

"Wetlands: water, life, and culture"
8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002

Resolution VIII.1¹

Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands

1. AWARE of the Preamble to the Articles of the Convention, which recognizes the fundamental ecological functions of wetlands as regulators of water regimes and as habitats supporting a characteristic flora and fauna, especially waterfowl;
2. RECALLING Resolution VI.23, which identified reconciling water management and wetland conservation as a key challenge for the Convention in the 21st century;
3. ALSO RECALLING Resolution VII.18, which requested the Scientific and Technical Review Panel (STRP) to review the current state of knowledge in the area of allocation and management of water to maintain wetland ecosystem functions, and to report to COP8 on its findings, and if possible to provide guidance for the Contracting Parties on this subject;
4. NOTING Decision IV/4 of the Convention on Biological Diversity (CBD), which identified the Ramsar Convention as its lead partner for actions concerning the conservation and wise use of wetlands, and particularly inland water ecosystems, including actions concerning the allocation and management of water for the maintenance of inland waters biodiversity;
5. NOTING ALSO the development, under the CBD/Ramsar Joint Work Plan 2000-2002, of the River Basin Initiative (RBI), which is designed to provide improved exchange of information and experience in the incorporation of wetlands and biodiversity issues into river basin management, and which is establishing linkages between wetlands, biodiversity and water management bodies that promote integrated water resource management;
6. AWARE of the Report of the World Commission on Dams, which includes information on the evaluation and assessment of water allocations, and specifically on environmental flow releases from dams, in the decision-making process for large dams, and of Resolution VIII.2 on the same subject adopted by this meeting;
7. RECOGNIZING the vital contribution made by wetlands on many occasions to ensure the allocation of water required for human well-being, including food and water security, and in flood control and poverty alleviation; but ALSO AWARE of the increasing demands being placed upon freshwater resources in many parts of the world and the threat this poses for maintaining wetland ecosystem functions and their biodiversity;

¹ Turkey entered a reservation to the adoption by consensus of this Resolution. The text of the reservation appears in paragraph 83 of the COP8 Conference Report.

8. FURTHER AWARE of the importance placed on freshwater resources in the United Nations Special Session of the General Assembly to review and appraise the implementation of Agenda 21, and in the subsequent Commission on Sustainable Development meeting in May 1998, which as part of its report relating to Strategic Approaches to Fresh Water Management recommended support for the implementation, *inter alia*, of the Ramsar Convention;
9. RECOGNIZING that, in Technical Session 1, this meeting of the Conference of the Contracting Parties has considered and discussed the *Guidelines for allocation and management of water for maintaining the ecological functions of wetlands*;
10. NOTING that additional technical guidance, including case studies, on the use of tools and methodologies for the allocation and management of water for maintaining wetland ecosystem functions has been prepared by the STRP and was available to this meeting of the Conference as an information document (COP8 DOC. 9);
11. REALIZING that a number of related decisions have been adopted previously which provide guidance for the Contracting Parties on wetland policy formulation (Resolution VII.6), reviewing laws and institutions (Resolution VII.7), involving local communities and indigenous people in wetland management (Resolution VII.8), promoting communication, education and public awareness related to wetlands (Resolution VII.9), incentives (Resolution VII.15), impact assessment (Resolution VII.16), wetland restoration as part of national planning (Resolution VII.17), and international cooperation under the Ramsar Convention (Resolution VII.19), all of which are relevant to the process of the allocation and management of water for maintaining the ecological functions of wetlands;
12. REALIZING ALSO that this meeting of the Conference has adopted further guidance that is relevant to the allocation and management of water for maintaining the ecological functions of wetlands, notably the *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14), *Principles and guidelines for wetland restoration* (Resolution VIII.16), impact assessment (Resolution VIII.9), *Agriculture, wetlands and water resource management* (Resolution VIII.34), *The impact of natural disasters, particularly drought, on wetland ecosystems* (Resolution VIII.35), and *Guidelines for rendering the use of groundwater compatible with the conservation of wetlands* (Resolution VIII.40); and
13. GRATEFUL to the Government of the United States of America for its financial contribution to the work of the STRP which allowed, *inter alia*, the preparation of the guidelines and background document on water allocation and management;

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14. ADOPTS the *Guidelines for allocation and management of water for maintaining the ecological functions of wetlands*, as annexed to this Resolution, and URGES all Contracting Parties to give priority to their application, adapting them as necessary to suit national conditions and circumstances;
15. ALSO URGES all Contracting Parties to utilize the additional guidance on tools and methodologies for the allocation and management of water for maintaining ecological functions available as an information document for this meeting of the Conference (Ramsar COP8 DOC. 9), and to take into account the relevant guidance and information,

particularly on the environmental flow releases from dams, including information contained in the Report of the World Commission on Dams;

16. STRONGLY URGES all Contracting Parties to bring the *Guidelines for allocation and management of water for maintaining the ecological functions of wetlands* and the additional guidance on tools and methodologies to the attention of their national ministries and/or agencies (at different levels of territorial organization) responsible for water resource management, to encourage these bodies to apply the guidance in order to ensure appropriate allocation and management of water for maintaining the ecological functions of wetlands in their territory, and to ensure that the principles contained in the Ramsar Guidelines are incorporated into their national policies on water and on wetlands;
17. FURTHER URGES Contracting Parties to include representatives of national water management ministries and/or agencies in the membership of their National Ramsar/Wetland Committees;
18. ENCOURAGES Contracting Parties with wetlands lying in shared river basins to work cooperatively to apply the *Guidelines for allocation and management of water for maintaining the ecological functions of wetlands* within the context of the management of water allocations in transboundary basins, making use of the Ramsar *Guidelines for international cooperation under the Convention* (Resolution VII.19);
19. REQUESTS the Scientific and Technical Review Panel to review the role of wetlands in groundwater recharge and storage and of groundwater in maintaining the ecological character of wetlands, as well as the impacts of groundwater abstraction on wetlands, and to report to COP9 including, as appropriate, with guidelines for Contracting Parties on these matters;
20. DIRECTS the Ramsar Bureau, working with the secretariat of the Convention on Biological Diversity, to bring the *Guidelines for allocation and management of water for maintaining the ecological functions of wetlands* to the attention of other water management organizations, relevant regional institutions, river basin authorities and commissions, and other interested parties and organizations, using the partnership mechanisms established through the joint Ramsar/CBD River Basin Initiative (RBI) for this purpose;
21. REQUESTS the Ramsar Bureau to work with the secretariat of the Third World Water Forum (Japan, 2003) to ensure that the critical importance of the goods and services provided by wetlands for water management, and the *Guidelines for allocation and management of water for maintaining the ecological functions of wetlands*, are fully recognized and debated during the Third World Water Forum;
22. FURTHER REQUESTS the Ramsar Bureau to make available the guidance adopted by this Resolution to the subsidiary bodies and Contracting Parties of other multilateral environmental agreements (MEAs), and in particular to the CBD's Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA) with regard to the maintenance of the biodiversity of inland waters, and to the UN Convention to Combat Desertification's Committee on Science and Technology (CST) with regard to the critical issue of water management for wetlands in drylands;

23. URGES multilateral and bilateral donors to ensure that the allocation and management of water for maintaining the ecological functions and production potential of wetlands is fully addressed in the design, planning and implementation of river basin and water resource management projects, taking into account the special circumstances and constraints of the concerned countries; and
24. ENCOURAGES Contracting Parties and other interested organizations to develop projects and other activities that promote and demonstrate good practice in water allocation and management for maintaining the ecological functions of wetlands, to make such good practice examples available to others through the information exchange mechanisms of the Ramsar/CBD River Basin Initiative, and to report to COP9 on the successes achieved and lessons learned from these activities.

Annex

Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands

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Introduction

1. Wetland ecosystems are adapted to the prevailing hydrological regime. The spatial and temporal variation in water depth, flow patterns and water quality, as well as the frequency and duration of inundation, are often the most important factors determining the ecological character of a wetland. Coastal and marine wetlands are often highly dependent on inputs of freshwater and associated nutrients and sediments from rivers.
2. Impacts on wetlands can be caused both by human activities within them and, because of the interconnectedness of the hydrological cycle, by activities that take place within the wider catchment. Human modification of the hydrological regime, by removing water (including groundwater) or altering fluxes, can have detrimental consequences for the integrity of wetland ecosystems. Insufficient water reaching wetlands, due to abstractions, storage and diversion of water for public supply, agriculture, industry and hydropower, is a major cause of wetland loss and degradation. A key requirement for wetland conservation and wise use is to ensure that adequate water of the right quality is allocated to wetlands at the right time.
3. Many river basin authorities and water agencies have insufficient appreciation of the socio-economic values and benefits provided by wetlands in terms of their productivity, e.g. fisheries and livestock grazing, and their social importance.
4. There is generally a lack of awareness of the wide variety of services that wetlands can provide, including flood reduction, resource management, and water quality improvement, and of the fact that they can be a very positive asset at the disposal of water managers. As a consequence, wetlands frequently do not receive due consideration in water allocation decisions. In contrast to this view, the Ramsar Convention on Wetlands promotes the principle that wetland ecosystems are an integral component of the global water cycle from which water resources are derived.

5. To maintain the natural ecological character¹ of a wetland, it is necessary to allocate water as closely as possible to the natural regime. The ecological character of many wetlands has adapted to past alterations of the water regime, yet they still provide important goods and services. A key step in any wetland conservation strategy is to define the desired ecological character of the most important wetlands. In any water allocation decision, it is then necessary to quantify the critical water needs of the wetlands, beyond which their ecological character will change in an unacceptable manner.
6. The following principles and guidelines aim to support improved allocation of water to wetlands so that they receive adequate water for maintaining the provision of their goods and services. The text is in two parts: 1) basic principles; and 2) guidelines for their operationalisation. The guidelines are further divided into four areas: a) decision-making, including policy and legislation; b) the process for determining water allocations; c) scientific tools and methods; and d) implementation.

Principles

7. Through the Dublin Principles adopted by the 1992 Dublin International Conference on Water and the Environment, the international community has, at the highest political level, affirmed the notion that water is an integral part of ecosystems, and that it is a social and economic good whose quantity and quality should determine the nature of its utilization.
8. In recent years the concept of integrated water resources management (IWRM) has come to the fore as a strategy to implement the Dublin Principles. IWRM is defined as “a process that promotes the coordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner, without compromising the sustainability of vital ecosystems”.² A key element of IWRM is that river basins (also referred to as catchments or watersheds) are usually the most appropriate physical entity on which to plan the management of water. Given the important hydrological and ecological functions of wetlands, it is essential that they be explicitly incorporated into river basin management.³
9. To ensure consistency with the international development agenda, the following seven guiding principles have been defined not only through analysis of previous policy documents of the Convention on Wetlands, but also by reference to principles developed by other international organizations and initiatives.
10. The principles are:

10.1 Sustainability as a goal. Adequate water has to be provided to wetlands to sustain the functioning of these ecosystems, respecting their natural dynamics for the benefit of future generations. Where water requirements are not known, or where the impact of

¹ The Conference of the Parties of the Ramsar Convention has defined *ecological character* as “the sum of the biological, physical and chemical components of the wetland ecosystem and their interactions which maintain the wetland and its products, functions and attributes” (Resolution VII.10).

² Global Water Partnership 2000. *Towards water security: a framework for action*. GWP, Stockholm, Sweden.

³ See Ramsar Wise Use Handbook 4, *Integrating wetland conservation and wise use into river basin management*.

reducing water allocation to wetlands is unclear, the precautionary approach⁴ should be applied. The wetland ecosystem is the resource base from which water is derived. It should be managed to protect the resource base in order to provide goods and services in a sustainable manner. This requires sufficient water allocation to maintain wetland ecosystem structure and function. This is directly compatible with the “wise use” concept embodied in the Ramsar Convention, which has been defined by the Conference of the Parties as “the sustainable utilisation of wetlands for the benefit of mankind in a way compatible with the maintenance of the natural properties of the ecosystem”.

10.2 Clarity of process. The process by which decisions are made on the allocation of water should be clear to all stakeholders. Water allocation has often been a contentious issue and this is likely to increase in future as competing demands rise and available water resources may diminish due, *inter alia*, to climatic change. In many cases stakeholders have not understood why a particular allocation decision was made, leading to suspicion and mistrust of decision-makers. Whilst it will not be possible to please all stakeholders in any water allocation decision, by ensuring a transparent process in the decision-making the outcome can often be less contentious and more acceptable.

10.3 Equity in participation and decision-making factors. There should be equity for different stakeholders in their participation in water allocation decisions. There should also be equity in the factors that are considered in decision-making, including the functions, products and attributes of wetlands. Decision-making is often a complex process requiring consideration of many factors and competing demands. Some water users may feel that their requirements have been given less weight than others. Whilst weightings may be applied to different demands for legal or policy reasons, no demand should be ignored. In any decision, ecological and social issues should be considered equally with economic considerations.

10.4 Credibility of science. Scientific methods used to support water allocation decisions should be credible and supported by review from the scientific community. Science must be based on appropriate hydrological and ecological data, including adequate baseline ecosystem records. The best available knowledge and science should be employed, which should be updated as better knowledge becomes available from research and monitoring. However, lack of perfect knowledge should not be used as an excuse for inaction. The precautionary approach⁴ should be applied.

10.5 Transparency in implementation. Once procedures for water allocation decisions have been defined and agreed, it is important that they be seen to be implemented correctly. This requires a transparent implementation processes, so that all interested parties can follow the choices made at each step, have access to information on which they are based, and recognize agreed procedures.

10.6 Flexibility of management. Like many ecosystems, wetlands are characterized by complexity, changing conditions, and uncertainty. It is essential that an adaptive

⁴ The precautionary approach, as set out in Principle 15 of the 1992 Rio Declaration, states that: “In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

management strategy be adopted, which requires plans that can be changed as new information or understanding comes to light.

10.7 Accountability for decisions. Decision-makers should be accountable. If agreed procedures are not followed or subjective decisions can be shown to be contrary to the spirit of the above principles, decision-makers should provide a full explanation. Stakeholders should have recourse to an independent body if they feel that procedures have not been followed.

Operationalising the principles

11. The guidelines that follow provide for specific actions that should be undertaken to operationalise the seven guiding principles set out above. They are presented in four sections – a) the decision-making framework, including policy and legislation; b) the process for determining water allocations; c) scientific tools and methods; and d) implementation. Further supporting information can be found in the Ramsar Wise Use Handbooks.

The decision-making framework

12. In order to make decisions on water allocations for wetland ecosystems, an enabling policy environment is required⁵, supported by adequate and appropriate legal tools⁶, which clarify the legal status of water and water allocations, and by a framework for assessing the merits of different allocation options (Box A).
13. Economic valuation provides a potential decision-support framework, as indicated in Resolution VI.23 and Operational Objective 2 in Section II of the Convention's Strategic Plan 2003-2008⁷ (Box B). It should be noted, however, that there are various forms of economic valuation: the multi-criteria analysis is recommended for application to water allocation issues because it permits evaluation of ecological and social, as well as economic, criteria.
14. In addition, in order to ensure that water allocation issues are addressed within wetland policy development legislation and economic valuation frameworks, there is a need to build public awareness of the value of ecosystem services and ecosystem health⁸. In this way, policies, legislation, and decisions that support the allocation of water to wetlands will be better understood and more readily accepted.
15. A key element in water allocation is the involvement of stakeholders in the decision-making process. This involvement should include establishing a forum, such as a working group, to enable interaction and conflict resolution. The implementing agency needs to establish a multi-disciplinary team and to open an information centre that holds all reports and data with open access.

⁵ See Ramsar Wise Use Handbook 2, *Developing and implementing national wetland policies*.

⁶ See Ramsar Wise Use Handbook 3, *Reviewing laws and institutions to promote the conservation and wise use of wetlands*.

⁷ See also Barbier, E.B., Acreman, M.C., and Knowler, D. 1996. *Economic valuation of wetlands: a guide for policy makers and planners*. Ramsar Convention Bureau, Gland, Switzerland.

⁸ See Ramsar Wise Use Handbook 6, *Promoting the conservation and wise use of wetlands through communication, education and public awareness - the Outreach Programme of the Convention on Wetlands* and Resolution VIII.31 on this subject.

16. Through stakeholder participation the various water uses and users within the catchment should be defined along with the objectives for water allocation, which should include the desired ecological character of wetlands. Objectives for water allocations to wetlands may be primarily ecological or may be related to wise use practices, such as fishing or livestock grazing. Management problems should be phrased in quantifiable terms⁹.

Box A: Guidelines related to policy and legislation on water allocations for wetland ecosystems

Taking cognizance of the *Guidelines for developing and implementing National Wetlands Policies*, adopted by Resolution VII.6, the *Guidelines for reviewing laws and institutions to promote the conservation and wise use of wetlands*, adopted by Resolution VII.7, and the *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands*, adopted by Resolution VII.8:

- A1. Review water policy and legislation in order to establish clearly the legal status and priority of water allocations for wetland ecosystems in relation to water allocations for other uses.
- A.2 Harmonize environmental and water policy and legislation to ensure consistency with regard to the principles and approach to determination of water allocations for wetland ecosystems.
- A.3 Clearly identify, in policy and legislation, the responsibilities of different ministries and resource management agencies in the determination and implementation of water allocations for wetland ecosystems.
- A.4 Research and document customary law and practices relating to water resource management in order to incorporate these, where appropriate, into formal decision-making processes for managing water allocations to wetland ecosystems.
- A.5 Establish minimum standards to be applied to new and existing water infrastructure to minimise environmental impacts including, *inter alia*, capacity to release environmental water allocations, thermal pollution mitigation devices, and fish passage.

Box B: Guidelines related to valuation of wetland ecosystems

- B.1 Create awareness about the values of the goods and services provided by wetland ecosystems, and incorporate the valuation of these goods and services into water resources planning.
- B.2 Define a framework, such as multi-criteria analysis, that allows evaluation of all social, cultural and ecological values of wetlands, as well as economic values.
- B.3 Develop economic tools to enable evaluation of the use of water to support wetland ecosystem services, for comparison with the value of alternative uses such as industrial and public supply, intensive irrigation and power generation.

The process for determining water allocations

⁹ See *New Guidelines for management planning for Ramsar sites and other wetlands*, Resolution VIII.14.

17. Once the frameworks related to policy, legislation and decision-making have been established, a process for determining water allocations should be defined, encompassing the concepts outlined in the guidance above.
18. Clearly stated and measurable goals and objectives should be defined, and explicit outcomes identified. All wetlands that may be affected by allocation decisions should be identified and the goods and services they provide should be determined, as part of the definition of their ecological character. Potential steps in this process are outlined in Box C.

Box C: A sample process for determining water allocation

- C.1 Establish roles and responsibilities of stakeholders.
- C.2 Set up an inter-disciplinary team.
- C.3 Create a forum for stakeholder interaction.
- C.4 Establish a forum for interaction and conflict resolution.
- C.5 Establish an information centre with open access to data.
- C.6 Define management objectives for water allocation, including the desired ecological character of wetlands.¹⁰
- C.7 Identify the wetlands that may be affected by allocation decisions and determine the goods and services they provide (which will be part of their ecological character).
- C.8 Establish wetland monitoring (if not already in place) and collect sufficient data.
- C.9 Define water needs of wetlands and evaluate the goods and services they provide.
- C.10 Make decisions supported by the knowledge of the benefits of water allocation to wetlands.
- C.11 Define water allocation, implement and monitor.

19. Tools should be developed to define the water needs of wetlands, the goods and services they provide, and to evaluate their benefits to society. Tools are only as good as the data upon which they are based, so it is essential to establish adequate monitoring of the hydrology and ecology of the wetlands, if this is not already in place.
20. When planning the water requirements of a wetland, historical patterns of flow, groundwater fluxes, and rainfall, and their inter-annual variability, should be examined closely to determine their role in sustaining native biota/habitats. This information is essential if wetlands are to be considered appropriately in water allocation decisions. Planning should also consider 'dry' periods when wetlands should naturally receive low or no water flows. The quality of water required to maintain the ecology of wetlands, including the appropriate temperature of water released from dams, should also be identified.
21. When the decisions have been made and implemented, wetlands should be monitored to record any decline or loss of goods and services. If such a decline or loss is detected, remedial measures should be taken, where feasible.
22. In catchments with existing dams, or where dams are planned, explicit consideration should be given to changes in the priority of water uses and the provision of environmental flow releases to meet specific downstream ecosystem and livelihood

¹⁰ See Ramsar Handbook 8.

requirements. In some cases “managed flood releases” designed to overtop river banks and supply floodplain wetlands and/or coastal deltas may be necessary.

Box D: Guidelines related to environmental flow assessment downstream of dams

D.1 Make use, as appropriate, of available guidelines and information (including information contained in the report of the World Commission on Dams) on incorporating social, environmental (including biological diversity), technical, economic, and financial issues in the processes of decision-making for water and energy development and management of water allocations for wetland ecosystems.

D.2 Encourage the determination of water allocations for wetland ecosystems as an integral part of the impact assessment process for water resource projects.¹¹

D.3 Encourage launching baseline ecosystem assessments for water resources where projects are currently in the planning phase in order to ensure that the necessary basic data will be available to support the environmental impact assessment process, the determination of water allocations for wetland ecosystems, and the development of effective mitigation measures when necessary.

Tools and methods

23. Three types of tools are required:

- a) tools to achieve stakeholder participation in the definition of the desired status of wetlands and their acceptance of the process for water allocation;
- b) physical-biological scientific tools capable of quantifying the goods and services provided by wetlands, as well as of predicting the impacts of changes in water availability on these goods and services; and
- c) tools to evaluate the benefits derived by societies from the goods and services provided by wetlands.

24. Whilst some generic tools may be available, these may need to be developed further or adapted to local requirements. A range of tools is likely to be needed to cope with different resolutions (temporal and spatial) and different levels of expectations.

25. For allocation issues where impacts are likely to be low, rapid and simple methods can be adopted. In addition, it may be acceptable to transfer knowledge from other wetlands, including water requirements of species. However, for contentious issues that need to stand up to detailed scrutiny (such as at a public inquiry) more detailed tools, such as hydro-ecological response models, may be required. This situation will also need more detailed data to be collected from the wetlands that may be impacted.

26. Each tool will need to be tested for its performance and applicability in a range of local case studies. The applications of tools to water allocation cases should also be monitored

¹¹ See also Resolution VIII.9, “*Guidelines for incorporating biodiversity-related issues into environmental impact assessment legislation and/or processes and in strategic environmental assessment*” adopted by the Convention on Biological Diversity (CBD), and their relevance to Ramsar.

in order to refine and improve the methods. In many cases, basic research will be necessary to establish the preferences and tolerances of local species.

Box E: Guidelines related to determination of water allocations for a particular wetland ecosystem

- E.1 Undertake studies to identify the habitat preferences (hydraulic, physico-chemical and geomorphological) of representative indigenous species at key life stages, and their tolerances of changes in habitat.
- E.2 Undertake baseline surveys in wetland ecosystems where water allocations are to be determined, in order to establish their ecological character, hydrological conditions (natural and present-day), water quality conditions (background and present-day), and geomorphological conditions.
- E.3 Design and implement appropriate ecological and hydrological monitoring programmes to establish whether water allocations for wetland ecosystems are being delivered and whether they are having the desired ecological effects.
- E.4 Identify wetland ecosystems which require a high level of protection (including those listed or proposed for listing as Wetlands of International Importance) or which are linked ecologically or hydrologically to Ramsar sites, and determine and implement water allocations for these ecosystems as a matter of priority.
- E.5 Develop or adapt locally applicable tools and test their applicability.
- E.6 Monitor application of tools and refine them as appropriate.

Implementation

- 27. A long-term strategy or plan should be established to manage water demand so as to achieve water allocations for ecosystems. Water allocations may be achieved in a variety of ways, including flow releases from reservoirs or restrictions to abstraction. In some cases, pumping from groundwater may also be used to augment stream flow. Groundwater extractions to supplement stream flows to wetlands should only be supported where such extraction does not significantly impact on other water-dependent ecosystems and their values.
- 28. Flows should normally follow the natural regime as closely as possible to maintain the natural ecology. This may be achieved by relating the magnitude, duration and timing of releases or abstractions to flows in nearby unregulated reference catchments, which will require real-time monitoring. Special abstraction/release rules should be defined for droughts, floods, and emergency situations. In cases where the dominant use of the wetland is farming (e.g., flood recession agriculture), flows may be tailored for specific requirements such as following the planting of rice on the floodplain.
- 29. Effective communication mechanisms should be established with all stakeholders for exchange of real-time information about releases and flow patterns.

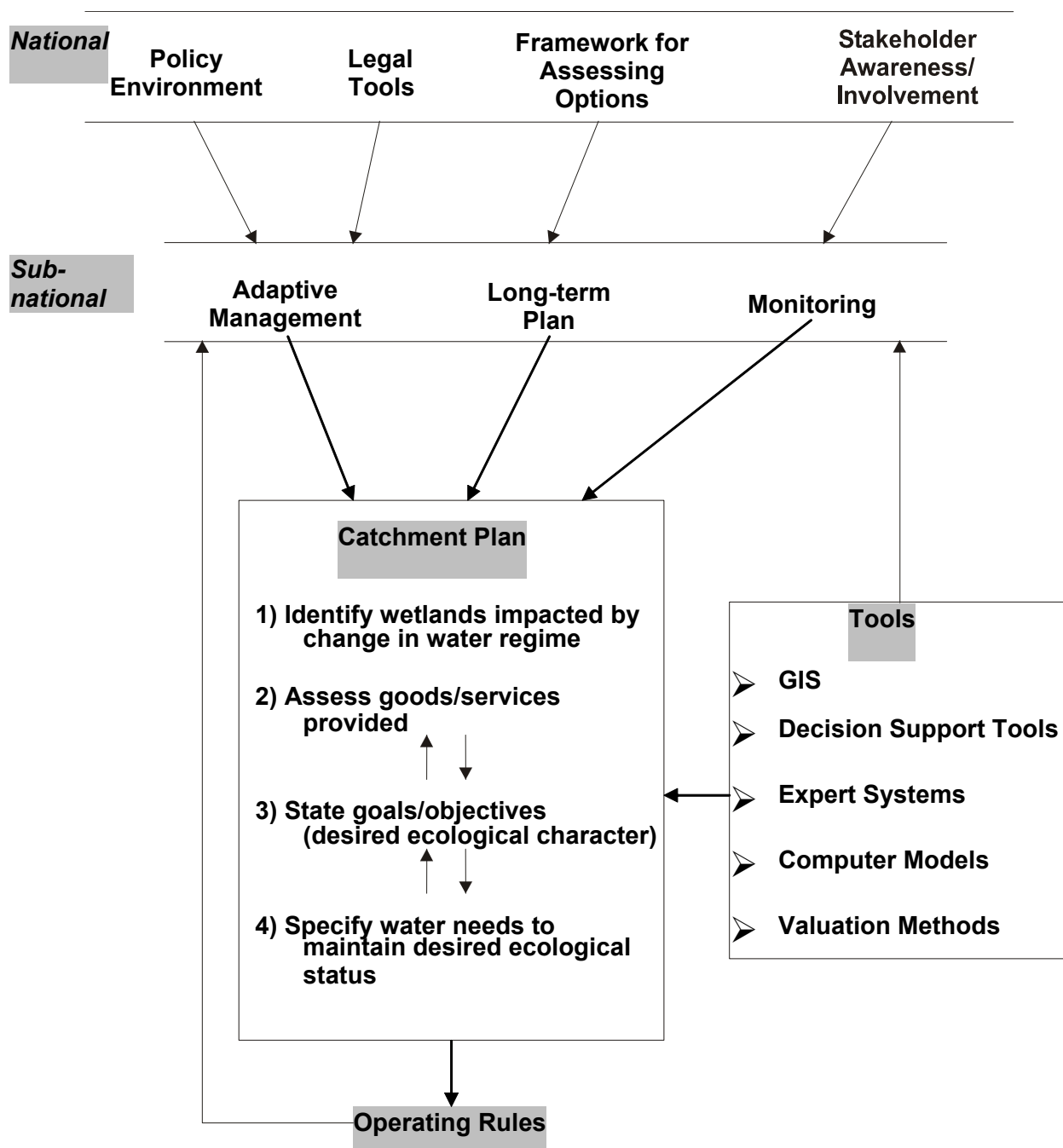
30. Management of water quality also needs to follow natural processes and mechanisms as far as possible. Water quality varies naturally according to the source and anthropogenic impacts, such as discharges. Water released from a reservoir may be of different quality to that of the natural river (e.g., colder and lower in oxygen), so outlet structures should be designed to reduce such impacts.
31. It is important to monitor compliance with water allocations and to ensure appropriate actions and responses. Where necessary, management strategies should be adapted in the light of monitoring and evaluation.

Box F: Guidelines related to implementing water allocations to wetlands

- F.1 Establish a long-term strategy or plan to manage water demand so as to achieve water allocations for wetland ecosystems.
- F.2 Allocate water as closely as possible to the natural regime (of both wetter and drier periods), using natural cues from reference catchments or to meet specific use requirements.
- F.3 Establish operating rules for droughts, floods, and emergency situations when rapid decisions may need to be made.
- F.4 Establish how existing infrastructure can be modified so as to release appropriate water allocations and water of appropriate quality, and ensure that new infrastructure meets this requirement.
- F.5 Disseminate real-time information about releases/flow patterns to stakeholders.
- F.6 Monitor compliance with water allocations and ensure appropriate actions/responses.
- F.7 Adapt management strategies in the light of monitoring and evaluation.

Conclusions

32. Wetland ecosystems are an integral component of the global water cycle from which water resources are derived. Allocating sufficient water to conserve wetlands provides important water resource benefits to people, including products (such as fisheries) and services (such as flood reduction).
33. To conserve wetlands, national policies, legal instruments, and a decision-making framework should be developed in order to promote the allocation of water to wetlands. Additionally, a decision-making process needs to be defined that establishes the desired ecological character of wetlands, which includes the goods and services they provide and the aspiration to conserve this character.
34. The following diagram summarizes the elements of the recommended overall process for the allocation and management of water for maintaining wetland ecosystem functions.



"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.2¹

**The Report of the World Commission on Dams (WCD) and its
relevance to the Ramsar Convention**

1. RECALLING that through Resolution VII.18 Contracting Parties have recognized the importance of the management of rivers and their water resources at the basin scale for the maintenance of the ecological character of wetlands, and that many wetlands provide vital goods and services in the management and provision of water supplies; and that this meeting of the Conference of the Contracting Parties has adopted *Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands* (Resolution VIII.1);
2. FURTHER RECALLING that Resolution VII.18 also requested the Scientific and Technical Review Panel (STRP) to report to COP8 concerning the findings of the World Commission on Dams (WCD) and their implications for the future;
3. NOTING that the work of the WCD, convened by the World Bank and IUCN – The World Conservation Union, has been completed in 2000, and that the final report of the WCD (*Dams and Development. A New Framework for Decision-Making*) has been published; and FURTHER NOTING that an Information Paper on this has been prepared by the STRP (COP8 DOC. 10);
4. RECOGNIZING that large dams have made significant contributions to development and remain an option in meeting energy and water resources requirements at local and national levels; and that they may also create artificial water bodies that provide some wetland values and functions, partially compensating for those of dam-impacted wetlands;
5. ALSO RECOGNIZING that large dams around the world affect wetland hydrology, influencing both water quality and quantity; that a significant proportion of globally threatened and non-threatened species are freshwater species of fish, amphibians and other biota, which are highly vulnerable to the direct and indirect impacts of dams; and that diversions of water may be a source of conflicts between users of wetland goods and services, urban and agricultural communities;
6. NOTING that the wise use of water resources requires a wide consultation among interested and affected stakeholder groups as well as extensive evaluation of social and environmental impacts on complex riverine, coastal and marine ecosystems, and establishment of a forum for interaction and conflict resolution; and RECALLING that

¹ Turkey entered a reservation to the adoption by consensus of this Resolution. The text of the reservation appears in paragraph 83 of the COP8 Conference Report.

Contracting Parties have adopted *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands* (Resolution VII.8);

7. FURTHER NOTING that the WCD recognized that within today's diverse world, a "one size fits all" approach is unrealistic, and thus the Commission's guidelines are "advisory tools to support decision making" and will require to be adapted to local and national contexts; and
8. THANKING the STRP, IUCN, the WCD Secretariat, and the Secretariat of the Convention on Biological Diversity for their work in preparing an Information Paper for this meeting (COP8 DOC. 10) on the findings of the WCD and its relevance to the Ramsar Convention;

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9. RECOGNIZES that the World Commission on Dams was a non-governmental process and therefore non-binding on governments;
10. ENCOURAGES Contracting Parties faced with managing or assessing the impact of dams on sensitive riverine and wetland ecosystems, to use, where appropriate, all available information, including information provided by the WCD, in association with the relevant guidance adopted by the Ramsar Convention to inform and guide local and national processes for allocation of water resources and decision-making, in order to ensure that wetlands and their values and functions are fully taken into account in decision-making on large dams;
11. REQUESTS Contracting Parties to engage fully in national and basin level processes to assess options for, alternatives to, and improvements in, the development and operation of dam infrastructure, utilising Resolution VII.18 on *Guidelines for integrating wetland conservation and wise use into river basin management* and the CBD-Ramsar River Basin Initiative;
12. URGES Contracting Parties to implement, where appropriate, Resolution VII.8 on *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands* with respect to the planning and operation phases of dams, and FURTHER URGES Contracting Parties to extend this principle of participation to wider issues related to water resources management at basin level, utilising Resolution VII.18 on *Guidelines for integrating wetland conservation and wise use into river basin management* and Resolution VIII.14 on *New Guidelines for management planning for Ramsar sites and other wetlands*;
13. FURTHER URGES Contracting Parties to undertake the systematic implementation of environmental flow assessments, where appropriate, to mitigate socio-economic and ecological impacts of large dams on wetlands, and to encourage the development of appropriate centres of expertise on environmental flow assessment and implementation, and in doing so to apply the *Guidelines on water allocation and management for maintaining the ecological functions of wetlands* (Resolution VIII.1);
14. ENCOURAGES Contracting Parties, wherever possible and appropriate, to take the necessary steps in order to maintain the migration access for indigenous fish and other species past dams;

15. CALLS UPON Contracting Parties to participate in the UNEP Dams and Development Project in order to promote dialogue on improving decision making, planning and management of dams;
16. REQUESTS IUCN and other appropriate technical institutions to contribute their ongoing work on environmental flow methodologies to further work requested of the STRP on water allocation and management, so as to ensure that they are made available to Contracting Parties to assist in their management of dam-related impacts, and requests the STRP to report on these methodologies to COP9;
17. REQUESTS the STRP, if the Standing Committee regards this as a priority for the STRP's work in 2003-2005, to review Resolutions VIII.1 and VIII.2 and to prepare further guidance, if it is required, for consideration at COP9;
18. ALSO REQUESTS the STRP, if indicated by the Standing Committee as a priority, to review the ecological roles played by reservoirs and other human-made wetlands, including their use by aquatic and other water-dependent biota, and to prepare guidance for Contracting Parties concerning the identification and designation of such wetlands for the Ramsar List, taking into account the experience gained by Parties that have already done so; and
19. URGES Contracting Parties to inform the Bureau of dams that have changed, are changing, or are likely to change the ecological character of Ramsar sites, in line with Article 3.2 of the Convention, and to report on the impacts of dams on wetlands in their territory in their National Reports to COP9.



Resolution VIII.3

Climate change and wetlands: impacts, adaptation, and mitigation

1. RECOGNIZING that climate change may substantially affect the ecological character of wetlands and their sustainable use, and AWARE of the potentially important role of wetlands in adapting to and in mitigating climate change;
2. CONCERNED that persistent drought in many regions of the world is already seriously affecting the ecological character of wetlands and that climate change, along with other land use and land management activities, is projected to exacerbate such problems;
3. FURTHER CONCERNED by the recent degradation of peatlands through drainage and fire in many parts of the world and the associated impacts on greenhouse gas emissions as well as the impact on biodiversity and local people of this degradation;
4. RECOGNIZING that heavy precipitation events are projected in many areas as a consequence of climate change and NOTING that many Contracting Parties are concerned that this will seriously adversely affect the ecological character of wetlands and their potential for supplying economic benefits, especially coral reefs and sea grass beds, which are wetland types under-represented in the Ramsar List;
5. ALSO NOTING that in its Third Assessment Report (TAR), the Intergovernmental Panel on Climate Change (IPCC) concluded that some wetlands, including reefs, atolls, mangroves, and those in prairies, tropical and boreal forests, and arctic (including permafrost) and alpine ecosystems, are considered to be amongst those natural systems especially vulnerable to climate change because of their limited adaptive capacity, and may undergo significant and irreversible damage;
6. RECOGNIZING the ecological, social and economic vulnerability of small islands developing states to the impact of climate change and in particular of sea level rise;
7. RECALLING that Action 5.1.6 of the Convention's Work Plan 2000-2002 requested the Scientific and Technical Review Panel (STRP) to prepare for consideration at COP8 a comprehensive review of the potential impacts of climate change on wetlands and the roles that wetlands can potentially play in mitigating the effects of climate change and sea level rise;
8. RECOGNIZING the work of the UN Framework Convention on Climate Change (UNFCCC) and its subsidiary bodies and their understanding that education, training and public awareness are vital tools in addressing issues of climate change, and NOTING the contribution that the Ramsar Convention's Communication, Education, and Public

Awareness Programme, as elaborated by Resolution VIII.31, can make to addressing issues of climate change and wetlands;

9. WELCOMING efforts by countries to address climate change, including those reflected in the 2001 Marrakesh Declaration, the Marrakesh Accords, and the 2002 Delhi Ministerial Declaration on Climate Change and Sustainable Development; RECOGNIZING the work of the IPCC and WELCOMING its report on Land Use, Land Use Change and Forestry (LULUCF), which includes forested wetlands; and EXPRESSING DEEP CONCERN about the findings of the IPCC Third Assessment Report;
10. ACKNOWLEDGING the developing cooperation among multilateral environmental agreements and their subsidiary bodies on matters of common interest on climate change; AWARE that the Joint Work Plan 2002-2006 between the Convention on Biological Diversity (CBD) and the Ramsar Convention includes joint actions on climate change, wetlands and biodiversity; and WELCOMING the decision by the Conference of the Parties to the UNFCCC at its eighth session which notes the need for the Joint Liaison Group between the CBD, the UN Convention to Combat Desertification, and the UNFCCC to invite the secretariat of the Ramsar Convention to share information and to participate in the meetings of the Joint Liaison Group, as appropriate;
11. THANKING the STRP for its preparation of the comprehensive COP8 information paper on climate change and wetlands; ALSO THANKING the Environmental Research Institute of the Supervising Scientist, Australia, the Australian National University scientists involved in the IPCC assessments, and IUCN–The World Conservation Union for their contribution to this work; and HAVING HAD AVAILABLE the “Interim Executive Summary to Ramsar COP8 DOC. 11: Climate Change and Wetlands” (COP8 DOC. 40) distributed at this meeting of the COP;
12. AWARE that the STRP’s report recognizes that there are key gaps in current knowledge and information on the impacts of climate change upon wetlands, and on wetland adaptation, and on the ways in which wetlands can mitigate climate change impacts, notably the role of peatlands in carbon sequestration; and
13. NOTING that other guidance adopted by this meeting of the Conference of the Parties is relevant to addressing issues of climate change and wetlands, notably *Principles and guidelines for incorporating wetland issues into Integrated Coastal Zone Management* (Resolution VIII.4), *Guidelines for Global Action on Peatlands* (Resolution VIII.17), *Partnerships and synergies with Multilateral Environmental Agreements and other institutions* (Resolution VIII.5), and Strategic Plan Operational Objective 3 (Resolution VIII.25);

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14. CALLS UPON Contracting Parties to manage wetlands so as to increase their resilience to climate change and extreme climatic events, and to reduce the risk of flooding and drought in vulnerable countries by, *inter alia*, promoting wetland and watershed protection and restoration;
15. CALLS UPON all relevant countries to take action to minimize the degradation, as well as promote restoration, and improve management practices of those peatlands and other wetland types that are significant carbon stores, or have the ability to sequester carbon and

are considered as mitigation factors, as well as to increase the adaptive capacity of society to respond to the changes in these ecosystems due to climate change;

16. ENCOURAGES Contracting Parties to consider, and use as appropriate, the information on climate change and wetlands in the background papers COP8 DOC. 11 and COP8 DOC. 40 when integrating climate change considerations into their national policy pertaining to the conservation and wise use of their wetlands;
17. URGES Contracting Parties to make every effort, when implementing UNFCCC and, where appropriate, its Kyoto Protocol, including revegetation and forest management, afforestation and reforestation, that this implementation does not lead to serious damage to the ecological character of their wetlands, using, where appropriate, strategic and other forms of environmental impact assessment and risk assessment, taking account Resolutions VII.10, VII.16 and VIII.9, as well as Article 4.1 of the UNFCCC and Article 2.1 of the Kyoto Protocol, as appropriate;
18. ENCOURAGES Contracting Parties and other organizations to undertake, where possible, studies of the role of wetlands in carbon storage and sequestration and in mitigating the impacts of sea-level rise and to make their findings available to the Convention;
19. INVITES Contracting Parties to pay special attention to the need for building and strengthening institutional capacity and synergies between related instruments at the national level in order to address the linkages between climate change and wetlands, and to report to COP9 on progress in this matter, including achievements and the identification of difficulties encountered;
20. INVITES the IPCC and UNFCCC to focus some of their future work on issues related to region-specific wetland data, and to improve knowledge on the vulnerability of wetlands to climate change and the capacity to project impacts on wetlands; and REQUESTS the STRP to become involved in this work, drawing upon the work of the IPCC and other relevant bodies as appropriate and reporting on the status of international discussions at COP9;
21. WELCOMES the recognition by the Plan of Implementation adopted by the World Summit on Sustainable Development (WSSD) of the need to improve and apply more widely techniques and methodologies for assessing the potential adverse effects of climate change on wetlands, and, as appropriate, to assist countries that are particularly vulnerable to those effects;
22. NOTES that in the WSSD Plan of Implementation, States that have ratified the Kyoto Protocol strongly urge States that have not yet ratified the Kyoto Protocol to do so in a timely manner; and
23. REQUESTS the Secretary General to request promptly that the IPCC prepare a Technical Paper on the relationship between wetlands and climate change, in time for consideration at the second STRP meeting prior to COP9; and FURTHER REQUESTS that the STRP develop, on the basis of the IPCC Technical Paper, a synthesis of key issues on wetlands and climate change as an information paper, which should undergo a review process as determined by the STRP, for consideration by Contracting Parties at COP9. If the IPCC is

unable to undertake preparation of a Technical Paper on the relationship between wetlands and climate change, the Conference of the Parties REQUESTS the STRP to prepare an information paper, based on the IPCC Third Assessment Report and other authoritative, updated information, that synthesizes key issues on wetlands and climate change, which should undergo a rigorous peer review process as directed by the Standing Committee upon the advice of the STRP, and which should be made available for consideration by the Parties at COP9.

"Wetlands: water, life, and culture"
8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002

Resolution VIII.4

Wetland issues in Integrated Coastal Zone Management (ICZM)

1. RECALLING that the definition of wetlands adopted by the Convention includes areas “with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres”, which effectively means that for the Convention most of the coastal zone around the world falls under its definition of wetland;
2. TAKING INTO ACCOUNT that Action 2.2.1 of the Convention’s Work Plan 2000-2002 is to “gather and make available to Contracting Parties information on land use planning related to wetlands, and . . . coastal zone management in particular”;
3. ALSO RECALLING that in Recommendation 6.8 the Contracting Parties called upon themselves “to adopt and apply strategic planning and integrated coastal zone management principles to assist sound decision-making on the conservation and wise use of coastal wetlands”;
4. FURTHER RECALLING that in Resolution VII.21 the Contracting Parties resolved “to review and modify existing policies that adversely affect intertidal wetlands and to seek to introduce measures for the long-term conservation of these areas”;
5. AWARE that a large proportion of the world’s population lives on or close to the coast and that the livelihoods of substantial numbers of people, including local communities and indigenous peoples and especially those in small island developing states, depend on the productivity and values of coastal wetlands, notably sustainable fishing and agriculture;
6. CONCERNED that many coastal wetlands have already been lost or could be degraded due in particular to land-claim, unsustainable aquaculture and exploitation of wetland resources, and pollution; and that increasing population and, in some areas, uncontrolled development, including tourism, are continuing to place great pressure on coastal wetlands and their conservation and wise use;
7. RECOGNIZING that coastal wetlands provide vital services in securing human well-being, notably through their role in buffering floods and storm surges, coast protection, and the effects of rising sea levels, but AWARE that coastal wetlands, notably coral reefs and those in small island developing states, are recognized as being particularly vulnerable to the impacts of climate change and sea-level rise and that this vulnerability is considered to be increased by inappropriate land-use and development in the coastal zone;
8. ALSO RECOGNIZING that initiatives to develop integrated coastal zone management (ICZM) are being developed or are under way in many parts of the world, but

CONCERNED that although a substantial body of guidance on good practice in ICZM is available, this guidance seldom recognizes the significance of wetlands in the coastal zone, both in terms of their role in the sustainable management of the coast and of their importance for the conservation of biological diversity, notably for migratory species such as waterbirds, turtles and fish;

9. AWARE that Contracting Parties have already designated many wetlands in the coastal zone as Wetlands of International Importance but that some coastal wetland types are still under-represented in the Ramsar List, and that additional guidance for the identification and designation of mangroves and coral reefs as Ramsar sites has been adopted by this meeting (Resolution VIII.11);
10. NOTING that through the Joint Work Plan 2002-2006 between the Ramsar Convention and the Convention on Biological Diversity (CBD) the conventions are collaborating in the preparation of guidance on the rapid assessment of marine and coastal biodiversity and on marine and coastal protected areas;
11. AWARE that the Convention is developing collaboration with regional seas conventions, including Memoranda of Cooperation already in place with the Cartagena and Barcelona Conventions and with the South Pacific Regional Environment Programme (SPREP), intended to support ecologically sustainable development in the coastal zone; and
12. WELCOMING the emphasis in the Plan of Implementation adopted by the World Summit on Sustainable Development on the implementation of the Ramsar Convention as a tool to conserve and manage marine and coastal wetlands;

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13. ADOPTS the *Principles and guidelines for incorporating wetland issues into Integrated Coastal Zone Management (ICZM)* annexed to this Resolution;
14. URGES Contracting Parties to ensure that coastal wetlands and their values and functions for human well-being, including their role in mitigating the impacts of climate change and sea-level rise and their importance for the conservation of biological diversity, are fully recognized in planning and decision-making in the coastal zone, including through ICZM initiatives, and FURTHER URGES Contracting Parties to ensure that those responsible for the implementation of ICZM at local, regional and national levels in their countries are made aware of, and utilize, the Ramsar *Principles and guidelines* annexed to this Resolution;
15. CALLS upon Contracting Parties and others to document case studies of good practice in the integration of wetlands into ICZM and to make these available to the Convention; and REQUESTS the Scientific and Technical Review Panel (STRP) to review these case studies as the basis for preparing further guidance on wetlands and ICZM under the Convention;
16. URGES Contracting Parties to review and, where necessary, amend and take action on existing policies and practices that adversely affect coastal wetlands, and to recognize in their policies the vital role of coastal wetlands in supporting people's livelihoods, in mitigating impacts of climate change and sea-level rise, and in maintaining biological diversity;

17. CALLS upon Contracting Parties to continue to document the past losses and current status and trends of coastal wetlands, including in their national wetland inventories, and to report on their conservation status in their National Reports to COP9;
18. ENCOURAGES Contracting Parties to continue to give priority to the identification and designation of coastal wetlands as Wetlands of International Importance, so as to ensure that their relevance for the conservation and wise use of coastal ecosystems is recognized, applying for this purpose the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11) and the additional guidance for the identification and designation of mangroves and coral reefs adopted by this meeting (Resolution VIII.11);
19. REQUESTS the STRP to consider the preparation of further guidance for the identification and designation of other coastal wetland types, including *inter alia* intertidal and subtidal mud and sand flats and seagrass beds, for consideration by COP9;
20. REQUESTS the Ramsar Bureau and the STRP to continue to work with the Convention on Biological Diversity in the development of guidance on rapid assessment of marine and coastal biological diversity and on marine and coastal protected areas, and to make this guidance available to Contracting Parties; and
21. ENCOURAGES the Ramsar Bureau to further develop collaboration with regional seas conventions and the Regional Seas Programme of the United Nations Environment Programme (UNEP), including the development of joint work plans, and to report on these developments to COP9.

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Annex

Principles and guidelines for incorporating wetland issues into Integrated Coastal Zone Management (ICZM)

The purpose of these principles and guidelines

1. These *Principles and guidelines for incorporating wetland issues into Integrated Coastal Zone Management (ICZM)* are intended to increase understanding and recognition of the importance and vital role played by wetlands in the coastal zone throughout the world. They are intended for use by Ramsar's Contracting Parties and others in ensuring that the significance of wetlands, and their values and functions, are more fully taken into account by those responsible for planning and decision-making in the coastal zone, so as to secure their future conservation and wise use.
2. In particular, the guidance is designed to ensure that coastal wetland conservation and wise use are better understood as essential to the sustainable development of the coastal zone, rather than being regarded, as is often the case, as solely a sectoral nature conservation and protected areas issue.
3. It is intended that the *Principles and guidelines* should be used by Contracting Parties as the basis for engaging in dialogue with all those responsible for ICZM implementation in their countries, and that the guidance should be widely disseminated to these people and their organizations.
4. The guidance should be applied in conjunction with other guidance developed by the Ramsar Convention that is relevant to the integration of wetlands into ICZM, notably the *Additional guidance for the implementation of the wise use concept* (Resolution 5.6), *Guidelines for integrating wetland conservation and wise use into river basin management* (Resolution VII.18), *Enhancing the conservation and wise use of intertidal wetlands* (Resolution VII.21), *Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands* (Resolution VIII.1), the *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14), and *Additional guidance for identifying and designating under-represented wetland types as Wetlands of International Importance* (Resolution VIII.11), notably concerning mangroves and coral reefs.
5. These *Principles and guidelines* have been prepared through the work of the Convention's Scientific and Technical Review Panel (STRP) in response to Action 2.2.1 of the Convention's Work Plan 2000-2002: to "gather and make available to Contracting Parties information on land use planning related to wetlands, and . . . coastal zone management in particular." The preparatory work in drafting the principles and guidelines was undertaken with the financial support of the government of the United States of America.

A discussion of the definitions, terminology, and current approaches in use in Integrated Coastal Zone Management can be found in the Appendix 1. Appendix 2 elaborates further the rationale for the Principles.

Background and context

6. The definition of wetland adopted by the Ramsar Convention covers coastal and marine as well as inland wetland ecosystems. Concerning coastal and marine wetlands, the Ramsar definition includes areas “with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres” (Article 1.1 of the Convention).
7. Furthermore, concerning the inclusion of marine and coastal wetlands in the List of Wetlands of International Importance under the Convention, Article 2.1 indicates that “they may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands.”
8. Thus the coverage of the Ramsar Convention and the commitments of its Contracting Parties importantly include coastal and marine ecosystems as well as inland ecosystems.
9. Parties to the Ramsar Convention have recognized the importance of securing the conservation and wise use of wetlands in the coastal zone through full engagement with ICZM processes. Recommendation 6.8 called on Contracting Parties to adopt and apply strategic planning and integrated coastal zone management principles to assist sound decision-making on the conservation and wise use of coastal wetlands, and in Resolution VII.21 the Contracting Parties resolved to review and modify existing policies that adversely affect intertidal wetlands and to seek to introduce measures for the long-term conservation of these areas.
10. In pursuance of more effective incorporation of coastal wetlands and their values and functions in the sustainable development of the coastal zone, the Convention has also developed links through Memoranda of Cooperation with regional seas conventions (notably the Barcelona and Cartagena Conventions) and with the work of the Regional Seas Programme of the United Nations Environment Programme (UNEP), supporting ecologically sustainable development of the coastal zone, particularly through the collaboration of the Convention’s Mediterranean Wetlands Initiative (MedWet) with the Mediterranean Action Plan, and the establishment of a Memorandum of Cooperation and joint work plan with the South Pacific Regional Environment Programme (SPREP).
11. Nevertheless, it is evident that many people and organizations responsible for planning and decision-making for the coastal zone, both at national policy and local implementation scales, are not always fully aware of the relevance and importance of coastal wetlands and their government’s commitments under the Ramsar Convention, and that wetlands as defined by the Convention cover a large proportion of the land and sea areas in the coastal zone.
12. Achieving sustainable management in the coastal zone poses particularly great challenges, since the pressures of increasing human population, multiple development pressures, pollution from land-based sources, and unsustainable exploitation of natural resources are particularly high on many parts of the world’s coasts. It has been estimated that at least 60% of the world’s human population live in the coastal strip from the shoreline to 60 km inland. Furthermore many coastal zones are attracting economic development faster than many inland areas, and this is placing immense pressure on coastal wetlands from land-claim for housing, industry, port-related development, tourism, increasing pollution loads, and depletion of natural resources.

13. Conflicts in coastal areas often result from competition over the allocation of coastal resources, including space. Typical conflicts occur over the access to the coastline; incompatibility of sectoral uses which cannot coexist in juxtaposition; private ownership which prevents public use of or access to coastal resources; long-term sustainable use goals inhibiting short-term economic gains; and the provision of coastal protection infrastructure.
14. In addition, the sustainable use of coastal resources can be seriously affected by both human-made and natural perturbation of coastal processes, including cumulative impacts generated by both large and small development projects; gradual alterations such as climate change and sea-level rise; sudden natural episodic events such as storms and flooding; and sudden man-made disasters, such as major oil spills. Often human-made and natural factors combine to strengthen the impact on the natural functions and processes in coastal areas.
15. In the last decades of the 20th century, there has been increasing global recognition, notably through Chapter 17 of Agenda 21 adopted by the Rio 1992 United Nations Conference on Environment and Development (UNCED), of the need to develop more effective integrated management of coastal zones. This recognizes that there is a wide range of stakeholders in the coastal zone and that there is particular complexity of governmental institutions and agencies with legislative responsibilities for different sectors of marine, coastal intertidal and terrestrial planning and decision-making.
16. Issues concerning stakeholders in the coastal zone can be grouped into three categories, for which different responses are necessary:
 - i) those issues which are the responsibility of a particular stakeholder, for example a port authority, often carrying out a statutory legal duty;
 - ii) those issues which are the responsibility of a particular stakeholder, or several stakeholders, who would benefit from the exchange of information to increase understanding and awareness; and
 - iii) those issues, for example the impacts of climate change, which can affect all stakeholders but are the responsibility of none, and for which it is advantageous to develop responses through an ICZM approach.
17. An increasing range of initiatives have been developed which are designed to establish and implement ICZM through planning and decision-making that involves full participation of all stakeholders, including local communities and indigenous peoples. In support of these ICZM initiatives, a substantial body of policy guidance and implementation guidelines has also been prepared.
18. However, a review of available guidance by the STRP in 2000 found that it seldom fully recognizes or incorporates guidance on the vital role played by wetlands, and their values and functions, in the coastal and nearshore marine zone. Furthermore, most guidance affords little or no recognition of the relevance of the Ramsar Convention and countries' commitments to the conservation and wise use of coastal zone wetlands.

19. Available guidance seldom provides a specific definition of coastal wetlands, and they are generally, at most, mentioned only as a generic type of coastal environmentally sensitive areas. However, in several ICZM guidelines, notably those prepared by the UN Food and Agriculture Organization (FAO), there is a more specific reference to coastal wetlands, but mainly in the context of integration of agriculture and fisheries into ICZM. These guidelines refer chiefly to those coastal and marine wetland types of significance to aquaculture and fisheries: mangroves, sea grass systems, coral reefs, sandy beach systems, and lagoons and estuaries.
20. A similar finding has been reported to the 6th meeting of the Conference of the Parties to the Convention on Biological Diversity (COP6, April 2002) concerning recognition of the importance of marine and coastal biological diversity in existing ICZM guidance.
21. In support of the principles and guidelines that follow, further background information on current approaches to development and implementation of ICZM and its commonly used definitions and terms is provided in Appendix 1.

Principles and guidelines for incorporating wetland issues into ICZM

22. The following eight guiding principles are divided into four sections:
 - A. Recognizing the role and significance of the Ramsar Convention and wetlands in the coastal zone;
 - B. Ensuring full awareness of the values and functions of wetlands in the coastal zone;
 - C. Using mechanisms for securing the conservation and sustainable use of wetlands in the coastal zone; and
 - D. Addressing the integration of the conservation and sustainable use of wetlands in broad-scale integrated ecosystem management
23. These principles set out the key issues that provide the basis for ensuring that ICZM fully incorporates the conservation and wise use of coastal wetlands through the Ramsar Convention. For each principle, guidelines are provided for their application by Ramsar Contracting Parties through specific actions that should be undertaken to operationalise the principles.
24. A more detailed rationale and background for each of the principles is provided in Appendix 2.

A. Recognizing the role and significance of the Ramsar Convention and wetlands in the coastal zone

Principle 1. The Ramsar Convention is the global intergovernmental treaty that specifically addresses the conservation and wise use¹ of coastal zone ecosystems.

25. The Convention on Wetlands (Ramsar, Iran, 1971) is the only global intergovernmental treaty that focuses on a specific ecosystem – wetlands. Under the Convention’s definition

¹ “Wise use” was defined in 1987 by Ramsar COP3 as “sustainable utilization for the benefit of humankind in a way compatible with the maintenance of the natural properties of the ecosystem”.

of wetland all parts of the intertidal and near-shore marine coastal zone are included along with inland wetlands – many types of which occur in the terrestrial part of the coastal zone. This coastal and marine coverage by the Convention is not always fully understood or recognized.

Guideline No. 1 – Ensuring the delivery of Contracting Parties' commitments under the Ramsar Convention through ICZM

- 1.1 Ensure that awareness is raised of governmental commitments as Parties to the Ramsar Convention in those parts of government and government agencies and other institutions with responsibilities for management and decision-making in the coastal zone.
- 1.2 Ensure that national policy frameworks for ICZM incorporate and are consistent with national wetland policies and strategies, including where these are included in national biodiversity conservation policies, strategies and plans, utilising the Ramsar *Guidelines for developing and implementing National Wetland Policies* (Resolution VII.6) for this purpose.
- 1.3 Invite those parts of government responsible for ICZM to participate in national wetland or Ramsar committees, where these have been established.
- 1.4 Consider the preparation of brochures and publications that highlight the Ramsar Convention in the coastal zone, and disseminate these widely.
- 1.5 Seek recognition with those parts of government responsible for the Convention on Biological Diversity (CBD) of the joint work and implementation responsibilities of the Ramsar Convention with regard to biodiversity conservation.
- 1.6 Ensure that the Convention's *Guidelines for international cooperation under the Ramsar Convention* (Ramsar Handbook No. 9) are made available as tools and assistance to those seeking to implement ICZM in a transboundary context.

Principle 2. The full incorporation of wetland conservation and wise use issues into ICZM is essential for a successful sustainable coastal management process.

26. Coastal areas are of ever-growing importance for the human population worldwide. Human activities are directly or indirectly responsible for many stresses affecting sustainability in the coastal zone, such as loss of habitat and ecological and hydrological functions, increased pollution of, and increased amounts of nutrients in, near shore environments, accelerated sea-level rise, and interception and interruption of flow of water and sediments. Many of these problems seriously affect coastal wetlands and their capacity to continue to provide vital values and functions for people and biodiversity in the coastal zone, since (as established in Principle 1) wetlands under the Ramsar Convention definition cover a very substantial part of the world's coasts.

Guideline No. 2 – Ensuring full incorporation by Contracting Parties of wetland conservation and wise use issues into ICZM, as essential for a successful sustainable coastal management process

- 2.1 Identify key barriers to incorporating wetland issues effectively into ICZM and to promoting the importance of wetland values for coastal zones; and work to overcome them in association with coastal managers and others responsible for ICZM.
- 2.2 Develop consultative processes which will involve wetlands managers and help them to understand better the functioning of ICZM processes.
- 2.3 Assess the economic benefits of wetland protection, conservation and wise use, and stimulate their consideration as an equal sector in ICZM.
- 2.4 Promote the establishment of appropriate mechanisms to bring together all major groups involved in ICZM, and encourage actions towards better understanding that coastal wetlands have to be effectively incorporated into ICZM.
- 2.5 Increase educational efforts and raise public awareness on the benefits of wetland management as an active ingredient of ICZM.
- 2.6 Promote the use of various tools and techniques, such as strategic environmental assessment (SEA), environmental impact assessment (EIA), economic and other management instruments, in order to improve the understanding of coastal wetlands as an economically and ecologically critical element of coastal areas.
- 2.7 Encourage the creation of a coastal management authority that will bring together all the sectors and institutions involved in ICZM, including coastal wetland managers.
- 2.8 Stimulate preparation of integrated coastal area management plans, projects and programmes of actions that fully include coastal wetland issues and concerns.
- 2.9 Promote the use of conflict resolution techniques in order to manage disputes that may arise among coastal resource users, including for coastal wetlands, and seek their integration into the ICZM processes.
- 2.10 Establish mechanisms to monitor and evaluate the progress of the implementation of ICZM processes, particularly in relation to the conservation and wise use of coastal wetlands.
- 2.11 Ensure that those responsible for ICZM policy and implementation are fully aware of the national government commitments under the Ramsar Convention, including through their participation in national Ramsar or wetland committees.

B. Ensuring full awareness of the values and functions of wetlands in the coastal zone

Principle 3. Coastal wetlands have important values and functions and provide multiple goods and services of high economic value.

The overall role of coastal wetlands in providing goods and services, values and functions

27. Coastal wetlands have major and varied biological, socio-economic and cultural values through their provision of a wide range of goods and services to people and their livelihoods, as well as through their contribution to the maintenance of biological diversity. In addition to the services they provide in relation to storm and flood control and related issues of water management, goods provided by coastal wetlands which can be vital for the health, safety and welfare of local populations include fruit, fish and shellfish, waterbird, deer, crocodile and other meats, resins, timber for building, fuel wood, reeds for thatching and weaving, fodder for animals, medicinal plants, fertile land for agriculture, agricultural products, water supply, and water transport.

Guideline No. 3 – Ensuring full recognition of the multiple goods and services of high economic value provided by coastal wetlands

- 3.1 Identify the most appropriate tools, such as economic valuation methods, multi-criteria analysis, and environmental and strategic environmental assessment (EIA and SEA), that will permit the full assessment of all social, cultural and environmental values of coastal wetlands, and ensure that these are recognized and applied by coastal managers in implementing ICZM.
- 3.2 Create improved awareness among all major stakeholders of the full range (direct and indirect) of economic values of goods and services provided by coastal wetlands.
- 3.3 Ensure that Ramsar's *Guiding Principles for taking into account the cultural aspects of wetlands for the effective management of sites* (Resolution VIII.19) are taken into account in assessing the cultural significance of coastal wetlands through ICZM processes.

The role of coastal wetlands in coastal processes

28. Naturally-functioning coastal wetlands are maintained by coastal processes and in turn contribute to coastal process management. The pivotal role of wetlands in coastal processes should be recognized and strengthened. Since wetlands have highly interlinked physical, biological, and chemical processes, an alteration of one element can affect the whole coastal process. Sound and sustainable management of coastal wetlands to maintain or enhance their functions in coastal processes is a key part of ICZM.

Guideline No. 4 – Ensuring the recognition by Contracting Parties of the key role of wetlands in coastal processes

- 4.1 Undertake studies to identify the role wetlands play in coastal processes. Based on these findings, Contracting Parties should undertake measures to prevent all activities that have harmful effects on wetlands, including the safeguard and management of the most important wetland areas.
- 4.2 Consider the rehabilitation or restoration of degraded coastal wetlands in order to re-activate their positive role in coastal processes.
- 4.3 Undertake measures in upstream river areas that will prevent harmful practices or developments affecting coastal wetlands, such as construction of dams, pollution discharges and excessive water abstraction (see also Principle 7).

The role of coastal wetlands in mitigating impacts of natural hazards, pollution, and flooding

29. Maintenance of natural coastal shorelines can help to absorb the energy of storm-driven waves before they force inland and cause destruction of property and human life. Shoreline stabilization and storm protection functions of coastal wetlands operate by reducing wind, wave and current energy through the physical presence of shallow intertidal and subtidal systems such as coral reefs, mangroves, tidal flats, and saltmarshes.
30. Without full maintenance of the hydrological and related functions of coastal wetlands, the success of sustainable coastal development is uncertain. Effective integration and maintenance of the hydrological functions of coastal wetlands into ICZM can contribute to improving the coastal waters' quality, reducing the risk to human health and loss of human life and property, increasing the economic value of the coastal land, and maintaining coastal biodiversity.

Guideline No. 5 – Ensuring the recognition by Contracting Parties of the role of coastal wetlands in regulating water flows and water quality

- 5.1 Undertake studies to identify the functions of and benefits provided by coastal wetlands in relation to flood and natural hazard management and ensuring water quality in coastal areas. Based on these findings, Contracting Parties should ensure that the functions and values of wetlands are recognized and incorporated into planning decisions in the coastal zone.
- 5.2 When protection of coastal wetlands from degradation or destruction has not been possible, first review opportunities for the rehabilitation or restoration of degraded coastal wetlands, and secondly consider the creation of additional constructed wetlands within coastal areas, to provide services related to flood and natural hazards control and ensuring water quality in coastal areas.
- 5.3 Undertake assessments to establish the economic and social costs likely to result if the natural functions of wetlands in relation to flood and natural hazards control and water quality are not maintained or are seriously affected or destroyed.
- 5.4 Ensure adequate consideration of the hydrological value of coastal wetlands by improving the awareness of coastal managers of these values and by raising the public awareness of this issue.
- 5.5 Encourage the development of appropriate methods of integration of flood and natural hazards management and water quality control through maintaining natural coastal wetland processes in all phases of the ICZM.

The role of coastal wetlands in mitigation of, and adaptation to, impacts of climate change and sea-level rise

31. A number of coastal wetland types, notably coral reefs, atolls, and mangroves, are considered to be especially vulnerable to the effects of climate change and sea-level rise owing to their limited adaptive capacity, and are likely to undergo significant and

irreversible damage (for further information on wetlands and climate change see Resolution VIII.3 and the information papers COP8 DOC. 11 and COP8 DOC. 40). Such effects may lead to serious diminution in the capability of coastal wetlands to provide their goods and services, values and functions. At worst, major parts of some low-lying countries and islands may become wholly or largely inundated by rising sea levels. Elsewhere, where natural landwards movement of coastal wetlands in response to rising sea levels is impeded by development, coast protection and flood defense, this 'coastal squeeze' will severely restrict the size and width of coastal wetlands and their adaptive capacity.

32. There are a number of potential adaptation options that can contribute to the conservation and sustainable use of coastal wetlands to mitigate the impacts of climate change and sea-level rise. These include: managed landwards reinstatement of coastal wetland habitats through removal of sea defence structures, designing multiple-use reserves and protected areas which incorporate corridors that would allow for migration of organisms as a response to climate change; expanding aquaculture that could relieve stress on natural fisheries; specific management in some ecosystems; and integrated resource management.

Guideline No. 6 – Ensuring the recognition by Contracting Parties of the role of coastal wetlands in mitigating impacts of climate change and sea-level rise

- 6.1 Ensure that climate change predictions and possible responses involving coastal wetlands are fully recognized in ICZM initiatives and their implementation.
- 6.2 Stimulate assessment of the implications and vulnerability of coastal wetlands in relation to climate change and sea-level rise, including from local and traditional knowledge; assess options for maximising their benefits in mitigating climate change and sea-level rise impacts; and ensure that this information is made available to ICZM processes.
- 6.3 Assess the feasibility of adaptation options for coastal wetlands in relation to climate change and sea-level rise scenarios.
- 6.4 Ensure that institutional mechanisms through ICZM are in place for the implementation of adaptation options, including restoration of coastal wetlands, and establish monitoring systems for adaptation programmes.

The role of coastal wetlands as important reservoirs of high species biological diversity, including migratory and non-migratory species and threatened species

33. Nutrient capture and retention makes many coastal wetlands amongst the most productive ecosystems recorded. Coastal wetlands are major reservoirs of biodiversity, and their high productivity often supports not only a high species diversity but also large abundance of many wetland-dependent species, which contribute to the high values and functions of coastal wetlands.
34. The Ramsar Convention includes commitments to species conservation and wise use measures as well as those at the habitat and ecosystem levels. The Convention pays particular attention to migratory species, notably migratory waterbirds and fish and globally and nationally threatened species, and many Ramsar sites have been selected for designation for their importance for these species (see also Principle 6).

Guideline No. 7 – Ensuring the recognition by Contracting Parties of the role of coastal wetlands for wetland-dependent migratory and non-migratory species and threatened species

- 7.1 Ensure that the species components of biological diversity, and the international commitments to their conservation and wise use through the Ramsar Convention and other agreements, are fully recognized and taken into account in decision-making through ICZM processes.
- 7.2 Ensure that ICZM and coastal managers recognize the particular importance of coastal zone wetlands for supporting many globally and nationally threatened species, and that ICZM processes will assist in the continued survival of such species.
- 7.3 Ensure that the particular requirements for the survival of migratory species, including fish, turtles, marine mammals, and migratory waterbirds, and the international commitments to the maintenance of flyway-scale site networks, are fully recognized in ICZM policies and implementation and in other legislation concerning the coastal zone.

C. Using mechanisms for securing the conservation and sustainable use of wetlands in the coastal zone

Principle 4. Mechanisms to resolve jurisdictional overlap in the coastal zone must fully include the legal and institutional frameworks for wetlands.

35. Management problems in the coastal zone can often arise from:
 - i) complex and unclear jurisdictional powers of sectoral managers and decision-makers;
 - ii) unclear definition of respective tasks of coastal resources managers;
 - iii) lack of adequate or contradictory legislation regulating sectoral management in ICZM;
 - iv) lack of an adequate institutional arrangement that guides the ICZM process;
 - v) the sectoral position taken by each management sector vis-à-vis other sectors;
 - vi) too narrowly focused management objectives; and
 - vii) lack of knowledge or capacity in those authorities, often local government, responsible for ICZM implementation.
36. It is important that those responsible for wetlands and the Ramsar Convention become fully aware of which institutional and legislative frameworks concerning the coastal zone apply in their country, and that these arrangements are reviewed, and as necessary amended, so as to ensure that they fully incorporate and are consistent with the wetland commitments under the Ramsar Convention. This has already been called for in Action 2.1.2 of Ramsar's Strategic Plan 1997-2002, and specifically for intertidal wetlands in Resolution VII.21.

Guideline No. 8 – Resolution of issues related to the legal and institutional frameworks and jurisdictional overlap in the coastal zone

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| 8.1 | Define clearly the roles of coastal resource and wetland managers in ICZM, and identify appropriate mechanisms for their effective collaboration. |
| 8.2 | Review existing legislation on integrated coastal management in relation to that for wetlands, and as necessary, develop new legislation to facilitate the integration of wetlands in the implementation of ICZM processes. |
| 8.3 | Review existing institutional arrangements for integrated coastal management and as necessary propose new institutional frameworks designed to avoid jurisdictional conflicts and overlaps in the coastal zone and include the integration of wetland-related issues in the implementation of ICZM. |
| 8.4 | Provide training and awareness-raising for coastal resources and wetland managers at all levels in order to increase understanding of the importance of coastal wetlands in the implementation of ICZM. |
| 8.5 | Seek to secure adequate financial resources to ensure effective operation of organizations and institutions charged with undertaking integrated coastal zone management. |

Principle 5. Many stakeholders use coastal wetlands and must participate fully in their management.

37. Stakeholders' involvement is a vital and important element in ICZM. The process requires a high level of participation, because people who live in the coastal area (including local communities and indigenous peoples) will be greatly affected by the decisions taken within the ICZM process. Therefore, their support greatly increases the chances for the long-term sustainability of the ICZM process. A stakeholder analysis should be a vital early step in the ICZM process, as the basis for identifying and engaging all stakeholders who should be involved.
38. Participation of local communities and indigenous peoples in ICZM is particularly important where they have customary rights or tenure in the coastal zone. The Ramsar Convention has adopted guidance on the involvement of these communities in the participatory management of wetlands (Resolution VII.8). Guidance on wetland education and public awareness has also been adopted by the Convention as its Communication, Education, and Public Awareness Programme (Resolution VIII.31).

<p>Guideline No. 9 – Ensuring stakeholder participation in the conservation and wise use of coastal wetlands</p>

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| 9.1 | Establish mechanisms to identify and involve stakeholders in the planning and management of coastal areas and coastal wetlands, including the adoption of relevant legislation that will facilitate the stakeholders' participation process, by applying <i>inter alia</i> Ramsar's <i>Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands</i> (Ramsar Handbook 5). |
| 9.2 | Pay particular attention to the full involvement in ICZM from its earliest stages of local communities and indigenous peoples that have customary rights or tenure in coastal wetlands. |

- 9.3 Facilitate the active participation of stakeholders, responding to their particular needs and sharing authority and responsibility for coastal wetlands' management, in coordination with other coastal resource management systems.
- 9.4 Support capacity building of all civil society groups (local communities, women and youth, NGOs, professional associations, local authorities, private sector) in order to develop skills for management of resources within coastal areas.
- 9.5 Develop and implement integrated participatory coastal management plans in which the needs and objectives of coastal wetlands management are fully incorporated.
- 9.6 Identify, design and implement community-based demonstration projects and provide additional economic incentives to local communities for coastal wetlands' protection, conservation and sustainable use.
- 9.7 Design and implement educational programmes that would increase the understanding of the need to protect and conserve coastal wetlands, and their values and functions, and the need for ICZM, including through implementation of the Convention's Communication, Education, and Public Awareness Programme.

Principle 6. The designation and management of Wetlands of International Importance in the coastal zone provides a global mechanism for the identification and recognition of critically important parts of coastal zone ecosystems, as the basis for their sustainable management.

- 39. The designation by Ramsar Contracting Parties of appropriate sites for inclusion in the List of Wetlands of International Importance provides a strong mechanism for identifying and recognizing critically important areas of the coastal zone for wetland biodiversity conservation and wise use, as well as the basis for planning and implementing their sustainable management.
- 40. Of the 1179 Ramsar sites designated worldwide (as of July 2002) covering 102.1 million hectares, 541 (46%) sites covering 36 million hectares (35% of the total area) are wholly, or include, coastal and marine wetland types, and numerous others are in the terrestrial parts of coastal zones. Many coastal zone Ramsar sites are large, and in some places they cover the whole coastal zone over substantial areas, for example in large coastal plain estuaries and areas of intertidal flats and coral reef systems. Furthermore, many other areas of the coastal zone not yet designated might qualify for designation according to the Ramsar *Criteria for Identifying Wetlands of International Importance* (Resolution VII.11).

Guideline No. 10 – Ensuring the recognition of the role of Ramsar sites and their management in the ICZM process

- 10.1 In line with Vision and Objectives of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11), identify and establish a coherent national network of Ramsar sites which fully represent the diversity of coastal and marine wetlands and their key ecological and hydrological functions.

- 10.2 Ensure that national ICZM policy guidance recognizes the role and importance of Ramsar sites, including their ecological and hydrological functions for sustaining human life, in the sustainable management of the coastal zone.
- 10.3 Raise awareness with those levels of government responsible for developing and implementing ICZM initiatives of the purpose and management approach embodied in Ramsar site designation, and ensure that such sites are not regarded solely as sectoral nature conservation sites.
- 10.4 Seek opportunities for developing the management of Ramsar sites as demonstration sites for the ecosystem approach to their sustainable use.
- 10.5 Ensure that the Convention's *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14) is available to those responsible for developing and implementing ICZM, and that the management planning processes for Ramsar sites are fully integrated with the ICZM process where it exists for areas including Ramsar sites.
- 10.6 Ensure that those responsible for ICZM recognize and utilise as appropriate the Convention's guidance on wetland management planning for wetlands in the coastal zone that are not designated as Ramsar sites.

Principle 7. Coastal wetlands are highly vulnerable to degradation and loss, but although easily degraded their restoration is costly and sometimes impossible.

- 41. Too often, decision-making in the coastal zone has treated many types of coastal wetlands as unproductive wastelands. It has been thought that the most appropriate management policy would be to control them or to permit encroachment upon them from a wide variety of uses inconsistent with the maintenance of natural coastal processes.
- 42. Many coastal wetland habitats continue to be destroyed at an alarming rate, as a consequence of a wide variety of development activities. Much coastal wetland loss is effectively irreversible, particularly where major urban and industrial development is in place. Nevertheless, restoration and rehabilitation of coastal wetlands should form a component of ICZM implementation as a mechanism for redressing, where appropriate, at least some of the past of habitat loss and for reinstating the important natural coastal protection functions of wetlands. However, such restoration can be much more expensive than exercising the option to maintain naturally functioning coastal wetlands, and the success of coastal wetland restoration is generally unpredictable.

Guideline No. 11 – Ensuring that Contracting Parties consider issues related to the degradation, loss and restoration of coastal wetlands

- 11.1 Choose, and adapt to the local conditions, the most appropriate methodology for assessing the damage to coastal wetlands that are caused by natural events and human actions.
- 11.2 Assess the status of coastal wetlands with regard to their degradation and loss, and undertake the cost/benefit analysis of the environmental, social and economic effects of the implementation of mitigation measures, including restoration, as part of an inventory

of coastal wetlands suitable for restoration, applying guidance on this matter contained in Resolution VIII.16.

- 11.3 Raise public awareness about the benefits of maintaining and restoring the existing coastal wetlands as opposed to their destruction.
- 11.4 If a coastal wetland is to be restored, seek the best possible advice and experience of other similar restorations so as to minimise risks of failure.
- 11.5 Integrate the cost and benefits of the wetland restoration projects in ICZM programmes and projects.
- 11.6 Ensure that full cost/benefit assessment, including the costs of restoring or recreating coastal wetland habitat that would be lost, form an essential part of environmental impact assessments for coastal wetland development projects.
- 11.7 Ensure that the difficulties, costs, and uncertainties of coastal wetland restoration are fully understood by ICZM decision-makers.
- 11.8 Where a coastal zone development proposal could cause loss of part or all of a designated Ramsar site, ensure that all those involved in impact assessment and decision-making are fully aware of the obligations and procedures as established in Articles 2.5 and 4.2 of the Ramsar Convention and the guidance on these matters contained in Resolution VIII.20.

D. Addressing the integration of the conservation and sustainable use of wetlands in broad-scale integrated ecosystem management

Principle 8. ICZM should be linked with river basin/catchment management and oceans and fisheries management so as to secure the conservation and sustainable use of coastal wetlands.

- 43. Influences and linkages of the coastal zone extend far beyond its boundaries: hinterland linkages are extended over the area of entire river basins/catchments, while the seaward influences extend beyond the outer limits of the coastal zone, affecting a number of ocean-related economic activities. A particular challenge for ICZM is to incorporate offshore activities into the process.
- 44. Conversely, activities and water resource management decisions upstream in river basins can have a profound influence on coastal wetlands, for example through changes in sediment and water flow regimes (e.g. increases in discharges due to deforestation and rapid run-off; decreases through trapping of water and sediments in dams), water quantity and quality.

Guideline No. 12 – Ensuring the recognition by Contracting Parties of the linkages between wetlands, ICZM, river basin/catchment management, and oceans and fisheries management

- 12.1 Identify and describe key linkages between wetlands in coastal and river basin/catchment areas and ocean-related activities, and ensure that the roles of inland and coastal wetlands are fully recognized.
- 12.2 Identify the key barriers to the integration of issues related to coastal areas and those related to river basin/catchment areas, and work with those responsible for river basin management and ICZM to overcome them.
- 12.3 Promote the Integrated Coastal Area and River Basin Management (ICARM) approach and identify key stakeholders in the management process.
- 12.4 Stimulate the preparation of integrated coastal area and river basin/catchment management plans, and help to secure adequate resources for their preparation and implementation. Where management plans already exist for river basins/catchments and coastal zones, these should be reviewed and may form the basis for their integration.
- 12.5 Work towards raising the public awareness, including through the Convention's Communication, Education, and Public Awareness Programme, of the necessity to identify and integrate issues common to wetlands, coastal areas, and river basins, and of the need to improve the stakeholders' participation in ICARM.
- 12.6 Review the role and importance of coastal wetlands in supporting fish populations and fisheries, and promote the implementation of FAO's Code of Conduct for Responsible Fisheries, particularly where it relates to coastal wetland issues.

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Appendix 1

ICZM definitions, terms, and current approaches

1. This Appendix provides background information on commonly-used definitions and terms in ICZM, what Integrated Coastal Zone Management is, and general principles and good practice embodied in ICZM implementation.

What is Integrated Coastal Zone Management?

2. ICZM is essentially a mechanism for bringing together the multiplicity of users, stakeholders, and decision-makers in the coastal zone in order to secure more effective ecosystem management whilst achieving economic development and intra- and inter-generational equity through the application of sustainability principles. The ICZM approach is generally facilitated through existing terrestrial and marine territorial planning legislation and mechanisms, where these exist.
3. Although there are many different definitions of ICZM, differences amongst them are minor. Most definitions recognize that ICZM is a continuous, pro-active and adaptive process of resource management for sustainable development of coastal zones, and that its goals have to be achieved within the constraints of physical, social, economic and environmental conditions, as well as within the constraints of legal, financial, and administrative systems and institutions.
4. ICZM does not substitute for sectoral planning and management. Rather it focuses on the linkages between sectoral activities, strengthening and harmonizing sectoral management to achieve more comprehensive sustainability goals.
5. ICZM is a cyclical process, generally composed of three basic stages: 1) initiation; 2) planning; and 3) implementation, monitoring, and evaluation. However, it should operate as an iterative process in which regular adjustments to the planning and implementation phases are made on the basis of review and evaluation.

Definitions and terms in the coastal zone

6. Integrated approaches to coastal management are known under a variety of different names and abbreviations, including Integrated Coastal Zone Management (ICZM), Integrated Coastal Area Management (ICAM), Integrated Coastal Management (ICM), and Integrated Marine and Coastal Area Management (IMCAM).
7. The precise region of coverage and terminology used in ICZM varies between countries and between ICZM initiatives. In some cases, definitions are embedded in legislation, but in others they have developed through general use and application. In not all countries are clear and agreed definitions and delimitations of the of the coastal zone itself, or other related terms, recognized.
8. Most published ICZM guidelines agree that the *coastal zone* is a relatively narrow interface zone between land and sea, where complex and intensive functional and ecological processes that depend on the interaction between land and sea take place. Ecologically,

coastal zones contain a number of critical terrestrial and aquatic habitats that are closely linked with the socio-economic systems, forming complex functional units.

9. However, in different countries, the definition of “coastal zone” that is applied can vary from: the intertidal shore between low and high water marks; this intertidal zone plus adjacent parts of the land, either as a defined distance landward from the shore (sometimes including also wider buffer zonation) or a more flexible inclusion of adjacent terrestrial ecosystems; to terrestrial, intertidal and nearshore marine parts of a coastal system, up to Economic Exclusion Zones of territorial waters.
10. Other terms in use in relation to ICZM include:
 - i) *Coastal area*: geographically broader than the coastal zone, with its boundaries extending further inland. The coastal zone forms part of the coastal area. This is important from the functional point of view, because many processes, be they environmental, demographic, economic or social, actually originate within the wider boundaries of the coastal area, but their main manifestations are visible only within the boundaries of the coastal zone;
 - ii) *Coastal waters*: a narrow near-shore belt of marine and estuarine waters;
 - iii) *Intertidal area (or zone)*: the area between the lowest tide and the shoreline (the landward extent of the tidal influence);
 - iv) *Coastline*: the contact line dividing the land from the coastal water bodies; and
 - v) *Shore lands*: the terrestrial area down to the highest line of tidal influence.
11. Coastal waters, intertidal area, coastline and shore lands all generally form parts of the coastal zone.
12. There are several common problems with effective implementation of ICZM as a consequence of the variation in definitions of the coastal zone concept. First, the national legislation dealing with the issue, if it exists, is usually vague in specifying the exact definitions and boundary criteria for the coastal zone. Second, very often the administrative boundaries do not coincide with the ecosystem boundaries. Third, transboundary coastal zones are often managed with difficulty by the countries concerned, not least since legislation and delimitation of coastal zones can differ greatly between adjacent countries.
13. A further inconsistency in coastal zone definitions arises in that, in some jurisdictions, land-use planning legislative frameworks cover only the terrestrial and intertidal parts of the zone (often extending to the low water line), whereas in others the legislation covers the terrestrial, intertidal, and near-shore marine components of the zone.

General principles and practice of ICZM

14. The purposes of ICZM are generally recognized to be to:

- i) guide the level of coastal uses or interventions so as not to exceed the carrying capacity of the resource base, by identifying which resources need to be harnessed without causing their degradation or depletion, and which resources need to be renewed or rehabilitated for traditional and new uses;
 - ii) respect natural dynamic processes, encouraging beneficial processes and preventing adverse interventions;
 - iii) reduce risks to vulnerable resources;
 - iv) ensure the coastal ecosystems' biodiversity;
 - v) encourage complementary rather than competitive activities;
 - vi) ensure that environmental, social, and economic objectives are achieved at an acceptable cost to society;
 - vi) protect traditional uses and rights and equitable access to resources; and
 - vii) resolve sectoral issues and conflicts.
15. A vital feature of a successful ICZM process is ensuring the full engagement and participation from its earliest stages of local communities, and this is particularly important in circumstances in which much or all of the coastal zone is under local ownership, such as customary tenure and rights to the exploitation of natural resources.
 16. ICZM should incorporate a dual "bottom-up" and "top-down" approach. This seeks to ensure that the interests of all stakeholders are taken into consideration through a local consultation and participation process, whilst at the same time creating a legal and regulatory environment for an effective implementation of the ICZM process.
 17. There are a number of dimensions of integration that need to be taken into consideration within the ICZM process. These include:
 - vertical* - integration among institutions and administrative levels within the same sector;
 - horizontal* - integration among various sectors at the same administrative level;
 - systemic* - the need to ensure that all important interactions and issues are taken into consideration;
 - functional* - interventions by management bodies which must be harmonised with the coastal area management objectives and strategies;
 - spatial* - integration between the land and marine components of the coastal zone;
 - policy* - coastal area management policies, strategies and plans which need to be incorporated into broader-scale (including national) development policies, strategies and plans;
 - science-management* - integration among different scientific disciplines and the transfer of science for use by end-users and decision-makers;
 - planning* - plans at various spatial scales should not have conflicting objectives, strategies or planning proposals; and
 - temporal* - coordination among short-, medium- and long-term plans and programmes.
 18. There is no single general model for a successful ICZM process, since successful implementation depends upon, among other things, local conditions, experience, ecosystem features, and patterns of development pressure, as well as the nature and extent of national and regional legislative and policy frameworks.

19. However, experience with implementing ICZM to date has identified some key components that need to be incorporated in any ICZM initiative if it is to succeed. These include:
 - i) achieving integration and coordination among government departments at various levels;
 - ii) linking sectors by “internalizing” problem solutions within them;
 - iii) achieving long-term sustainability of the intervention by securing its financial security;
 - iv) ensuring political support and institutional arrangements for project implementation;
 - v) securing local community and stakeholders’ full participation and consultation;
 - vi) achieving consensus on the sustainable use and management of coastal resources;
 - vii) shaping the management process to allow flexibility and adaptation to the changing conditions; and
 - viii) fitting the ICZM process to the institutional, organizational, and social environments of the countries or regions involved.
20. ICZM outputs range from global declarations to more detailed local ICZM plans.
21. At a global scale, in 1992 the Rio United Nations Conference on Environment and Development (UNCED) adopted Agenda 21. Chapter 17 of Agenda 21 addresses oceans and sea, living marine resources, and coastal zone management. It offers a variety of global integrated coastal management strategies, as well as an assessment of costs needed for their implementation. The ecosystem-based approach of the Ramsar Convention, embodied in its wise use concept, is consistent with the sustainable development approach for the coastal zone outlined in Agenda 21. An analysis of Ramsar’s contribution to the implementation of Agenda 21, in preparation for the 2002 World Summit on Sustainable Development (WSSD), has concluded that the Convention has contributed significantly to Chapter 17 of Agenda 21, particularly in terms of three of its seven programme areas – integrated management and sustainable development of coastal areas, marine environmental protection, and sustainable use and conservation of marine living resources under national jurisdiction.
22. At the regional scale, examples of ICZM include the Mediterranean Agenda 21 (adopted in 1994), which provides a unique example of a regional strategy in the format of UNCED’s Agenda 21. Also at the regional scale, in response to an extensive project-based demonstration programme which included development of ICZM involving a number of coastal wetlands sites, the European Commission has passed a communication to the European Parliament and Council which incorporates a recommendation detailing a *European Strategy for ICZM*, which was due to be finalised in mid-2002.
23. National coastal policies and legislation are now setting the strategic direction for coastal management in an increasing number of countries, as well as defining the regulatory framework for coastal interventions. These are increasingly complemented by the establishment of appropriate institutional arrangements involving ministries, inter-ministerial coordination committees, coastal agencies, and others, although the extent of such coordination varies greatly between countries.
24. Coastal spatial plans are generally considered as amongst the powerful instruments for guiding coastal development through an ICZM process, and are often developed at a

regional (subnational) scale. Regulation and enforcement tools, often as part of development planning legislation with local government responsible for its application, can also prove valuable instruments in supporting the implementation of such coastal plans. Environmental impact assessment (EIA), strategic environmental assessment (SEA), and economic instruments for environmental management are also increasingly being used to facilitate the implementation of ICZM at national and local levels.

25. At local scale, Local Agendas 21 are being developed in many parts of the world and are proving particularly effective in stimulating stakeholder participation and reaching local consensus on coastal management actions.
26. However, there are a number of frequently encountered barriers that stand in the way of a more effective implementation of ICZM. Bureaucratic inertia, opposition to changes, opposition from multiple private economic interests, lack of adequate political will to start the process, lack of minimal financial resources, complexity of the legislative issues in defining the coastal zone, and lack of understanding between marine scientists and land use planners are generally some of the most important barriers.
27. These barriers may be broken down through actions that include:
 - i) placing the proposed ICZM programme in its full social context at the earliest possible moment;
 - ii) indicating clearly to the largest possible number of stakeholders what ICZM is and what it can, and cannot, achieve;
 - iii) increasing the transparency of the decision-making process through ICZM mechanisms;
 - iv) improving the stakeholders' participation; and
 - v) bringing into the process, as early as possible, the representatives of all affected agencies with regulatory or implementation responsibilities in the coastal zone.

Appendix 2

Rationale for the principles for incorporating wetland issues into ICZM

Principle 1. The Ramsar Convention is the global intergovernmental treaty that specifically addresses the conservation and wise use of coastal zone ecosystems.

1. The Convention's "Classification system for wetland type" lists the following types of wetlands under its section **Marine/Coastal wetlands**:
 - A. *permanent shallow marine waters* in most cases less than six metres deep at low tide, including sea bays and straits;
 - B. *marine subtidal aquatic beds* including kelp beds, sea-grass beds and tropical marine meadows;
 - C. *coral reefs*;
 - D. *rocky marine shores* including rocky offshore islands and sea cliffs;
 - E. *sand, shingle or pebble shores* including sand bars, spits, sandy islets, dune systems and humid dune slacks;
 - F. *estuarine waters*: the permanent water of estuaries and estuarine systems of deltas;
 - G. *intertidal mud, sand and salt flats*;
 - H. *intertidal marshes* including salt marshes, salt meadows, saltings, raised salt marshes, and tidal brackish and freshwater marshes;
 - I. *intertidal forested wetlands* including mangrove swamps, nipah swamps and tidal freshwater swamp forests;
 - J. *coastal brackish/saline lagoons* including brackish to saline lagoons with at least one relatively narrow connection to the sea;
 - K. *coastal freshwater lagoons* including freshwater delta lagoons; and
 - Zk(a) *marine/coastal karst and other subterranean hydrological systems*.
2. In addition, many of the inland wetland types in the Ramsar classification system can occur within the coastal zone as defined for the purposes of ICZM.
3. It is also important to recognize that the Ramsar classification covers human-made as well as natural wetlands, and that artificially-created wetlands in the coastal zone may also be covered under Ramsar site designations (see also Principle 6). In the coastal zone, particularly significant human-made wetland types included in the Ramsar classification system are:
 1. *Aquaculture* (e.g. fish/shrimp) *ponds*; and
 5. *Salt exploitation sites*, such as salt pans and salines.
4. The Convention's ecosystem-based approach for the wise use² of all wetlands, and the extensive guidance adopted by Contracting Parties for its delivery and incorporated in the Ramsar Wise Use Handbooks, is fully consistent with the multisectoral approach embodied in ICZM.

² "Wise use" was defined in 1987 by Ramsar COP3 as "sustainable utilization for the benefit of humankind in a way compatible with the maintenance of the natural properties of the ecosystem".

5. In addition, through its Joint Work Plan 2002-2006 with the Convention on Biological Diversity (CBD) and the decisions of the CBD COP, the Ramsar Convention acts as a lead implementing partner of the CBD for its programme of work on wetlands, including marine and coastal, and inland water ecosystems. The Convention works jointly with the CBD in the delivery of its Jakarta Mandate programme of work on marine and coastal ecosystems, notably concerning ICZM (including through these Principles and Guidelines); marine and coastal living resources, especially coral reefs; rapid assessment methods for marine and coastal biodiversity; and marine and coastal protected areas (see also Principle 6).
6. One of the commitments of countries which are Contracting Parties to the Ramsar Convention is to ensure, as far as possible, the sustainable utilisation of all wetlands in their territories and, for the coastal zone, ICZM processes provide a strong mechanism for securing the intent of that commitment.
7. However, government commitments to sustainable utilization under Ramsar appear to be poorly recognized and seldom utilised in the context of ICZM. Neither is this clearly recognized in most guidelines for ICZM. It is essential, therefore, that all sectors and levels of government (from national to local) and agencies with responsibilities in the coastal zone are made fully aware of, and contribute to the delivery of, their government's commitment to Ramsar's wise use principle, including through the development and implementation of ICZM.
8. Parties to the Ramsar Convention also make commitments to international cooperation under the Convention (see in particular Ramsar Wise Use Handbook 9), which includes the sharing of information and expertise and joint actions for transboundary wetlands, river basins, and migratory species. These established mechanisms provide useful tools and guidance for those implementing ICZM in a transboundary context.

Principle 2. The full incorporation of wetland conservation and wise use issues into ICZM is essential for a successful sustainable coastal management process.

9. Past and present management practices have not always helped towards more effective integrated management of coastal areas, and coastal wetlands have far too often been treated as separate sectoral management issues. This has resulted in the lack of integration, as well as to many conflicting decisions.
10. Coastal areas have predominately been treated within the purview of land use planning and management, which is focused on securing coastal development. Its major outcome has been regulation of the use of coastal space, but this approach has largely failed to secure wider consideration of other important coastal issues.
11. Within land use planning and management, coastal wetlands have generally been perceived as solely within the domain of protected areas management, whose main objective is to secure their protection and conservation. Such planning has often failed to integrate coastal wetlands in wider development objectives, leaving them to be treated as special spatial units that have little to contribute to other coastal sectors. The result has been that, in many parts of the world, the conflicts in coastal use have resulted in continued degradation and loss of coastal wetlands and their functions.

12. Sustainable coastal management is an objective that has yet to be fully delivered. It should encourage the management of all aspects of the human use of the coastal area (within its widest geographical definition) to yield the greatest benefits for the present population, but maintaining the potential of coastal systems to meet the aspirations of future generations. This task involves integrating successfully a range of coastal sectors and activities. Coastal wetlands count among the most crucial parts of coastal systems.
13. The values and functions of coastal wetlands are already well established (see section B of these Principles for further guidance): many of the products and services that they provide are of crucial importance for the functioning of coastal areas, and without them life in coastal areas would be impossible or much poorer. In addition, the ecological value of coastal wetlands and their biodiversity in their own right justifies that coastal wetlands be effectively integrated and managed in ICZM.
14. The distinctive feature of ICZM is that it is both multi-sectoral and operates at different spatial scales of decision-making, and that it strives to integrate and coordinate the activities of all coastal users. It has this multi-objective character because it has both to manage coastal development and to conserve and manage natural resources. While doing so, it must integrate the concerns and objectives of all relevant economic sectors, institutions and social groups. Among the most important linkages that ICZM should achieve, which at the same time constitutes one of its fundamental challenges since in most countries planning does not cross the land-sea interface, is the integration of the terrestrial and maritime domains.
15. The multiple benefits of wetlands as fundamental to maintaining the health of the coastal zone have been poorly understood. Often individual administrations have perceived the potential and value of wetlands only within the context of their own sectoral interests. Since coastal wetlands were therefore undervalued, the real costs of destructive practices affecting them have not been taken fully, if at all, into account. This has often resulted in policy inconsistencies and/or wetland destruction or degradation.

Principle 3. Coastal wetlands have important values and functions and provide multiple goods and services of high economic value.

The overall role of coastal wetlands in providing goods and services, values and functions

16. In many parts of the world, coastal wetlands are of particularly great significance for their provision of fish and shellfish. Not only do coastal wetlands act as habitat for adult fish that provide vital food sources for many local communities, but many, such as estuaries, seagrass beds, coral reefs and mangroves, also act as critical spawning and nursery areas for many species of both inshore and oceanic fish.
17. Naturally-functioning coastal wetlands also contribute vital roles in reducing coastal erosion, buffering storm impacts, and mitigating effects of sea-level rise.
18. Coastal wetlands provide a number of other services for the people, both locally and further afield.

19. There have been many attempts to calculate the total value of products and services that wetlands provide through valuation techniques (see also Ramsar's *Economic Valuation of Wetlands: A Guide for Policy Makers and Planners*, Barbier, Acreman & Knowler, 1997). Although exact figures have proven to be difficult to calculate, there is a general agreement that, if the values also include those of all the environmental services provided by coastal wetlands (e.g., flood and hazard storm protection, climate change mitigation, water purification, water recharge, sediment/pollutant retention, nutrient retention, evaporation, habitats, etc.), this figure would be extremely high.
20. However, many coastal wetland systems and resources have been grossly undervalued in development decisions. Although they produce a number of marketable products that may be valued, the greater part of their value lies in non-marketable goods and services, which therefore remains largely unrecognized. Some of the ecological services provided by coastal wetlands are also considered as public goods, i.e. the services that should be available to everyone at no cost, but these are seldom fully costed in valuation practices. Under-valuation has been a major reason why wetland resources have been misallocated and why conversion of wetlands to other uses has continued to be a common practice, with often serious consequential costs and impacts on local communities.

The role of coastal wetlands in coastal processes

21. Processes operating in coastal waters largely determine the production of renewable resources and regulate vital processes, such as water quality and coastline dynamics. Processes operating in the coastal (terrestrial) strip determine whether or not people can settle safely in this zone. Beach erosion and devastating floods are, however, constant threats to coastal communities. Hydrological and biological processes in estuaries, where rivers discharge into the sea, are particularly complex because of the mixing of fresh and saline waters and the interaction of tidal flows and river discharge determining sediment movement and deposition. Such processes can be readily disrupted by human interventions that unwittingly alter salinity, water flows, and sedimentation, and which can limit the adaptive capacity of coastal systems to respond to change.

The role of coastal wetlands in mitigating impacts of natural hazards, pollution, and flooding

22. Coastal erosion can be increased as a result of, for example, removal of protective barriers, removal of wetland vegetation, direct removal of wetland sediment, reduction of sediment inputs, and land-claim or reclamation of coastal wetlands and the construction of hard artificial shorelines and barriers to coastal sediment transport, such as groynes and breakwaters. The benefits and risks of construction of such hard shoreline stabilization and storm protection measures need to be carefully evaluated against the opportunities for maintaining or restoring the buffering provided by naturally-functioning coastal wetlands.
23. Other human actions can also indirectly cause coastal erosion, for example, as a consequence of construction works in coastal wetlands or in upstream parts of rivers, mariculture in mangrove swamps, other forms of aquaculture, coastal agriculture, damming of rivers, reduction of soil erosion in drainage basins, and salt marsh land reclamation.
24. It is, however, important to keep in mind that many coastlines are naturally dynamic, and cycles of erosion are often an important feature of their ecological character. Attempts at

artificial control of erosion where, for example, conflicts arise between the natural ecosystem functioning and protection of life and property, can have consequential effects on erosion and sedimentation patterns elsewhere in the coastal zone.

25. Sediment and nutrient retention and export (a bio-geochemical function of wetlands) is beneficial because coastal wetlands, by slowing down the force of water, encourage the deposition of sediments (which would otherwise be lost through coastal erosion) and nutrients carried in water. Nutrient retention in wetlands makes them produce great volumes of organic matter, which forms the base of the aquatic food chain. Sediment brought down by rivers builds up rich and fertile deltas and is important in balancing coastal land loss. Coastal deltas are dependent on riverine sediments and nutrients for their survival. In other coastal wetland systems most sediment is brought in by currents from the reworking of offshore marine sediments.
26. Wetlands in the terrestrial part of the coastal zone and upstream often play a crucial role in flood and storm control. Flood management requires implementation of coastal flood and erosion control measures, but wetlands can reduce the need for expensive engineering structures for water management. Wetland vegetation also plays a role in slowing down the rate of flow of floodwaters.
27. Coastal terrestrial wetlands and those further up-river help to purify polluted water, particularly urban waters and agricultural runoff, through natural filtration, by processing chemical and organic wastes before they enter the coastal waters. This reduces the eutrophication of coastal waters and limits the high concentration of nutrients reaching groundwater supplies or other water sources that may be used for drinking water.
28. However, water quality in many coastal wetlands is still affected by pollution carried by rivers. Pollution can be generated by discharges from industrial waste-waters, domestic sewage (particularly from overcrowded cities), forestry and agriculture operations, temperature increases caused by the operations of thermoelectric plants, construction of large reservoirs or dams that slow the water flow, recreational activities, airborne dust, and oil from offshore installations. Coastal wetlands help cleanse the polluted water before it is discharged into the sea, but the chemical pollution introduced into coastal wetlands can greatly affect their natural ecological character.

The role of coastal wetlands in mitigation of, and adaptation to, impacts of climate change and sea-level rise

29. Direct impacts of rising sea levels may include increased levels of inundation and storm flooding; accelerated coastal erosion; seawater intrusion into fresh groundwater; encroachment of tidal waters into estuaries and river systems; elevated sea surface temperatures and ground temperatures contributing to the increase of wave activity and storm waves and surges.
30. Rising sea-surface temperatures associated with climate change are considered to be already affecting coral reefs through increased bleaching and reduced calcification rates – in turn, increasing impacts on mangrove and coastal lagoons are expected soon, often as a consequence of the loss of the storm buffering role of coral reefs.

31. There are also a number of predicted indirect impacts of climate change on coastal wetlands due to changes in storm surges and increased saltwater intrusion into the freshwater systems as a consequence of rising sea levels.
32. Coastal wetlands play a very important role in mitigating the effects of climate change. They play a major role in carbon, nitrogen, and sulphur cycles, and degradation of coastal wetlands could disrupt these cycles. The maintenance of forested coastal wetlands, notably mangroves, may become increasingly important in their role as carbon sinks.
33. Sometimes the human response to climate changes may also impact indirectly on coastal wetlands. Thus, for example, increasing aridity inland can lead to a greater proportion of river flow being intercepted before the river discharges to the coastal zone, thus reducing sediment inputs and increasing salinity in coastal wetland systems.
34. Sea-level rise associated with climate change may lead to large negative effects on coastal areas, causing the loss of property and human lives, changes in coastal ecosystems causing a decrease in their productivity, and changes in coastal resource systems (freshwater, land, soil, vegetation, etc.).

The role of coastal wetlands as important reservoirs of high species biological diversity, including migratory and non-migratory species and threatened species

35. Some coastal wetlands, for example coral reefs, are known to support as large a species diversity as any ecosystem in the world, and are a particularly rich source of genetic material. Coastal wetlands, notably mangroves, coral reefs and seagrass beds, also support a very high diversity of fish and shellfish species, both for adults and as spawning and nursery areas for juvenile stages, many of which are commercially important as food. Many globally and nationally threatened species of plants and animals also depend upon coastal wetlands for their survival.
36. Some species live permanently in coastal wetlands, whereas others spend only part of their time there but are nevertheless dependent on these coastal wetlands during different stages of their life-cycles. Coastal wetlands also provide critical habitat networks and migratory pathways for migratory species, notably waterbirds, fish and turtles, and some cetaceans.
37. Maintaining coastal wetland habitats is crucial for the overall ecology of coastal areas and their support of the many coastal wetland-dependent species. Hence the continuing loss and degradation of coastal wetland habitats (see also Principle 7 below) threatens the survival of many coastal wetland species important for the maintenance of biodiversity and of socio-economic importance.
38. The requirements of migratory waterbirds dependent on coastal wetlands are of particular significance to the integrated management of coastal systems. Such species require the maintenance of habitat networks, both local, national and international at different spatial scales for their survival through their annual migrations.
39. At the international scale, many migratory waterbirds depend upon the continued presence of a network of migratory staging areas and non-breeding grounds that are often widely separated geographically along migratory flyways. For many species, critical parts of these networks are in the coastal zone. A number of initiatives have been established in different

parts of the world that seek to identify and safeguard site networks, including many coastal wetlands. These include the African-Eurasian Migratory Waterbird Agreement (AEWA), the Asia-Pacific Migratory Waterbird Conservation Strategy (APMWCS), and the Western Hemisphere Shorebird Reserves Network (WHSRN), as well as others that are under development.

40. ICZM initiatives in one coastal area need to take into account these requirements of migratory species and the international commitments to their conservation, since removing or damaging one link (e.g., land-claim or reclamation of an estuary) in a migratory chain may threaten the viability of migratory populations throughout their flyways.
41. In addition, at smaller spatial scales, for example within a tidal estuary, waterbirds also generally require a mosaic of coastal habitats for feeding and roosting at different stages of a tidal cycle, and ICZM planning needs to be well informed of such requirements, as well as of the implications of selective removal or degradation of some elements of the coastal habitat mosaic.

Principle 4. Mechanisms to resolve jurisdictional overlap in the coastal zone must fully include the legal and institutional frameworks for wetlands.

42. Establishment of an appropriate legal and institutional framework is crucial for the long-term sustainability of ICZM processes. It is also necessary to achieve a certain level of flexibility in defining boundaries of coastal wetlands and coastal zones in order to avoid unnecessary conflicts among resource management domains.
43. Legislative and institutional frameworks for ICZM differ greatly between countries, as do the legislative and institutional responsibilities of different levels of government from national to local level. In some countries there are strong national legislative frameworks, but in others ICZM is at best policy-driven and/or voluntary. In some countries, ICZM implementation is directed from national government, but in many others the implementation responsibility lies with regional or local government, often chiefly delivered through general development planning powers which do not necessarily recognize the complexity of coastal zone jurisdictions.
44. It is likewise important to ensure that institutional capacity is sufficient to secure full integration of wetlands into ICZM, through training and awareness raising of those institutions responsible for ICZM and by securing adequate resources for implementation through the involvement of all relevant sectors, including those in local government.

Principle 5. Many stakeholders use coastal wetlands and must participate fully in their management.

45. Stakeholders should be stimulated to take an active part in all stages of the ICZM process: initiation, planning (data collection, analysis, conflict identification, objectives definition, strategy formulation, and integration of sectoral plans), and monitoring and evaluation. Extensive public consultation should be held in advance of important decisions being taken. Conflicts among coastal users should be identified as early as possible, and their resolution should be built into the ICZM process.

46. Until recently, stakeholder involvement and community participation in environmental management was relatively limited. However, the 1992 Rio Conference (UNCED) has led to a major shift in this attitude. Elements of civil society (local communities, NGOs, professional associations, local authorities, the private sector) have become more prominently recognized, and consensus has evolved that the long-term sustainable use of major natural resources depends upon the understanding and support of those who are closely connected with them.
47. Coastal areas, including their wetlands, are often managerially very complex because of the large number of users and stakeholders involved. There is a large degree of shared, and often overlapping, jurisdiction, and a great amount of common property resources involved. Resource management initiatives have both to involve all levels of government (sometimes called “vertical concertation”) and reach a high degree of coordination among sectoral actors (“horizontal concertation”). This can only be possible if wide stakeholder participation is achieved.
48. Education and public awareness is very important in this endeavour, but it should not be confused with participation. Education and awareness helps the stakeholders better to understand sustainable use and value of coastal resources, but it is only the participation, as a part of the political and decision-making process, that leads to a consensus to support certain decisions. Participation is not about changing stakeholders’ views, but rather about shifting their perspective from taking an exclusively sectoral view to a more integrated agenda that will make all the parties better prepared to address major environmental management issues in coastal areas.

Principle 6. The designation and management of Wetlands of International Importance in the coastal zone provides a global mechanism for the identification and recognition of critically important parts of coastal zone ecosystems, as the basis for their sustainable management.

49. Ramsar site designation is guided by the Convention’s *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*, adopted in 1999 under Resolution VII.11, whose vision is “to develop and maintain an international network of wetlands which are important for the conservation of global biodiversity and for sustaining human life through the ecological and hydrological functions they perform”. On the *Strategic Framework*, the Convention’s Contracting Parties established that the international network has to be built from coherent and comprehensive national networks of designated Ramsar sites.
50. Under the Convention, governments are expected to develop sustainable management plans for their Ramsar sites that are compatible with the maintenance of their ecological character and key biodiversity features.
51. It is important that Ramsar sites are recognized, in general, as multiple use areas that provide vital goods and services to people and their livelihoods, and normally not solely as “protected areas”. Relatively few Ramsar sites are nature reserves where the primary land use is for nature conservation, yet there is a common misconception that Ramsar sites are only relevant under ICZM as a sectoral nature conservation and protected areas interest.

52. There are major opportunities to use Ramsar sites, in the coastal zone and elsewhere, as demonstration sites for the ecosystem approach to sustainable utilisation and management (including full stakeholder and local community participation) and the delivery of ICZM.
53. In the *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14), the Parties stress that it is essential to ensure the participation of all stakeholders, particularly local communities and indigenous peoples, in the management planning process, and to develop management planning in its wider context of river basin and coastal zone planning and management. This is wholly consistent with the principles and practice of ICZM.

Principle 7. Coastal wetlands are highly vulnerable to degradation and loss, but although easily degraded their restoration is costly and sometimes impossible.

54. Many coastal wetlands have been degraded or destroyed through a variety of development activities, including: agriculture and forestry (drainage, embankment construction, fertiliser and pesticide use, water abstraction for irrigation, dune stabilisation, and conversion of natural forests to intensive plantation); transport (navigation channels, road and railway construction, drainage and embankments, and landscape fragmentation); energy (hydro-electric power dams, electricity lines, power station construction); tourism and recreation (floodplain and coastline infrastructure development, leisure navigation, damage to habitats due to pressure of tourists, pollution); urban and industrial development (including direct habitat loss, and increased run-off and other inflows); construction of dams and embankments to protect infrastructure; drainage of land for new development; waste disposal and pollution; ground and surface water abstraction; extractive industries (gravel extraction and toxic mining waste); and the indirect effects of climate change (erosion due to sea-level rise, changing rainfall patterns).
55. Many important coastal wetland habitats continue to be destroyed at an alarming rate. For example, in tropical regions up to 80% of mangroves are believed to have been lost from a range of countries, with rates of destruction being most rapid during the past 50 years. Coral reefs are also highly vulnerable to habitat destruction because of their physical structure, and damage often occurs as a result of unregulated and/or uncontrolled tourism activity, increased sediment discharge from rivers into the coastal zone, and from destructive fishing techniques. Such loss and damage to coral reefs is in addition to the problems they are facing from coral bleaching as a consequence of rising sea surface temperatures. In some developed temperate countries, over one-quarter of highly productive estuarine habitat has been lost, largely for agriculture, industrial development, and related infrastructure.
56. Much coastal wetland loss is effectively irreversible, particularly where major urban and industrial development is in place. Nevertheless, restoration and rehabilitation of coastal wetlands should form a component of ICZM implementation as a mechanism for redressing, where appropriate, at least some of the past of habitat loss and for reinstating the important natural coastal protection functions of wetlands. However, as for other wetlands, the Ramsar Convention guidance on wetland restoration (Resolution VIII.16) is that this should be a secondary option, less preferable than the strategy of continuous conservation and sustainable use of existing coastal wetlands and their values and functions.

57. There have been some successes in coastal habitat restoration, mostly at a small scale, for example in mangrove restoration and in re-establishing tidal marshes on claimed agricultural land. However, experience so far is that currently available restoration techniques for coastal wetlands are generally imprecise and the outcomes unpredictable in relation to restoration objectives. Very seldom can restoration or rehabilitation re-create conditions and values that attain those of pristine natural coastal wetland ecosystems.
58. Furthermore, restoration is a long-term and costly process that includes technical, as well as institutional, economic and regulatory measures, as well as monitoring and management as a restoration project proceeds. A full cost/benefit assessment, including the costs of restoring or recreating coastal wetland habitat that would be lost, should be an essential part of ICZM decision-making.
59. The Ramsar Convention stipulates that destruction of part or all of a designated Ramsar site should only be permitted in the “urgent national interest” (Article 2.5 of the Convention) and that under such circumstances compensatory habitat provision should be made (Article 4.2). Guidance adopted by the Convention in 2002 (Resolution VIII.20) on such compensation indicates that wherever possible it should provide for the habitats and species characteristic of the destroyed area, although it is recognized that this is often hard to achieve.

Principle 8. ICZM should be linked with river basin/catchment management and oceans and fisheries management so as to secure the conservation and sustainable use of coastal wetlands.

60. River basins are increasingly becoming the primary unit for water resource management and for many river basins management authorities have been or are being established. The Ramsar Convention has also adopted *Guidelines for integrating wetland conservation and wise use into river basin management* (Resolution VII.18) in recognition of the important role that inland wetlands play in water resource management. However, it is also essential that river basin (or catchment) management processes should be closely linked with ICZM processes in related areas.
61. The approach of Integrated Coastal Area and River Basin Management (ICARM) requires the adoption of goals, objectives and policies, as well as the establishment of governance mechanisms which recognize the interrelationships between the two systems with a view to their sustainable development. The basic principles of ICARM are the same as those for ICZM (see Appendix 1) but applied simultaneously to the two, linked, systems. The importance of both inland and coastal wetlands as a pre-requisite for successful ICARM needs to be fully recognized.
62. Likewise, activities further off-shore outside the coastal zone, for example unsustainable fisheries, can lead to degradation in biological diversity and change in the ecological character of coastal wetlands which species may utilise at different stages of their life-cycles; offshore sediment extraction can lead to increased coastal erosion; oil and other toxic chemical spillage from off-shore oil exploitation and shipping can cause severe on-shore pollution events impacting coastal wetlands.
63. Fishing and aquaculture are amongst the most important ocean-related economic activities. However, existing fisheries policy and management in many countries have failed to create

a positive environment for sustainable use of this resource. This has brought increasing resource degradation, further overexploitation of the resource base, and inequity. Three main threats to coastal fisheries are considered to be: open access to fisheries, the loss of fish habitat, and water pollution.

64. Fisheries should be fully integrated into ICZM, since many fish populations are highly dependent on coastal wetlands, yet fisheries jurisdiction and management often continue to be maintained as a separate sectoral process. Integrating fisheries into ICZM requires deciding how coastal resources should be used, and taking into account the needs of local communities (including fishers) and considering their opinions as crucial input in the planning process. Where the coastal zone (including coastal wetlands) has multiple uses, fisheries practices should be carried out to avoid conflict among fishers and other users. Important coastal wetland fish habitats such as mangroves, coral reefs and lagoons should be protected from destruction and pollution.
65. The adoption of the FAO Code of Conduct for Responsible Fisheries is considered to be a positive step towards sustainable fishery resources management. All people involved in fisheries should strive to achieve maximum sustainable yield, i.e. to achieve long-term sustainable use of fish resources, as a means of assuring resource conservation, continued food supplies, and alleviation of poverty in fishing communities.

"Wetlands: water, life, and culture"
8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002

Resolution VIII.5

Partnerships and synergies with Multilateral Environmental Agreements and other institutions

1. RECALLING that Operational Objective 7.2 of the Strategic Plan 1997-2002 identified a range of actions to strengthen and formalize linkages with other international and/or regional environment conventions;
2. WELCOMING the progress made by the Convention in the past triennium in cementing and expanding its cooperation with other Multilateral Environmental Agreements (MEAs) and institutions;
3. ALSO WELCOMING the participation of the Convention in the MEA-related work of the Open-ended Group of Ministers or their Representatives on International Environmental Governance established by Decision 21/21 of the Governing Council of the United Nations Environment Programme (UNEP), as well as in the Ecosystem Management Group (EMG) established by the United Nations General Assembly to coordinate the environmental work of the United Nations system and MEAs;
4. EXPRESSING APPRECIATION to UNEP and to the United Nations University (UNU), among others, for the work carried out to improve synergies among MEAs;
5. NOTING WITH PLEASURE Decision V/2 of COP5 of the Convention on Biological Diversity (CBD) which "endorses the proposed joint work plan for the period 2000-2001 of the Convention on Biological Diversity and the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, which includes, *inter alia*, a River Basin Initiative, encourages Parties, other Governments and relevant bodies to support and participate in the Initiative, and stresses that Parties to the Convention on Biological Diversity that are not Parties to the Ramsar Convention shall not be disadvantaged in the workings and implementation of the joint work plan"; and Decision VI/20 of CBD COP6 which "welcomes and endorses the third joint work plan (2002-2006) between the Convention on Biological Diversity and the Ramsar Convention on Wetlands";
6. ALSO NOTING WITH SATISFACTION the approval by the Standing Committee of the Convention and by the Council of UNESCO's Man and the Biosphere Programme (MAB) of a Programme of Joint Work between Ramsar and MAB;
7. WELCOMING the preparation of the Joint Work Plan with the Convention on Migratory Species (CMS) and the African – Eurasian Migratory Waterbird Agreement (AEWA) concerning joint actions to safeguard migratory waterbirds and their habitats;

8. FURTHER WELCOMING the Memorandum of Cooperation and Joint Work Plan with the South Pacific Regional Environment Programme concerning cooperation and support for wetland conservation and wise use in Pacific Island countries;
9. RECOGNIZING the developing collaboration with regional seas conventions through the Memoranda of Cooperation with the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention) and The Coordinating Unit of the Mediterranean Action Plan of the Secretariat of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention);
10. WELCOMING the establishment of the Joint Liaison Group between the Convention on Biological Diversity, the UN Framework Convention on Climate Change (UNFCCC), and the UN Convention to Combat Desertification, and the conclusion of the UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA) at its 16th session concerning its potential synergies with the Ramsar Convention;
11. WELCOMING the invitation extended to the Ramsar Convention from the SBSTA of UNFCCC to share information and participate in the meetings of the Joint Liaison Group referred to in the previous paragraph;
12. HAVING ADOPTED at this meeting the Convention's Strategic Plan 2003-2008, which includes in its Operational Objective 13 on 'Collaboration with other institutions' a series of Actions related to the partnerships and synergies with MEAs and other agencies;
13. WELCOMING the decision of the Second Global Environmental Facility Assembly (GEF), held in Beijing (China) from 16-18 October 2002, to approve the "land degradation, primarily desertification and deforestation, and persistent organic pollutants" as new GEF focal areas; and
14. NOTING once more the benefits to be gained from synergy and integrated implementation, where appropriate, of MEAs, at all levels: global, regional, national and local;

THE CONFERENCE OF THE CONTRACTING PARTIES

15. URGES Contracting Parties, the Scientific and Technical Review Panel (STRP), the Standing Committee, and the Bureau, in cooperation with the governing and subsidiary bodies and the secretariats of other Multilateral Environmental Agreements (MEAs), the International Organization Partners, and other collaborators, to implement fully the actions contained in Operational Objective 13 of the Strategic Plan 2003-2008 on 'Collaboration with other institutions';
16. FURTHER URGES Contracting Parties to make renewed efforts to increase collaboration at the national level between the institutions and focal points responsible for the implementation of MEAs, including through ensuring their participation in National Ramsar Committees, so as to foster synergies and harmonisation;
17. REQUESTS the Bureau to continue to participate in and contribute to the work of the United Nations Environment Programme, in particular its Division of Environmental

Conventions and the World Conservation Monitoring Centre, in the area of promoting synergies among MEAs, as well as in the work of the Environmental Management Group (EMG);

18. WELCOMES AND ENDORSES the third Joint Work Plan (2002-2006) between the Convention on Biological Diversity and this Convention, the Programme of Joint Work between MAB and this Convention, the Joint Work Plan with the South Pacific Regional Environment Programme (SPREP), and the Joint Work Plan between the Convention on Migratory Species and the African-Eurasian Migratory Waterbird Agreement and this Convention;
19. URGES Contracting Parties, the International Organization Partners, and other collaborators to contribute actively to the work of the joint Ramsar/CBD River Basin Initiative;
20. URGES AGAIN eligible Contracting Parties of both the Ramsar Convention and the CBD to develop projects suitable for consideration by the Global Environment Facility (GEF), in accordance with paragraphs 6 and 7 of Decision IV/4 of CBD's COP4 relating to inland water ecosystems, and to communicate details of progress on these to the Ramsar Bureau;
21. REQUESTS the Ramsar Bureau to further strengthen its working relations with the GEF Secretariat;
22. INVITES the GEF Council to consider affording to the Ramsar Convention, represented by the Ramsar Bureau, the status of observer at all Council and Assembly meetings of GEF, so that the Convention can be in a better position to provide advice on its areas of expertise to the Council and its member States, particularly in view of the Joint Work Plan between Ramsar and the CBD;
23. DIRECTS the STRP, in accordance with Resolutions VII.2 and VIII.28 on the Panel's *modus operandi* and subject to the availability of funds and human resources, to exchange information, cooperate and coordinate activities, where appropriate, with the equivalent subsidiary bodies of other MEAs and relevant regional fora, and to report, through the Standing Committee, to Ramsar COP9; and
24. FURTHER DIRECTS the Ramsar Bureau, in collaboration with the secretariats and other bodies of other MEAs and relevant regional fora, to keep under regular review the progress, successes and constraints in the implementation of joint work between these bodies and the Convention, and to report to Ramsar COP9.

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Resolution VIII.6

A Ramsar Framework for Wetland Inventory

1. RECALLING Recommendation 1.5, in which the Contracting Parties stated the need to prepare inventories of their wetlands “as an aid to the formulation and implementation of national wetland policies”, and Resolution VII.6, in which the Parties adopted guidelines on these matters;
2. RECALLING ALSO Recommendation 4.6, Resolutions 5.3 and VI.12, and Action 6.1.2 of the Strategic Plan 1997-2002, in all of which the Parties recognized the value of national inventories for identifying sites suitable for inclusion in the List of Wetlands of International Importance (the Ramsar List) under the Convention;
3. AWARE that in Action 6.1.3 of the Strategic Plan 1997-2002 and Resolution VII.20 the Parties also recognized the importance of baseline wetland inventory for quantifying the global wetland resource as the basis for assessment of its status and trends, for identifying wetlands suitable for restoration, and for risk and vulnerability assessments;
4. NOTING that this meeting has adopted *Principles and guidelines for wetland restoration* (Resolution VIII.16); *Wetland issues in Integrated Coastal Zone Management (ICZM)* (Resolution VIII.4); *Additional guidance for identifying and designating under-represented wetland types as Wetlands of International Importance* (Resolution VIII.11); *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14); and *Guidelines for Global Action on Peatlands* (Resolution VIII.17), the implementation of all of which will be substantially assisted by the availability of wetland inventory at national and other scales;
5. RECALLING the findings of the report of Wetlands International entitled *Global Review of Wetland Resources and Priorities for Wetland Inventory* (GRoWI), from which it was indicated to COP7 that few countries, if any, had comprehensive national inventories of their wetland resources, and that it was not possible to provide a clear baseline estimate of the world’s wetland resources with any confidence;
6. NOTING that a joint project between Wetlands International and the Institute for Inland Water Management and Waste Water Treatment (RIZA) in the Netherlands has expanded and updated the GRoWI analyses for all European countries;
7. AWARE that the Millennium Ecosystem Assessment (MA) is evaluating the condition, status and trends in global ecosystems including inland wetlands, subterranean (karst), and coastal and marine systems, and that this will include new applications of remote sensing which may enhance information on the global distribution of wetlands and their status;

8. ALSO AWARE that the European Space Agency's project Treaty Enforcement Services using Earth Observation (TESEO) is evaluating the use of remote sensing for wetland inventory, assessment, monitoring and site management, as well as for dryland ecosystems;
9. RECALLING that in Resolution VII.20 the Conference of the Parties urged "all Contracting Parties yet to complete comprehensive national inventories of their wetland resources, including where possible wetland losses and wetlands with potential for restoration, to give highest priority in the next triennium to the compilation of comprehensive national inventories", but NOTING with concern that in their National Reports to this meeting only 51 Contracting Parties have reported the existence of partial inventories or the initiation of national wetland inventory, and only 29 the completion of comprehensive inventories;
10. ALSO RECALLING that in Resolution VII.20 the Contracting Parties requested the Scientific and Technical Review Panel (STRP), in collaboration with Wetlands International, the Ramsar Bureau, and other interested organizations, to review and further develop existing models for wetland inventory and data management, including the use of remote sensing and low-cost and user-friendly geographic information systems, and to report their findings to the 8th Meeting of the Conference of the Contracting Parties with a view to promoting international common standards;
11. FURTHER RECALLING that in Resolution VII.20 the Contracting Parties resolved that their inventory data, where it exists, should be housed and maintained in such a way that the information resource should be available to all decision-makers, stakeholders, and other interested parties;
12. APPRECIATIVE of the financial support of the governments of the United Kingdom and the United States of America for the preparation by the STRP of further guidance on wetland inventory; and
13. RECOGNIZING that various methodologies for national inventory can in general be applied also to local, sub-national (e.g. provincial), and transboundary international scales;

THE CONFERENCE OF THE CONTRACTING PARTIES

14. ADOPTS the *Framework for Wetland Inventory* as annexed to this Resolution;
15. RECOGNIZES that it is appropriate to apply different wetland inventory approaches, methods and wetland classifications for different purposes and objectives, but that common standards can be achieved by ensuring consistency in the collection of a core (minimum) dataset, as provided in the Framework;
16. URGES all Contracting Parties that have yet to complete comprehensive national wetland inventories to continue to give a high priority in the next triennium to the compilation of such inventories, utilizing the *Framework for Wetland Inventory* to ensure that their inventory design appropriately addresses their purpose and objectives, in order that their activities that require the sound basis of wetland inventory, such as policy development and Ramsar site designations, can be carried out on the basis of the best possible information;

17. ENCOURAGES Contracting Parties initiating development of a national wetland inventory to consider the application or adaptation of an existing inventory methodology and data management system, including the updated inventory methodology developed by the Mediterranean Wetlands Initiative (MedWet), the Asian Wetland Inventory and other appropriate methodologies, so as to ensure consistency in inventory data and information collected;
18. CALLS UPON Contracting Parties that have undertaken wetland inventories to ensure that they have appropriate arrangements in place for housing and maintaining their wetland inventory data, both in printed and electronic formats, and, where appropriate, to make this data and information available, including where possible through the World Wide Web and CD-ROM formats, to all decision-makers, stakeholders, and other interested parties;
19. ALSO CALLS UPON all Contracting Parties and others who have undertaken, or are undertaking, wetland inventory to document information about the inventory, its data holdings, management and availability using the standard metadata record provided in the *Framework for Wetland Inventory*, so as to make this information available as widely as possible;
20. REQUESTS the Ramsar Bureau and Wetlands International, working with its Wetland Inventory and Monitoring Specialist Group, to make available, if possible, the standard metadata record for wetland inventory on the World Wide Web so that Contracting Parties and others can report and make fully available the information about their wetland inventories, and so as to assist in the updating by Wetlands International of global information about the status of wetland inventory;
21. ENCOURAGES Contracting Parties and other interested organizations and funding bodies to provide resources to Wetlands International, working with other relevant organizations, to review and update the *Global Review of Wetland Resources and Priorities for Wetland Inventory* (GRoWI) report made available to COP7, and to report on its findings to the 9th Meeting of the Conference of the Contracting Parties, including progress in the implementation of Resolution VII.20;
22. REQUESTS the Scientific and Technical Review Panel, working with Wetlands International, the Ramsar Bureau, remote sensing agencies, and other interested organizations to review further the application of remote sensing data, low-cost geographical information systems, and classification systems in wetland inventory, and to report on its findings to the 9th Meeting of the Conference of the Contracting Parties;
23. CALLS UPON Contracting Parties and other organizations with experience in training and capacity building in wetland inventory, including in the use of remote sensing and geographical information systems, to work with Wetlands International in order to make available this expertise through the Ramsar Training Framework, once established;
24. FURTHER CALLS UPON bilateral and multilateral donors to assign priority to supporting wetland inventory projects in developing countries and countries with economies in transition, noting the importance of such projects in forming the basis for developing and implementing the sustainable use of wetlands; and

25. REQUESTS Contracting Parties to give priority to submitting wetland inventory projects to the Ramsar Small Grants Fund.

Annex

A Framework for Wetland Inventory

Background and context

1. In Resolution VII.20 (1999) the Contracting Parties recognised the importance of comprehensive national inventory as the vital basis for many activities necessary for achieving the wise use of wetlands, including policy development, identification and designation of Ramsar sites, documentation of wetland losses, and identification of wetlands with potential for restoration (see also Resolutions VII.16 and VIII.17). It also encouraged the collection of information for the management of shared wetlands, including those within river basins and/or coastal zones (see also Resolutions VII.18 and VIII.4) as appropriate. Furthermore, Operational Objective 1 of the Convention's Strategic Plan 2003-2008 is devoted to wetland inventory and assessment, with a series of concrete actions to achieve this Operational Objective.
2. The *Global Review of Wetland Resources and Priorities for Wetland Inventory* (GRoWI), prepared in 1999 for the Ramsar Convention by Wetlands International and the Environmental Research Institute of the Supervising Scientist, Australia, indicated that few countries have comprehensive national inventories of their wetland resources, and lack this essential baseline information on their wetlands. In addition, the National Reports submitted to Ramsar COP8 indicated that insufficient progress has been made in wetland inventory.
3. The GRoWI review concluded that a clear identification and statement of purpose and objectives is fundamental to the design and implementation of effective and cost-efficient inventory, but found that the purpose and objectives for many existing inventories were poorly, if at all, stated.
4. In Resolution VII.20 the COP urged Contracting Parties which had yet to complete national inventories of their wetland resources to give the highest priority to the compilation of comprehensive wetland inventories, and requested the Convention's Scientific and Technical Review Panel (STRP) to review and further develop existing models for wetland inventory and data management, including the use of remote sensing and low-cost and user-friendly geographic information systems.
5. This *Framework for Wetland Inventory* has been developed by the STRP, working with the Ramsar Bureau, Wetlands International, the Environmental Research Institute of the Supervising Scientist (Australia) and others, in response to Resolution VII.20. The Framework provides guidance on a standard approach to designing a wetland inventory program. It includes information on determining appropriate remote sensing techniques to apply, wetland classifications and existing standardised inventory methods, and recommends standards for core data fields and data and metadata recording.
6. The Framework provides guidance for designing wetland inventory at multiple scales from site-based to provincial, national and regional. The extent of detail that can be compiled in the inventory will generally decrease as the geographical area of coverage increases, unless large resources can be allocated for the program.

7. The data fields included in any particular inventory will be based on the specific purpose and scale of the inventory. A core data set is recommended as a minimum, but with the option of adding further data fields as required.
8. The Framework uses the definition of “inventory” agreed in Workshop 4 on *Wetland Inventory, Assessment and Monitoring – Practical Techniques and Identification of Major Issues* held during the 2nd International Conference on Wetlands and Development, Dakar, Senegal, 8-14 November 1998 (Finlayson *et al.* 2001). The definition is provided below along with those for the inter-connected concepts of assessment and monitoring:

Wetland inventory: The collection and/or collation of core information for wetland management, including the provision of an information base for specific assessment and monitoring activities.

Wetland assessment: The identification of the status of, and threats to, wetlands as a basis for the collection of more specific information through monitoring activities.

Wetland monitoring: Collection of specific information for management purposes in response to hypotheses derived from assessment activities, and the use of these monitoring results for implementing management. (Note that the collection of time-series information that is not hypothesis-driven from wetland assessment should be termed *surveillance* rather than monitoring, as outlined in Resolution VI.1.)

9. It is important to distinguish between inventory, assessment and monitoring when designing data gathering exercises, as they require different categories of information. Wetland inventory provides the basis for guiding the development of appropriate assessment and monitoring, but wetland inventories repeated at given time intervals do not constitute ‘monitoring’.

A framework for wetland inventory

10. A structured framework for planning and designing a wetland inventory is summarized in Table 1. The framework comprises 13 steps that provide the basis for making decisions in relation to the purpose (and objectives), and the available resources, for an inventory.
11. All steps in the Framework are applicable to the planning and implementation of any wetland inventory, and all steps should therefore be followed during the design and planning process. The framework does not provide prescriptive guidance on particular inventory methods; rather it provides guidance to the Contracting Parties and others who are planning to undertake wetland inventory by drawing attention to different methods and wetland classifications already in use and of proven utility under different circumstances.
12. The framework should be used as a basis for making decisions for undertaking a wetland inventory under the circumstances particular to each inventory program. Guidance on the application of each step is provided.

Table 1. A structured framework for planning a wetland inventory

Step	Guidance
1. State the purpose and objective	State the reason(s) for undertaking the inventory and why the information is required, as the basis for choosing a spatial scale and minimum data set.
2. Review existing knowledge and information	Review the published and unpublished literature and determine the extent of knowledge and information available for wetlands in the region being considered.
3. Review existing inventory methods	Review available methods and seek expert technical advice to: a) choose the methods that can supply the required information; and b) ensure that suitable data management processes are established.
4. Determine the scale and resolution	Determine the scale and resolution required to achieve the purpose and objective defined in Step 1.
5. Establish a core or minimum data set	Identify the core, or minimum, data set sufficient to describe the location and size of the wetland(s) and any special features. This can be complemented by additional information on factors affecting the ecological character of the wetland(s) and other management issues, if required.
6. Establish a habitat classification	Choose a habitat classification that suits the purpose of the inventory, since there is no single classification that has been globally accepted.
7. Choose an appropriate method	Choose a method that is appropriate for a specific inventory based on an assessment of the advantages and disadvantages, and costs and benefits, of the alternatives.
8. Establish a data management system	Establish clear protocols for collecting, recording and storing data, including archiving in electronic or hardcopy formats. This should enable future users to determine the source of the data, and its accuracy and reliability. At this stage it is also necessary to identify suitable data analysis methods. All data analysis should be done by rigorous and tested methods and all information documented. The data management system should support, rather than constrain, the data analysis. A meta-database should be used to: a) record information about the inventory datasets; and b) outline details of data custodianship and access by other users.
9. Establish a time schedule and the level of resources that are required	Establish a time schedule for: a) planning the inventory; b) collecting, processing and interpreting the data collected; c) reporting the results; and d) regular review of the program. Establish the extent and reliability of the resources available for the inventory. If necessary make contingency plans to ensure that data is not lost due to insufficiency of resources.
10. Assess the feasibility & cost effectiveness	Assess whether or not the program, including reporting of the results, can be undertaken within under the current institutional, financial and staff situation. Determine if the costs of data acquisition and analysis are within budget and that a budget is available for the program to be completed.

11. Establish a reporting procedure	Establish a procedure for interpreting and reporting all results in a timely and cost effective manner. The report should be succinct and concise, indicate whether or not the objective has been achieved, and contain recommendations for management action, including whether further data or information is required.
12. Establish a review and evaluation process	Establish a formal and open review process to ensure the effectiveness of all procedures, including reporting and, when required, supply information to adjust or even terminate the program.
13. Plan a pilot study	Test and adjust the method and specialist equipment being used, assess the training needs for staff involved, and confirm the means of collating, collecting, entering, analysing and interpreting the data. In particular, ensure that any remote sensing can be supported by appropriate “ground-truth” survey.

Step 1 State the purpose and objective

13. Wetland inventory has multiple purposes. These include:
 - a) listing particular types, or even all, wetlands in an area;
 - b) listing wetlands of local, national and/or international importance;
 - c) describing the occurrence and distribution of wetland taxa;
 - d) describing the occurrence of natural resources such as peat, fish or water;
 - e) establishing a baseline for measuring change in the ecological character of wetlands;
 - f) assessing the extent and rate of wetland loss or degradation;
 - g) promoting awareness of the value of wetlands;
 - h) providing a tool for conservation planning and management; and
 - i) developing networks of experts and cooperation for wetland conservation and management.
14. An inventory should contain a clear statement of its purpose and objective. This should identify the habitats that will be considered, the range of information that is required, the time schedule, and who will make use of the information.
15. A clear statement of the purpose(s) will assist in making decisions about the methods and resources needed to undertake the inventory.

Step 2 Review existing knowledge and information

16. Past investigations have resulted in the provision of broad-scale wetland inventory information for many parts of the world. Other, more detailed, but localized inventory may have been undertaken, restricted either geographically or to particular wetland habitats or ecosystems in the region under consideration.
17. Valuable information may be held in many different formats and/or by many different organizations (e.g., waterbird, fisheries, water quality and agricultural information bases, and local peoples' information and knowledge).
18. A comprehensive review of existing data sources may be necessary and its relevance to the proposed inventory work ascertained.

Step 3 Review existing inventory methods

19. A number of established methods for wetland inventory exist. The characteristics of five examples in current use are summarized in Appendix I. Further sources of information are listed in Appendix VI. The techniques and habitat classifications used in these methods have been successfully adapted for use in a number of locations.
20. The review should determine whether or not existing established inventory methods are suitable for the specific purpose and objectives of the inventory being planned.
21. Some inventory methods use a linked hierarchical approach, in which inventory may be designed at different spatial scales for different purposes.
22. Many inventories have been based on ground-survey, often with the support of aerial photography and topographical maps and, more recently, satellite imagery. The development of Geographic Information Systems (GIS) and the enhanced resolution of satellite imagery have resulted in greater use of spatial data.
23. A procedure for determining which remotely sensed datasets are the most appropriate for particular purposes, including their use in GIS, is given in Appendix II. A summary of currently available remote sensing data sets that can be applicable to wetland inventory is provided in Appendix III.

Step 4 Determine the scale and resolution

24. The spatial scale used for wetland inventory is inseparable from its objective and greatly influences the selection of the method to be used.
25. Wetland inventory has been carried out at a number of spatial scales, with specific objectives at each scale. When choosing the scale it is necessary first to determine the objective and then assess how this can be achieved through a chosen scale.
26. Suitable scales for wetland inventory within a hierarchical approach are:
 - a) wetland regions within a continent, with maps at a scale of 1:1,000,000 – 250,000
 - b) wetland aggregations within each region, with maps at a scale of 1:250,000 – 50,000
 - c) wetland sites within each aggregation, with maps at a scale of 1:50,000 – 25,000.
27. The choice of scale is also related to the size of the geographic area involved and to the accuracy required and achievable with available resources.
28. Each of the scales needs a minimum mapping unit that reflects the minimum acceptable accuracy for that scale. This is done by first determining what is the minimum size of feature that can be clearly delineated at that scale, to acceptable standards, and by then determining what measures are required to describe the accuracy/confidence of defining the unit. For example, a land systems map compiled to a scale of 1:250,000 typically involves taking one on-the-ground site observation for every 600 ha surveyed.

Step 5 Establish a core or minimum data set

29. A core or minimum data set sufficient to describe the wetland(s) should be determined. The specific details of this data set are inseparable from the level of complexity and the spatial scale of the inventory.
30. It is recommended that sufficient information (the core, or minimum, data set) should be collected so as to enable the major wetland habitats to be delineated and characterized for at least one point in time.
31. The core data can be divided into two components:
 - a) that describing the biophysical features of the wetland; and
 - b) that describing the major management features of the wetland.
32. The decision whether to undertake an inventory based only upon core biophysical data or also to include data on management features will be based on individual priorities, needs, and resources. The second component is likely to provide information that can immediately be used for assessment purposes, but it may require more extensive data collection and analyses. Care should be exercised to ensure that the inclusion of this information does not detract from the primary purpose of obtaining sufficient information to enable the delineation and characterization of the wetland(s).
33. Recommended core data fields for the collection of biophysical and management features of wetlands are listed in Table 2.

Table 2. Core (minimum) data fields for biophysical and management features of wetlands

Biophysical features

- Site name (official name of site and catchment)
 - Area and boundary (size and variation, range and average values) *
 - Location (projection system, map coordinates, map centroid, elevation) *
 - Geomorphic setting (where it occurs within the landscape, linkage with other aquatic habitat, biogeographical region) *
 - General description (shape, cross-section and plan view)
 - Climate – zone and major features
 - Soil (structure and colour)
 - Water regime (periodicity, extent of flooding and depth, source of surface water and links with groundwater)
 - Water chemistry (salinity, pH, colour, transparency, nutrients)
 - Biota (vegetation zones and structure, animal populations and distribution, special features including rare/endangered species)
-

Management features

- Land use – local, and in the river basin and/or coastal zone
- Pressures on the wetland – within the wetland and in the river basin and/or coastal zone
- Land tenure and administrative authority – for the wetland, and for critical parts of the

river basin and/or coastal zone

- Conservation and management status of the wetland – including legal instruments and social or cultural traditions that influence the management of the wetland
- Ecosystem values and benefits (goods and services) derived from the wetland – including products, functions and attributes (see Resolution VI.1) and, where possible, their services to human well-being (see Resolutions VI.23 and VII.8)
- Management plans and monitoring programs – in place and planned within the wetland and in the river basin and/or coastal zone (see Resolutions 5.7, VI.1, VII.17, and VIII.14)

* These features can usually be derived from topographical maps or remotely sensed images, especially aerial photographs.

Step 6 Establish a habitat classification

34. Many national wetland definitions and classifications are in use (Appendix IV). These have been developed in response to different national needs and take into account the main biophysical features (generally vegetation, landform and water regime, sometimes also water chemistry such as salinity) and the variety and size of wetlands in the locality or region being considered.
35. The Ramsar Classification System for Wetland Type (Resolution VI.5) is increasingly being used as a classification basis for national wetland inventories. However, when it was first developed it was not anticipated that the Ramsar classification would be used for this inventory purpose, so its usefulness as a habitat classification for any specific wetland inventory should be carefully assessed. Whilst the Ramsar Classification System has value as a basic habitat description for sites designated for the Ramsar List of Wetlands of International Importance, it does not readily accommodate description of all wetland habitats in the form and level of description that are now commonly included in many wetland inventories.
36. A classification based upon the fundamental features that define a wetland – the landform and water regime – is considered to be superior to those based on other features (Resolution VII.20). The basic landform and water regime categories within such a classification can be complemented with modifiers that describe other features of the wetland, for example, for vegetation, soils, water quality, and size.
37. As it is unlikely that a single classification can be globally acceptable, not least because different classification systems are required by some national legislations, a classification should be chosen that suits the purpose of the inventory. The core biophysical data recommended to be collected in an inventory (Table 2) may be used to derive a classification that suits individual needs.

Step 7 Choose an appropriate method

38. Many inventory methods are available (see Appendices I and IV for examples). When assessing which method (or methods) is appropriate for an inventory, it is necessary to be aware of the advantages and disadvantages of the alternatives in relation to the purpose and objective of the proposed inventory work. This applies particularly to the use of remotely sensed data (as listed in Appendix III).

39. To assist in determining which remote sensing data is most useful for a particular inventory, a simple decision-tree is provided in Appendix II. The decision-tree is also presented pictorially and contains six steps to assist in determining which data are most suitable. Importantly, the extent of “ground-truth” survey required to validate the remote sense data should be assessed when considering such techniques.
40. Physico-chemical and biological sampling should be undertaken whenever possible by standard laboratory and field methods that are well documented and readily available in published formats. There is a variety of acceptable methods in use. The bibliographical details of those used should be recorded and any departures from standard procedures clearly justified and documented.
41. As a general rule, the inventory method chosen should be sufficiently robust to ensure that the required data can be obtained within the constraints imposed by the terrain, resources, and time period available. Where adequate methods do not exist, well-directed research is needed to develop or identify specific techniques.
42. The use of Geographic Information Systems (GIS) for managing spatial data, in particular, is encouraged, noting that low-cost GIS platforms are increasingly available and widely-used.

Step 8 Establish a data management system

43. Increasing use of databases and Geographic Information Systems ensure that a large amount of data can be stored and displayed, but these capabilities will be undermined if the data are not well managed and stored in formats that are readily accessible.
44. Potential data management problems can be overcome by establishing clear protocols for collecting, recording and storing data, including archiving data in electronic and/or hardcopy formats. The protocols should enable future users to determine the source of the data, as well as its accuracy and reliability. The protocols should also ensure effective recording and reporting of data and information.
45. The data management system should support analysis of the data. Details of all analytical methods should be recorded along with the data and made available to all users. This includes details of statistical techniques and any assumptions about the data.
46. In addition, a meta-database should be used to record basic information about individual inventory data sets. These meta-data records should include a description of the type of data and details of custodianship and access. A standard metadata format has been developed specifically for recording wetland inventory (Appendix V), and further guidance on the use of this inventory metadata standard will be issued by the Ramsar Bureau.
47. General good practice guidance on meta-data and data custodianship, ownership and access is also available in a handbook produced for the Biodiversity Conservation Information System (BCIS) (Biodiversity Conservation Information System 2000).
48. The meta-data records should be an integral part of the data management system and not treated as a separate entity from the data files, even if these have been archived.

Step 9 Establish a time schedule and the level of resources that are required

49. It is necessary to determine the time schedule for planning the inventory, as well as for collecting, processing and interpreting the data collected during an inventory. This is particularly important if field sampling is required, in which case a sampling schedule that takes into account any special features of the terrain and sampling techniques will be necessary.
50. The schedule should be realistic and based on firm decisions about funding and resources. This will determine the extent and duration of the inventory. The schedule should also include time to prepare for the inventory, especially if a team of experts needs to be gathered, and extensive background investigation and review has to be undertaken.
51. The extent and reliability of the resources available for the inventory will eventually determine the nature and duration of the inventory. The funding to secure and train suitable personnel and obtain appropriate technical resources, such as field equipment and remote sensing data, should be confirmed and steps taken to ensure that these are available when required.

Step 10 Assess the feasibility and cost effectiveness of the project

52. Once a method has been chosen and a time schedule determined, it is necessary to assess whether or not it is feasible and cost effective to undertake the project. This assessment is essentially a review of the entire inventory method, including the time schedule and costs.
53. Factors that influence the feasibility and cost effectiveness of the project include:
 - availability of trained personnel;
 - access to sampling sites;
 - availability and reliability of specialized equipment for sample collection or analysis of samples;
 - means of analyzing and interpreting the data;
 - usefulness of the data and information derived from it;
 - means of reporting in a timely manner; and
 - financial and material support for any continuation of the project.

Step 11 Establish a reporting procedure

54. The results obtained in the inventory should be recorded and reported in a timely and cost effective manner. The records should be concise and readily understood by others involved in the program or similar investigations. Where necessary the records should be cross-referenced to other documentation from the inventory.
55. It is important to keep in mind that the data may be useful for further analyses in the future – the analysts involved should be able to readily access and interpret the data records and be aware of any constraints on their usefulness for such purposes. In this respect the reporting procedure should incorporate reference to the meta-database and archived data.

56. A report on the inventory should be prepared at pre-determined intervals. It should be succinct and concise and indicate whether or not the purpose and objective of the inventory is being achieved, and whether there are any constraints on using the data (e.g. changes to the sampling regime such as lack of replication or concerns about its accuracy).
57. The core data should be made available to interest groups in appropriate formats along with details of the methods used. Reports may present the data collected and/or contain specific recommendations for further inventory and data collection, or for management action.
58. At the same time, a meta-data record of the inventory should be made and added to a centralized file using a standardized format.
59. All reports should be made available to interested parties and other agencies in the shortest possible time through appropriate electronic and hardcopy formats.

Step 12 Review and evaluate the inventory

60. Throughout the inventory it may be necessary to review progress and make adjustments to the sampling regime, data management, and program implementation. The review and evaluation process should be developed and agreed as part of the planning and design phase of the inventory. The review procedures should establish that when changes are made they should be recorded and made known to all involved in the inventory.
61. The review procedures should also establish that at the end of the inventory, or after a predetermined time period, the entire process should be re-examined and necessary modifications made and recorded. The evaluation procedures should be designed to illustrate both the strengths and the weaknesses of the inventory, including necessary reference to the sampling regime and/or the data quality.
62. The evaluation can also be used to justify a request for ongoing funding. If the inventory has been a success and achieved its purpose and objective, this should be clearly stated and the program brought to an end. Conversely, if the inventory has not achieved its purpose and objective, this also should be clearly stated along with a recommendation as to whether it should continue, possibly in a revised form, or halted.

Step 13 Plan a pilot study

63. Before launching an inventory a pilot study is essential. The pilot study provides the mechanism through which to confirm or alter the time schedule and the individual steps within the chosen method. It also provides the opportunity to develop individual workplans for all personnel.
64. The pilot study phase is the time to fine-tune the overall method and individual steps and test the basic assumptions behind the method and sampling regime. Specialist field equipment should be tested and, if necessary, modified, based on practical experience. It is also the opportunity to assess training needs. The amount of time and effort required to conduct the pilot study will vary considerably – its importance will be shown by the improvements made to the schedule and design of the inventory.

65. The pilot study provides the final step before commencing the wetland inventory itself. Lessons learnt during the pilot study should be incorporated into the inventory method.

Implementation of the inventory

66. Once the method has been agreed by following all steps in the above Framework the inventory can be implemented with some confidence. Importantly, that confidence is dependent upon a suitable pilot study being undertaken and confirmation of all individual sampling and data management protocols. Any further changes to the agreed protocols should be recorded and, where necessary, discussed and formalized.
67. It should be expected that collection of the data for the full inventory will consume most of the time and resources available for the inventory. The steps in the Framework are designed to guide development an overall method and ensure that the inventory can be competently implemented.
68. All data collected during the inventory should be contained within the agreed data management system, which may include both hardcopy and electronic files and records. Steps should be taken to ensure that the data records are secure and duplicate copies kept in safe locations.
69. Whilst the steps in the Framework provide the basis for designing an inventory project for specific purposes and with specified resources available, it does not ensure that an inventory will be effective. This can only be done by the personnel engaged to undertake the inventory – the Framework provides an outline of the method, including necessary training and contingency in support of the method.
70. It must be stressed that all steps in the Framework are necessary, with the pilot study step providing an important feedback and an opportunity to refine the inventory before the main sampling effort commences. Similarly, the review and evaluation step provides an important check on progress and a formal opportunity to adjust or even halt the inventory.

Appendix I

Inventory methods

71. Standardized inventory methods are available and have been successfully used in different circumstances, countries or regions. Notable amongst these are the Mediterranean Wetlands Initiative (MedWet) inventory, the United States Fish and Wildlife Service national wetland inventory, the Ugandan national wetland inventory, the Asian wetland inventory, and the Ecuador national wetland inventory.
72. The characteristics of these examples are summarised below in terms of each of the 13 Framework steps. These examples have been chosen principally as they were considered comprehensive examples of existing methods, but also because they illustrate differences in approaches that could be used in different locations, for different purposes, and at different scales. The need for different methods and wetland classifications (see also Appendix IV) that enable local and national needs to be met must be stressed: this is illustrated by the range of examples below.

Mediterranean Wetlands Initiative (MedWet) inventory

73. This is a set of standard but flexible methods and tools, including a database for data management, for inventory in the Mediterranean region. Although not intended as a pan-Mediterranean wetland inventory, it has provided a common approach that has been adopted, and adapted, for use in several Mediterranean countries and elsewhere.

1. Purpose and objective	To identify where wetlands occur in Mediterranean countries and ascertain which are priority sites for conservation; to identify the values and functions for each wetland and provide a baseline for measuring future change; and to provide a tool for planning and management and permit comparisons between sites.
2. Information review	A process of consultation with an advisory group of experts from the Mediterranean and elsewhere. This group considered the experience and knowledge gained from other inventory and various Ramsar guidelines on managing wetlands.
3. Review methods	Considered database methods used elsewhere in Europe, United States and Asia. Compatibility with wetland databases being used in Europe was a key consideration, e.g. the CORINE Biotopes program. The method was designed to include both a simple and a complex data format.
4. Scale and resolution	Multiple scales for river basins, wetland sites and habitats have been adopted.
5. Core data set	Standard data sheets have been established for river basins, wetland sites (identification, location, description, values, status), habitat, flora, fauna, activities and impacts, meteorological data, and references.
6. Habitat classification	Ramsar classification can be used at a broad scale. For detailed information on sites the United States National Wetland Inventory classification has been adapted.
7. Method	Five steps: i) site selection; ii) Site identification through cartographic means or remote sensing with field assessment; iii) habitat

	classification; iv) data collection and management through standard data sheets and database; and v) map production using standard conventions.
8. Data management	Based on a standard database, initially developed in FoxPro in MS-DOS, and updated in 2000 in Microsoft Access. [Note. A further updated database, using MS Visual Basic software, and including mapping/GIS capability, due for release 2002.]
9. Time schedule and resources	Dependent on the complexity of the inventory. A simple inventory can be done with minor resources while a detailed inventory requires greater human and financial resources.
10. Feasibility & cost effectiveness	Assessed in France before being made available for on-ground pilot studies. The feasibility of the program is built around having a flexible approach that reflects the resources that are available for the inventory.
11. Reporting	Standardized data sheets provided for storing information and a database for ease of reporting. Specific formats for reports can be determined and included.
12. Review and evaluation	An inventory working group has been established to assess progress with undertaking and using the information from inventories using this approach, and to update the information and methods as necessary.
13. Pilot study	Undertaken in Portugal, Morocco, Greece, Spain and France.
Further information	Costa, Farinha, Tomas Vives & Hecker 1996 & 2001; Hecker, Costa, Farinha & Tomas Vives 1996. http://www.wetlands.org/pubs&/wetland_pub.html

United States national wetland inventory

74. A long running national program that has developed a classification and methodology for producing a map-based inventory.

1. Purpose and objective	To conduct a natural resource inventory of wetlands for use in wetland planning, regulation, management and conservation.
2. Information review	Reviewed the extent of wetland survey and inventory to determine the status of wetland protection and the availability of maps of wetlands.
3. Review methods	Reviewed existing wetland inventory and consulted with state and federal agencies to determine what inventory techniques were being used.
4. Scale and resolution	Maps produced at a scale of 1:80 000 or 1:40 000.
5. Core data set	Standardized data collection is undertaken in line with the information required for the habitat classification and production of standard maps for each state.
6. Habitat classification	Hierarchical classification developed as an integral part of the inventory to describe ecological units and provide uniformity in concepts and terms.
7. Method	Based on interpretation of color infrared aerial photographs, initially at 1:24 000 and more recently at 1:40 000 to 1:80 000 scale. The mapping unit varies according to the region and ease of identifying

	wetlands. The method includes field checking and stereoscopic analysis of photographs. Other remote sensing techniques are being tested.
8. Data management	Maps and digital data are made available online at www.nwi.fws.gov . Data is analyzed through GIS using ARC-INFO.
9. Time schedule and resources	Ongoing program since 1974. Maps are updated as needed and when funding is available.
10. Feasibility & cost effectiveness	Large scale program was extensively funded and a large proportion of the country is now mapped. A statistical design was incorporated to provide valid representative figures for selected areas.
11. Reporting	National wetland trends are produced periodically, based on statistical sampling. Mapping targets have been set through legislation that has periodically been revised.
12. Review and evaluation	The inventory has been under regular review and its outputs evaluated and new targets and priorities established.
13. Pilot study	An extensive phase of method development was undertaken before the inventory was considered operational. The classification system which underpins the inventory was extensively tested in the field.
Further information	Cowardin, Carter, Golet & LaRoe 1979; Cowardin & Golet 1995; Wilen & Bates 1995 www.nwi.fws.gov

Uganda National Wetlands Programme

75. The inventory is a component of an ongoing National Wetlands Program. It is largely carried out at the local level, using standard formats, and includes a training component.

1. Purpose and objective	To survey, describe, quantify and map all wetlands and provide decision-makers and planners, especially at district level, with information for management planning; to support policy implementation; to support economic valuation; and to support overall natural resource management planning.
2. Information review	Undertook literature review prior to the onset of the inventory.
3. Review methods	Carried out a review prior to the onset of the inventory process.
4. Scale and resolution	Uses SPOT imagery at 1:50 000 to cover the country.
5. Core data set	Bio-physical data encompassing site name, area, location, general description, seasonality, biota (vegetation types and animals present) and management data covering land-use, land tenure, conservation status, values, threats.
6. Habitat classification	Derived from landform, water regime and vegetation.
7. Method	GIS-based map analyses based on remotely sensed data alongside topographic maps of similar scale (1:50 000) as well as ground surveys. Uses standard data sheets. All wetlands are coded. Methods are documented in a wetland inventory guide. Activity is carried out on district basis with personnel from the district being designated to carry out the fieldwork and compile reports.

8. Data management	A computerized database using Microsoft Access was based on the standardized field data sheets. This database will be linked to the ArcView map database using wetland codes. The linkage between the two databases forms the National Wetland Information System (NWIS) which is already developed with ongoing data entry.
9. Time schedule and resources	An ongoing process with regular updates. The inventory is one of the main activities of a donor-funded National Wetlands Program with a number of partners.
10. Feasibility & cost effectiveness	Feasibility assessed through pilot studies. Cost effectiveness related to the complexity of the wetland systems, extent of areas being assessed, availability of remotely sensed images and capacity.
11. Reporting	Standardized data sheets used for storing information in a database for ease of reporting. Individual reports prepared at district level. These will be consolidated into a National Wetland Inventory.
12. Review and evaluation	Done within the project in consultation with a few external experts.
13. Pilot study	Undertaken in a few wetlands and then districts..
Further information	National Wetlands Programme 1999; Pabari, Churie & Howard 2000. www.iucn.org/themes/wetlands/uganda.html

Asian Wetland Inventory (AWI)

76. This approach has been developed in response to the recommendations contained in the *Global Review of Wetland Resources and Priorities for Wetland Inventory* report and presented in Resolution VII.20. The method is a hierarchy that can be implemented at four spatial scales. The method is based largely on a draft protocol developed in Australia, and has been tested in a pilot study in Japan. The pilot study has resulted in a manual being produced.

1. Purpose and objective	To provide a hierarchical database on coastal and inland wetlands in Asia
2. Information review	Undertaken in the extensive global review of wetland inventory conducted on behalf of the Ramsar Convention (see Resolution VII.20)
3. Review of methods	Undertaken in the extensive global review of wetland inventory conducted on behalf of the Ramsar Convention and refined through the development of a manual.
4. Scale and resolution	Hierarchical multi-scalar approach with four levels of analysis: level 1 at 1:10 000 000 to 1:5 000 000; level 2 at 1:1 000 000 to 1:250 000; level 3 at 1: 250 000 to 1:100 000; and level 4 at 1:50 000 to 1:25 000.
5. Core data set	Hierarchical multi-scalar minimum data at each level of analysis: level 1 – broad geology, land cover and climate for river basins; level 2 – geology, landforms, climate for wetland regions; level 3 – hydrological, climate, landform, physico-chemical, and biological detail for wetland complexes; and level 4 information on management issues and procedures included, in addition to site descriptions as per level 3
6. Habitat classification	Derived from minimum data on landform and water regimes and possibly supplemented with information on vegetation, areal size and water quality.

7. Method	GIS-based map analyses using remotely sensed imagery and maps augmented with ground surveys that are more intensive at levels 3 and 4. Prescribed data sheets and fields with agreed codes are available for each level of analysis.
8. Data management	The data management system is built on a computerized database engine with web, user/data interface and GIS capabilities. This serves as the primary data management/storage/retrieval component of the project. The system is based on the Windows platform using MS Visual Basic and Access 97 software. The website (www.wetlands.org/awi) serves as the main communication node for data collection, announcements and discussions.
9. Time schedule and resources	An ongoing process with regular updates of information obtained through national or local analyses. The program has been devolved through the regionalized structure of Wetlands International and its partners.
10. Feasibility & cost effectiveness	Feasibility assessed through project meetings and submission of funding applications that required targeted outputs etc. Cost effectiveness related to the extent of the areas being assessed and the extent of pre-existing inventory information, maps and remotely sensed images. The procedure was based on the Ramsar Convention's review of wetland inventory that found many inventories did not achieve their purpose through being over-ambitious and/or not applying tight data management and reporting procedures – all features that have been addressed.
11. Reporting	Standardized data sheets provided for storing information in a database for ease of reporting. Individual reports are provided through the devolved projects and where appropriate copies filed by Wetlands International on its web page (www.wetlands.org/awi/).
12. Review and evaluation	Provided at the Wetlands International seminar "Wetlands in a Changing World" held in Wageningen, The Netherlands, 30 November 2001.
13. Pilot study	Undertaken in Japan – Hokkaido and Kushiro Marsh with maps produced in a GIS format.
Further information	Finlayson, Howes, Begg & Tagi 2002; Finlayson, Howes, van Dam, Begg & Tagi 2002 www.wetlands.org/awi/

Ecuador wetland inventory

77. This is a national wetland inventory nearing completion that has been developed by the Ministry of the Environment, the Ramsar Bureau, and the EcoCiencia Foundation, and is designed to support Ecuador's implementation of the Ramsar Convention and the wise use of wetlands.

1. Purpose and objective	To provide information to assist in the management of globally important biodiversity in Ecuadorian wetlands, supporting Ecuadorian wetlands conservation through the identification, characterization and prioritization of wetlands for management and conservation.
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2. Information review	Published documents and material on the internet and held by universities, research organisations and from a national workshop on the identification and status of wetlands was assessed.
3. Review of methods	Inventory methods used in Canada, Venezuela, Brazil and parts of Argentina were reviewed. Each method was considered to have limitations for application in Ecuador, including too resource and capacity demanding, too little background information available in Ecuador, lacking an ecosystem (catchment)-scale approach, or only reliant on secondary information sources.
4. Scale and resolution	Information was collected at 1:50,000 scale. As some wetlands were too large to use maps at this scale, large individual sites are presented at different scales but information on them held in the database at 1:50,000 scale.
5. Core data set	The data was collected using a quadratical-based matrix that included five selected general criteria, each validated through a series of analysed variables. Information was gathered on social, economic, zoological, botanical, limnological, ecological (including aquatic and terrestrial) features.
6. Habitat classification	The habitat classification followed two existing systems being used in Ecuador.
7. Method	The method includes the following steps: information collected using remote sensing; validation and delineation of zones using a numerical matrix; information on socio-economical and ecological aspects of wetlands derived from interviews; published information reviewed; primary information on ecological and social aspects of wetlands generated. Data was entered into a GIS containing physiographic layers so as to permit the production of recommended land-use strategy and management proposals for the wetlands within their catchments.
8. Data management	Cartographic information is managed by the department of Geographical Information Systems (GIS). Other information is maintained in digital formats by individual researchers. A database of wetland photographs is also maintained.
9. Time schedule and resources	The project began in 1996 with pilot studies in two provinces. Nation-wide coverage was intended to be completed by July 2002 but has now been extended to early 2003 for financial reasons. The total project cost is US\$ 1 million over the seven years of the project, with funding from the Ramsar Bureau, the World Bank, the Global Environment Fund, the MacArthur Foundation and the Ecuadorian Government.
10. Feasibility & cost effectiveness	Feasibility and cost effectiveness was assessed in the project development phase through the World Bank's incremental costs assessment procedures.
11. Reporting	Published reports will be produced, and data held electronically in the GIS database.
12. Review and evaluation	Six-monthly World Bank evaluation of the process and progress in achievements of targets. Final report will have pre-publication review by the Ramsar Bureau. The Ecuador National Wetlands Working Group will consider the final publication.

13. Pilot study	A pilot study was undertaken in 1996 of the lentic wetlands, in the Provinces of Esmeraldas and Manabí.
Further information	<p>Briones, E., Flachier, A., Gómez, J., Tirira, D., Medina, H., Jaramillo, I., & Chiriboga, C. 1997. Inventario de Humedales del Ecuador. Primera parte: Humedales Lénticos de las Provincias de Esmeraldas y Manabí. EcoCiencia/ INEFAN/ Convención de Ramsar. Quito, Ecuador.</p> <p>Briones, E., Gómez, J., Hidalgo, A., Tirira, D., & Flachier, A. 2001. Inventario de Humedales del Ecuador. Segunda parte: Humedales Interiores de la Provincia de El Oro. Convención de Ramsar/ INEFAN/ EcoCiencia. Quito, Ecuador.</p>

Appendix II

Determining the most appropriate remotely sensed data for a wetland inventory

78. The following steps provide an outline procedure for assessing which is the most appropriate remote sensing technique for a particular inventory. The procedure is summarized graphically in Figure 1. Available remote sensing data sets applicable to wetland inventory are listed in Appendix III.
79. Much of the information required for this specific determination concerning use of remote sensing can be acquired by following the inventory Framework steps that lead to the choice of an inventory method.

I. Define the purpose and objective

80. Explicitly define the purpose and objective for the inventory (e.g., distribution of specific plant species on a floodplain wetland, baseline data for areas inundated by floodwaters, type of habitats to be mapped, etc.).

II. Determine if remote sensing data is applicable

81. Assess whether remote sensing technology can be applied successfully as a tool to the wetland issues defined previously. This decision will be based on a combination of wetland habitat structure and sensor characteristics and explicitly relates to the spatial and spectral resolution of the remote-sensing device. Expert advice may be needed.

III. Define the wetland characteristics within a remote sensing context

82. Determine the spatial scale most suitable for the habitat structure, the season for data collection, the spectral characteristics and resolution that are critical to sensor choice, and what data and sensors are already available. If multiple surveys are required, determine at the outset the most appropriate temporal scale (e.g., annually or over much longer time periods).

IV. Choose appropriate sensor(s)

83. Assess the spatial and spectral resolution of likely sensors and ensure that they can obtain the environmental information that is required for the defined problem/issue. In some cases several sensors may be required (e.g., Landsat TM fused with polarimetric AirSAR for the identification of salt-affected areas on floodplains dominated by tree species).
84. For each sensor ascertain whether or not it can revisit the site at necessary intervals and whether its application is dependent on seasonal conditions (e.g. optical or RADAR sensors) and that the costs of the image and its analysis are within the allocated budget.

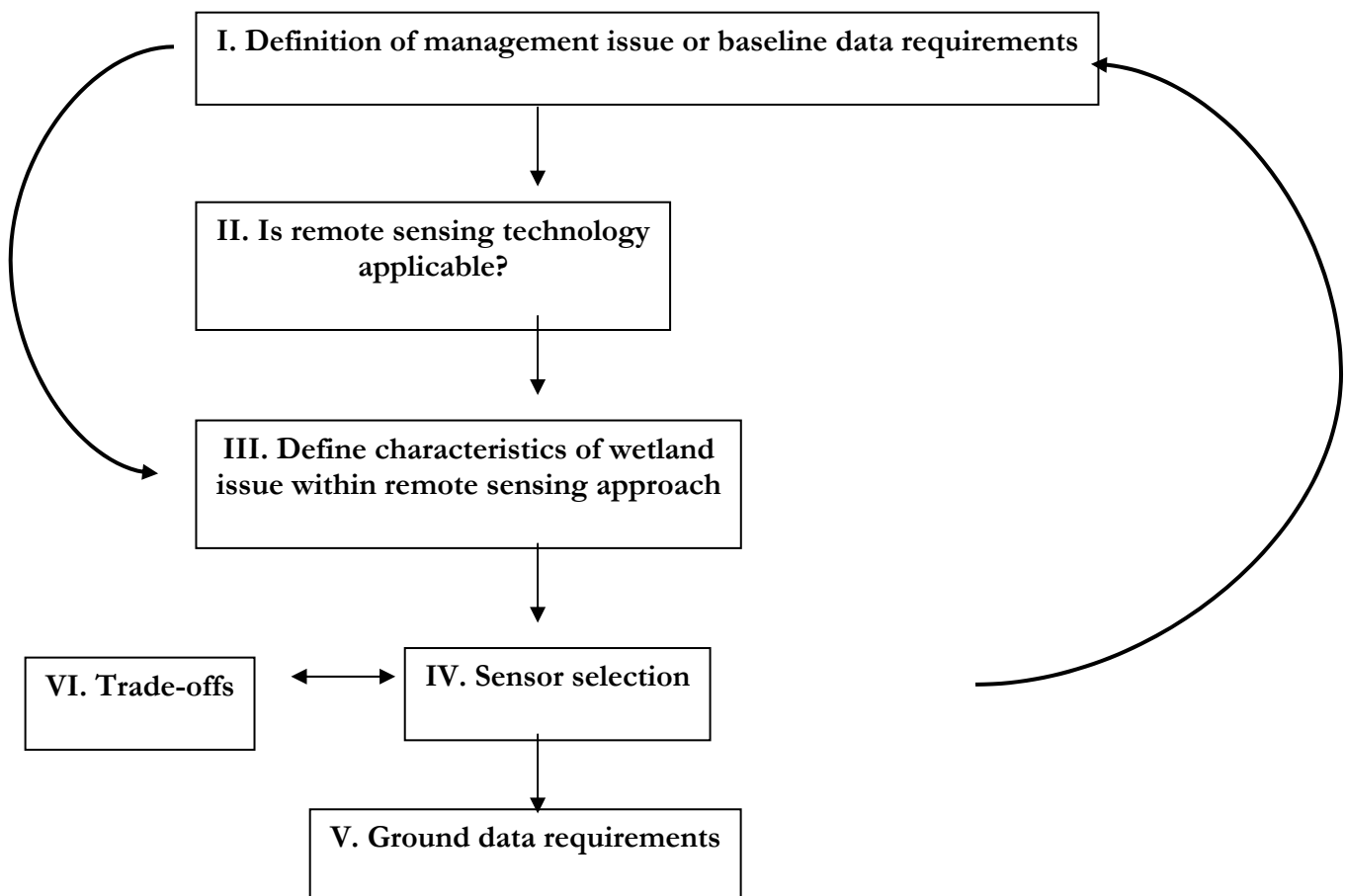
V. Ground data requirements

85. Determine a ground sampling strategy suitable for the sensor selected, including whether or not the collection of ground data should be done simultaneously with the acquisition of data from the sensor. Also determine any potential issues that may influence extrapolation from the ground data, such as scaling-up.

VI. Trade-offs

86. Ascertain if there are any trade-offs when using particular sensors (e.g., what advantages and disadvantages does one data source offer?) and whether these will affect the study (as defined at step I above).

Figure 1. Recommended steps in determining the most appropriate remotely sensed data for use in a wetland inventory.



Appendix III

Summary of remotely sensed data sets applicable to wetland inventory

SATELLITE DATA

Data Type	Spatial Resolution	Coverage	Spectral Resolution	Temporal Resolution	Contact
IKONIS	1m panchromatic 4m multispectral	100km ² (minimum)	Band 1 (blue) = 0.45-0.53µm Band 2 (green) = 0.52-0.61µm Band 3 (red) = 0.64-0.72µm Band 4 (NIR) = 0.77-0.88µm	1-3 days Not routinely collected Data capture must be ordered	Space Imaging http://www.spaceimaging.com/
Landsat 7 ETM	Bands 1-5 & 7 = 30 m Band 6 = 60m Band 8 = 15m	Typical full scene = 184 x 185km (Super scenes up to 60,000km ² and small scenes 25 x 25km are available)	Band 1 (blue) = 0.45-0.52µm Band 2 (green) = 0.52-0.60µm Band 3 (red) = 0.63-0.69µm Band 4 (NIR) = 0.76-0.90µm Band 5 (MIR) = 1.55-1.75µm Band 6 (TIR) = 10.40-12.50µm Band 7 (MIR) = 2.08-2.35µm Band 8 (pan) = 0.52-0.90µm	Every 16 days Data available since April 1999	EROS Data Center of the U.S. Geological Survey http://landsat7.usgs.gov/
Landsat 5 TM Due to be decommissioned	Bands 1-5 & 7 = 30m Band 6 = 120m	Typical full scene = 184 x 185km (Super scenes up to 60,000km ² and small scenes 25 x 25km are available)	Band 1 (blue) = 0.45-0.52µm Band 2 (green) = 0.52-0.60µm Band 3 (red) = 0.63-0.69µm Band 4 (NIR) = 0.76-0.90µm Band 5 (MIR) = 1.55-1.75µm Band 6 (TIR) = 10.40-12.50µm Band 7 (MIR) = 2.08-2.35µm		U.S. Geological Survey http://edcns17.cr.usgs.gov/EarthExplorer/

SPOT	Multispectral = 20m PAN = 10m	60 x 60km	Band 1 (green) = 0.50-0.59µm Band 2 (red) = 0.61-0.68µm Band 3 (NIR) = 0.79-0.89µm Band 4 (SWIR) = 1.58-1.75µm* PAN = 0.51-0.73µm/0.61-0.68* *= SPOT4 only	Every 26 days Data available since 1990	SPOT Image http://www.spot.com/
RADAR-SAT	10 – 100m (varies with angles and # of looks)	50 x 50km – 500 x 500km (varies with angles and # of looks)	Single frequency C Band 56 nm HH polarisation variety of beam selections	Data available since 1995 revisit times approx. 6 days at mid-latitudes	Canadian Space Agency (CSA) Canadian Center for Remote Sensing (CCRS) distributed by Radarsat International http://www.rsi.ca/
JERS 8 optical bands SAR L band Bands 3 and 4 provide stereo coverage	18m pixels	75 x 75km	<u>Eight optical bands</u> Band 1 (green) = 0.52-0.60µm Band 2 (red) = 0.63-0.69µm Bands 3 & 4 (NIR) = 0.76-0.86µm Band 5 (MIR) = 1.60-1.71µm Band 6 (MIR) = 2.01-2.12µm Band 7 (MIR) = 2.13-2.25µm Band 8 (MIR) = 2.27-2.40µm SAR BAND = L band 235nm <u>HH polarisation</u>	Data available covering years 1992-1998	EOC Earth Observation Centre, National Space Development Agency of Japan http://hdsn.eoc.nasda.go.jp/
ALI	10 m – PAN 30 m – MSS	37 km swath	PAN – 0.48-0.69µm Band 1 – 0.48 – 0.69µm Band 2 – 0.433 – 0.453µm Band 3 – 0.45 – 0.515µm Band 4 – 0.525 – 0.606µm Band 5 – 0.63 – 0.69µm Band 6 – 0.775 – 0.805µm Band 7 – 0.845 – 0.89µm Band 8 – 1.2 – 1.3µm Band 9 – 1.55 – 1.75µm Band 10 – 2.08 – 2.35µm	Data captured since November 1990 Captures must be requested Operation expected until 2002(?)	GSFC NASA's Goddard Space Flight Center http://eol.gsfc.nasa.gov/

HYPER-ION	30 m resolution	7.5 km x 100 km	220 spectral bands covering 0.4 – 2.5µm	Data captured since November 1990 Captures must be requested Operation expected until 2002(?)	GSFC NASA's Goddard Space Flight Center http://eo1.gsfc.nasa.gov/
ASTER Advanced Spaceborne Thermal Emission and Reflection Radiometer	VNIR (bands 1-3) 15m pixels SWIR (bands 4-9) 30m pixels TIR (bands 10-14) 90m pixels	60 km swath	Band 1 - 0.52 - 0.60µm Band 2 - 0.63 - 0.69µm Band 3N - 0.78 - 0.86µm Band 3V - 0.78 - 0.86µm Band 4 - 1.600 - 1.700µm Band 5 - 2.145 - 2.185µm Band 6 - 2.185 - 2.225µm Band 7 - 2.235 - 2.285µm Band 8 - 2.295 - 2.365µm Band 9 - 2.360 - 2.430µm Band 10 - 8.125 - 8.475µm Band 11 - 8.475 - 8.825µm Band 12 - 8.925 - 9.275µm Band 13 - 10.25 - 10.95µm Band 14 - 10.95 - 11.65µm 5 bands 0.58-12.50um (varying bandwidths)	Coverage is sporadic Data can be downloaded free of charge	NASA / Earth Observing Data Gateway http://edcimswww.cr.usgs.gov/pub/imswelcome/
AVHRR Advanced Very High Resolution Radiometer	1.1km pixel	2700km swath width		daily images	NOAA: Online requests for these data can be placed via the U.S. Geological Survey Global Land Information System (GLIS) http://edc.usgs.gov/Webglis/glisbin/glismain.pl

Orbview-4 Due for launch in 2001	Multispectral 4m pixel Hyperspectral 8m pixel Panchromatic 1m pixel	Multispectral 8km swath width Hyperspectral 5km swath width Panchromatic 8km swath width	Multispectral 4 bands VIS/NIR Hyperspectral 200 bands 0.4-2.5µm Panchromatic 1 band in VIS	revisit 2-3 days	Orbital Science Corporation Army,Navy,Airforce, NASA http://www.orbimage.com/
ERS-1 SAR	12.5m pixel	100 km x 102 km	Single frequency C Band (5.3 GHz), Wave length: 5.6 cm; VV polarisation	Data available since 1991 to 1999 revisit times approx.: 3-day, 35- day and 176-day depending on the mode of operation	European Space Agency (ESA) http://www.esa.int
ERS-2 SAR	12.5m pixel	100 km x 102 km	Single frequency C Band (5.3 GHz), Wave length: 5.6 cm; VV polarisation	Data available since 1995 revisit times approx.: 3-day, 35- day and 176-day depending on the mode of operation	European Space Agency (ESA) http://www.esa.int
ERS-1 ATSR	1 km pixel	512 km x 512 km	4 bands: 1.6µm (visible) and three thermal bands at 3.7µm, 11µm, and 12µm.	Data available since 1991 to 1999 revisit times approx.: 3-day, 35- day and 176-day depending on the mode of operation	European Space Agency (ESA) http://www.esa.int
ERS-2 ATSR2	1 km pixel	512 km x 512 km	7 bands: four bands in the visible: 0.55µm, 0.67µm, 0.87µm; 1.6µm and three thermal bands at 3.7µm, 10.8µm, and 12µm.	Data available since 1995 revisit times approx.: 3-day, 35- day and 176-day depending on the mode of operation	European Space Agency (ESA) http://www.esa.int

ENVISAT ASAR	30 m, 150 m or 1km depending on the operational mode	Swath with of < 100km, > 400km and in 5km x 5km vignette, pedending on the operational mode	Single frequency C Band (5.3 GHz), HH and VV polarisation	Data available in 2002	European Space Agency (ESA) http://www.esa.int
ENVISAT MERIS	300 m (full reesolution) and 1200 m (reduced resolution)	1150km wide swath	15 spectral bands in the 390 - 1040 nm range of the electromagnetic spectrum	Data available in 2002	European Space Agency (ESA) http://www.esa.int
ENVISAT AATSR	1 Km	512 km x 512 km	7 bands: four bands in the visible: 0.55µm, 0.67µm, 0.87µm; 1.6µm and three thermal bands at 3.7µm, 10.8µm, and 12µm.	Data available in 2002	European Space Agency (ESA) http://www.esa.int

AIRBORNE DATA

HyMap	Typically 2.5m or 5m	Varies with pixel size 5m = 2.5km swath 2.5m = ~1.3km swath	124 bands covering 0.44-2.4µm	Unreliable – user defined and sensor availability	Integrated Spectronics Pty Ltd http://www.intspec.com/
HyMap MK1 (AIS)	Usually 5m	Varies with pixel size 5m = 2.5km swath	98 bands covering 0.50-1.1µm, 1.45-1.80µm, 1.95-2.45µm	Unreliable – user defined and sensor availability	Integrated Spectronics Pty Ltd http://www.intspec.com/
CASI Compact Airborne/ Spectrograp- hic Imager	Typically 1m	Depends on spatial resolution 1m pixel = ~500m swath	Variable bands (~19-288) (~2-12nm wide) 0.40-1.0um Typically 96 bands covering visible to NIR	Unreliable – user defined and sensor availability	Manufactured by Ires Research Ltd. http://www.itres.com/ BallAIMS www.ballaerospace.com.au

Daedalus	Spatial resolution determined by aircraft flying height. A 1000 metre increase in flying height = 2.5 metre pixel size increase.	Image swath = Flying Height x 1.6	<p>Band 1 – 0.42-0.45µm.</p> <p>Band 2 – 0.45-0.52µm.</p> <p>Band 3 – 0.52-0.60µm.</p> <p>Band 4 – 0.605-0.625µm.</p> <p>Band 5 – 0.63-0.69µm.</p> <p>Band 6 – 0.695-0.75µm.</p> <p>Band 7 – 0.76-0.90µm.</p> <p>Band 8 – 0.91-1.05µm.</p> <p>Band 9 – 1.55-1.75µm.</p> <p>Band 10 - 2.08-2.35µm.</p> <p>Band 11 - 8.5-13.0µm.</p> <p>Band 12 Band 11 X0.5 or X2 Gain.</p>	Unreliable – user defined and sensor availability	Air Target Services http://www.airtargets.com.au/index.html
AIRSAR Airborne Synthetic Aperture Radar	Slant range resolution of 10m Azimuth resolution of 1m	Ground swath = 10-15km	<p>P, L, C bands</p> <p>Interferometric with L and C</p> <p>Runs in several modes including high resolution 80MHz SAR, TOPSAR (data coregistered with DEMs, ATI mode (C and L bands along track)</p>	Unreliable, see PACRIM missions	JPL/NASA http://airsar.jpl.nasa.gov/
MASTER Modis ASTER airborne simulator	5-50m pixel (depending on flight height)	Swath varies with flying height	<p>50 bands</p> <p>0.40-13.0um</p>	Unreliable, see PACRIM missions	JPL/NASA http://masterweb.jpl.nasa.gov/
AVIRIS Advanced Visible/Infra-Red Imaging Spectrom_r	20m pixel	11.5km swath width	224 bands (10nm wide) 0.40-2.50um		NASA-JPL http://makalu.jpl.nasa.gov/

Airborne Digital Cameras	Spatial resolution determined by aircraft flying height. Typically 0.5 – 1 m resolution.	Swath of image depends on aircraft flying height	Typically colour (RGB) or colour infrared (IR, R, G)	Unreliable – user defined	Contact local companies. Example Specterra Systems Pty Ltd http://www.specterra.com.au/
Airborne CIR / Colour / Black and White photos	Spatial resolution determined by aircraft flying height.	Swath of image depends on aircraft flying height	Typically colour (RGB), colour infrared (IR, R, G), or black and white	Unreliable – user defined	Contact local companies. Example FUGRO Airborne Surveys http://www.fugro.com/
LIDAR	Absolute elevation accuracy of 15 cm.	User defined	Varies, depending on type of laser selected.	Unreliable – user defined.	A number of different LIDAR systems made by different manufacturers.

FIELD BASED

Spectrometers	Varies – typically nanometres - metres	Varies – typically millimetres - metres	Continuous spectral curve. Range varies from UV-SWIR Typically 0.4 - 2.5µm	Unreliable – user defined and sensor availability	For hire contact local companies. For purchase contact Analytical Spectral Devices Inc http://www.asdi.com/
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Appendix IV

Wetland classifications

87. A wide range of different wetland classifications are in use around the world. An annotated summary of some of these wetland classifications is given below, listed in order of their date of publication.
88. No single classification is likely to meet all needs of different wetland inventories. Rather it is recommended that a classification suited to the purposes of a particular inventory should be chosen or developed.
89. In some cases it may be possible to derive a classification from the core information collected in the inventory, such as proposed for the Asian Wetland Inventory, or to establish a mechanism to compile and present information on wetland types under several different classifications, as has been done for the MedWet inventory. However, it should not be assumed that an existing classification will suit all inventory purposes.

Name/title	USA national wetland classification
Description	Hierarchical classification containing 5 levels that describe the components of a wetland, namely, vegetation, substrate composition and texture, water regime, water chemistry and soil. It contains vegetated and non-vegetated habitats.
Reference	Cowardin, Carter, Golet & LaRoe 1979; Cowardin & Golet 1995
URL	wetlands.fws.gov/Pubs/Reports/Class_Manual/class_titlepg.htm and www.nwi.fws.gov/atx/atx.html

Name/title	Hydrogeomorphic classification – Australia
Description	Based on landforms and water regimes with further sub-divisions based on areal size, shape, water quality and vegetation features. A binary format for describing wetland habitats is provided.
Reference	Semeniuk 1987; Semeniuk & Semeniuk 1997.

Name/title	Classification of wetlands in the countries of Western European: CORINE BIOTOPES (1991) Classification of Palearctic Habitats (1996) EUNIS Habitats Classification (2002) (EUropean Nature Information System)
Description	European standard for hierarchical description of natural or semi-natural areas, including wetland habitats. Habitats are identified by their facies and their flora. EUNIS Habitat classification (2002) integrates earlier classifications (CORINE-Biotopes, Palearctic Habitat Classification) and establishes links with other Classification types (CORINE-Land-Cover typology, Habitats Directive Annex I, Nordic classification system, and other national systems).
Reference	European Communities 1991; Devillers, & Devillers-Terschuren 1996; Davies & Moss 2002.
URL	http://nature.eionet.eu.int/activities/EUNIS/harmo/eunis_habitat http://mrw.wallonie.be/dgrne/sibw/EUNIS/home.html

Name/title	Ramsar Classification System for Wetland Type
Description	Hierarchical listing of wetland habitats loosely based on the USA national wetland classification. It has been modified on several occasions since introduction in 1989 so as to accommodate further habitats of interest to the Contracting Parties to the Ramsar Convention.
Reference	Scott & Jones 1995; Ramsar Bureau 2000.
URL	http://www.ramsar.org/key_ris_types.htm

Name/title	MedWet Mediterranean wetland classification
Description	Hierarchical listing of wetland habitats loosely based on the USA national wetland classification with modifications made to reflect the range of wetland habitats around the Mediterranean. Software that accompanies the methodology enables other classifications commonly used in the region to be generated from the database.
Reference	Hecker, Costa, Farinha & Tomas Vives et al 1996
URL	http://www.wetlands.org/pubs&/wetland_pub.html

Name/title	Canadian wetland classification
Description	Hierarchical listing of habitats based on broad physiognomy and hydrology, surface morphology and vegetation physiognomy. Further characterisation is based on the chemical features of the habitat.
Reference	National Wetlands Working Group 1997; Zoltai & Vitt 1995.
URL	www.fes.uwaterloo.ca/research/wetlands/Publications.html

Name/title	South African wetland classification
Description	Adaptation of the “Cowardin” wetland classification developed in the USA. Includes adaptations to reflect the functional aspects of wetlands based on geomorphic and hydrologic features. It is hierarchical and able to accommodate all wetland types in the region.
Reference	Dini & Cowan 2000
URL	www.ccwr.ac.za/wetlands/inventory_classif.htm

Name/title	Asian wetland classification
Description	Based on landforms and water regimes. Classification can be derived from the core data fields and augmented with information on vegetation, areal size, and water quality.
Reference	Finlayson, Howes, Begg & Tagi 2002 Finlayson, Howes, van Dam, Begg & Tagi 2002.
URL	Web-based information not yet available

Appendix V

Recommended standard metadata record for the documentation of wetland inventories

90. The following figure and table summarize the standard structure of a wetland inventory metadata record, designed to assist all those undertaking wetland inventory in documenting and making publicly available information about their inventory, in line with Resolution VII.20.
91. The inventory metadata record is based on, and consistent with, global standards for metadata recording, (e.g. ISO/DIS 9115 Geographic Information Metadata), and has been prepared for the Ramsar Convention by the Environmental Research Institute of the Supervising Scientist, Australia, with the financial support of the government of the United Kingdom, to support the development of the next phase of the *Global Review of Wetland Resources and Priorities for Wetland Inventory (GRoWI 2)*.
92. Further guidance on the application and use of this inventory metadata standard record for reporting wetland inventory has been prepared and will be issued by the Ramsar Bureau.

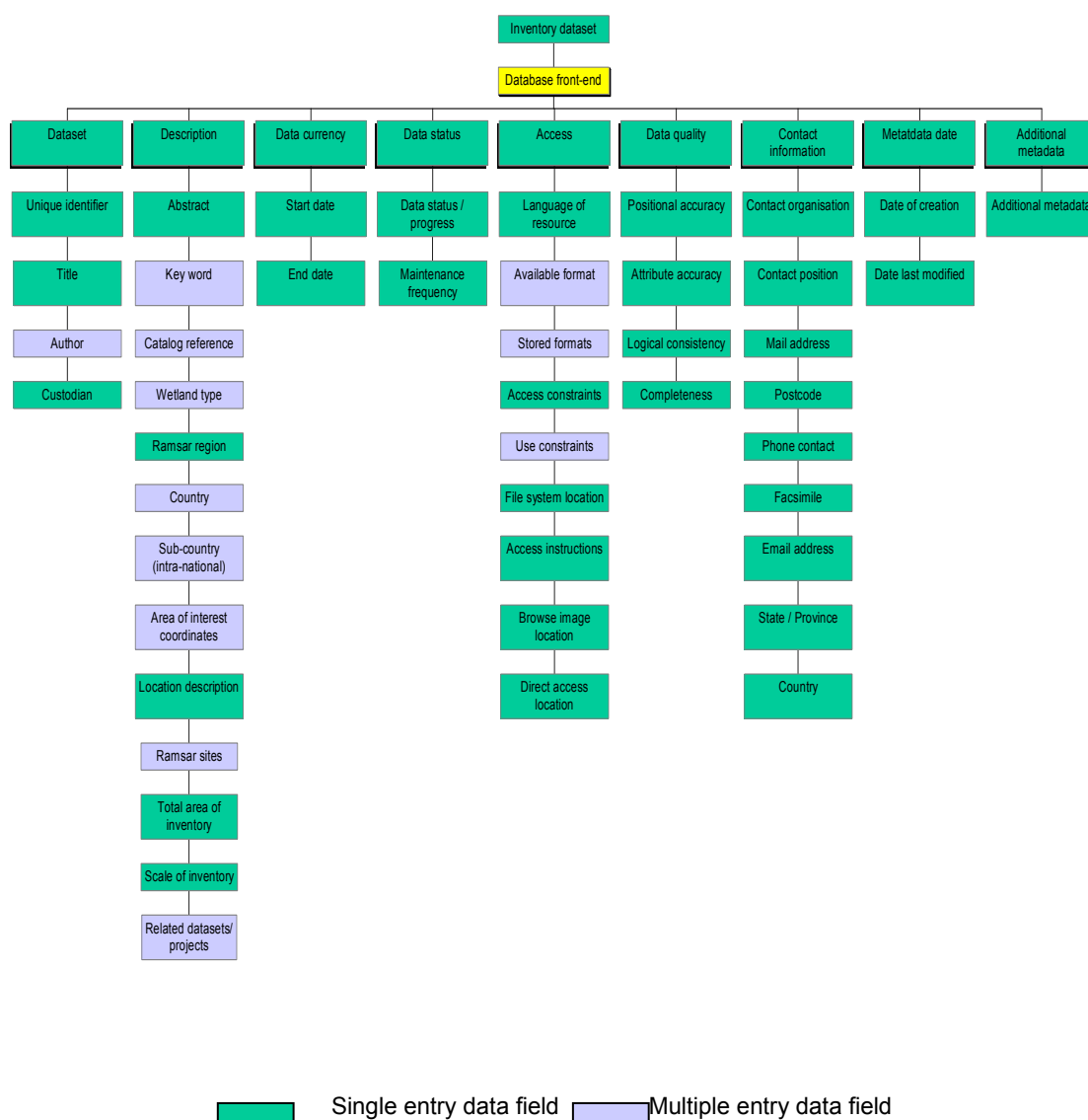


Figure 2. Diagrammatic representation of the wetland inventory metadatabase framework.

Table 3. Description of the fields of the wetland inventory metadatabase

FIELDNAME	FIELD DESCRIPTION
UNIQ_ID	Unique identifier for each wetland inventory dataset
TITLE	Title of Inventory/ Dataset
AUTHOR	Author / dataset creator
CUSTOD	Organisation/ individual with custodial rights to the data
ABSTRACT	Abstract – summary or short description of the contents of dataset / inventory activity
KEYWORD	Words that may be used to search for a particular dataset. Choose three-five words that describe the key inventory activities i.e. remote sensing – vegetation, and which can be used to search on in database;
CAT_REF	Library catalog reference – e.g. ISBN number – if applicable to dataset
WETL_TYP	Type(s) / nature of wetland(s) being described in inventory
RAMSAR_R	Ramsar region – choose from standard Ramsar 4 letter codes i.e. EEUR; AFRI; etc
COUNTRY	Countries in area of inventory dataset – choose from standard 3-letter ISO country code http://www.bcpl.net/~jspath/isocodes.html
SUB_COUN	Intra-national regions, described in free text; corresponds with sub_nation field in Wetland Inventory metadatabase
COORDS	Bounding coordinates of area – entered as degrees-minutes-seconds for upper left hand, and lower right hand areas; alternatively, could put in series of coordinates which define the perimeter of the inventory area
LOC_DESC	Freehand description of area
RAMSAR_L	Name of Listed Ramsar sites in area – if appropriate
INV_AREA	Total area covered by inventory i.e. a few hectares; '000s of kilometres ²
SCALEINV	Textual descriptions to complement the inventory area values – for example, “large scale”; “small scale” inventory, which could be used as search features to locate particular datasets.
REL_DATA	Related datasets. Names of related files / datasets within the overall inventory.
INV_START	First date of information in the inventory dataset
INV_END	Last date of information in the inventory dataset
INV_STAT	Status of progress on the process of creation of the inventory dataset – complete / incomplete
FREQ_MAIN	Frequency of maintenance / changes / updates to the dataset – regular / irregular/ none planned
LANG_RES	The language in which the dataset was created in i.e. English; Spanish; Vietnamese
AV_FORM	The formats in which the inventory dataset is available in, specifically identifying whether the data is available in digital and/or hard copy formats; in the former case, including a list of forms it is available in i.e. Access database; ArcInfo coverage; Text file etc.
STORFORM	The form or formats in which the dataset is stored by the custodian.
ACC_CONS	Access constraints – e.g. may not be available to general public; use may require a license agreement to be signed
USR_CONS	User constraints – e.g. may not reproduce data without payment of royalty or signing of a license that outlines agreed usage of information
NFS_LOC	Dataset network file system locations – may be entered as a URL address

ACC_INST	Data Access instructions on how to access dataset
IMG_LOC	The location of a browseable image – if applicable to dataset
DIR_LOC	Locations on network from which dataset may be directly accessed – if applicable
DATA_LIN	Data quality – lineage. A brief description of the source(s) and processing / analytical steps and methodology which were used in the creation of the dataset.
POS_ACC	Positional accuracy – a brief assessment and description of the location of spatial features in the dataset relative to their true position on the earth. Information could include whether a differential GPS was used, for instance.
ATTRIB_ACC	Attribute accuracy – a brief assessment of the reliability assigned to features in the dataset, relative to their real world values. For example, was a particular sampling intensity utilized in mapping an area
LOGIC_CON	Logical consistency. A brief description of the logical relationships between items in the dataset. For spatial datasets, this may take the form of a topological consistency check, to ensure that all polygons are closed, nodes are formed at the end of lines, and that there is only one label within each polygon.
DATA_COM	Completeness. A brief assessment of the completeness of the dataset, classification, and verification.
CONT_ORG	Contact organisation (option of adding new organisation, or choosing from existing list of organisations)
CONT_POS	Contact position
MAIL_ADD	Mailing / Postal address for contact position and organisation
POSTCODE	Postcode of mailing address
CONT_PH	Phone number of contact position – should include international direct dial code (IDD), and specify whether local code includes a zero or not when using IDD (e.g. ++ (IDD) (0) xx xxxx xxxx)
CONT_FAX	Facsimile of contact position – should include international direct dial code(IDD), and specify whether local code includes a zero or not when using IDD
CONT_EM	Electronic mail address of contact position.
CONT_STA	State / Province in which contact organisation located.
CONT_COU	Country of contact organisation.
META_NEW	Date metadata was created (automatically generated when file created)
META_MOD	Date metadata last modified (automatically generated when file modified)
META_CIT	Citations for metadata; list of other documents, products which cite or use the products described in the metadata record
ADD_META	Additional metadata – reference to other directories or systems that contain additional information about the dataset.; links to additional metadata records, particularly for GIS and remotely sensed products.

Appendix VI

Reading list

- Biodiversity Conservation Information System 2000. *Framework for Information Sharing: Executive Overview*. Busby, JR (Series Editor). Includes CD-ROM with full text of 8 Handbooks. Available from BCIS Program Manager (for contact details see: <http://www.biodiversity.org>)
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- National Wetlands Programme. 1999. Uganda Wetlands Inventory Guide, version 4. Ministry of Water, Lands and Environment, Kampala, Uganda.

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- Phinn S, Hess L & Finlayson CM 1999. An assessment of the usefulness of remote sensing for wetland monitoring and inventory in Australia. In CM Finlayson & AG Spiers (eds), *Techniques for Enhanced Wetland Inventory, Assessment and Monitoring*. Supervising Scientist Report 147, Supervising Scientist Group, Canberra. pp 44-82.
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"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.7

Gaps in and harmonization of Ramsar guidance on wetland ecological character, inventory, assessment, and monitoring

1. RECALLING that through Article 3.1 of the Convention, Contracting Parties undertake to “formulate and implement their planning so as to promote the conservation of the wetlands included in the List [of Wetlands of International Importance], and as far as possible the wise use of wetlands in their territory”; and under Article 3.2, to “arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change”;
2. ALSO RECALLING that through Resolution VI.1 Contracting Parties adopted working definitions of “ecological character” and guidelines for describing and maintaining the ecological character of listed sites, and through Resolution VII.10 adopted revised definitions of “ecological character” and “change in ecological character”, and that Parties are strongly encouraged to include within their management plans a regime for regular and rigorous monitoring to detect changes in ecological character;
3. RECOGNIZING that Objective 4.1 of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Annex to Resolution VII.11) is “to use Ramsar sites as baseline and reference areas for national, supranational/regional, and international environmental monitoring to detect trends in the loss of biological diversity, climate change, and the processes of desertification”, and that definition and assessment of the ecological character of Ramsar sites is an essential prerequisite for delivering this Objective;
4. AWARE that Recommendation 4.7 and Resolution VIII.13 approved categories of information to be provided by Contracting Parties in the Information Sheet on Ramsar Wetlands (RIS) that include a statement of the ecological character of the sites designated as Wetlands of International Importance;
5. ALSO AWARE that Contracting Parties have adopted a range of guidance relevant to the identification, assessment, monitoring and management of the ecological character of Wetlands of International Importance and other wetlands, including on wetland inventory (Resolution VII.20), wetland risk assessment (Resolution VII.10), impact assessment (Resolution VII.16), and monitoring (Resolution VI.1);
6. RECOGNIZING that this meeting of the Conference of the Parties has adopted further guidance relevant to the assessing and managing of the ecological character of wetlands, including *A Framework for Wetland Inventory* (Resolution VIII.6), *New Guidelines for*

management planning for Ramsar sites and other wetlands (Resolution VIII.14), and on impact assessment (Resolution VIII.9);

7. RECALLING that Resolution VII.25 authorized the Scientific and Technical Review Panel (STRP), in collaboration with appropriate international bodies, to compile and disseminate reliable criteria and methods for the evaluation of the ecological character of wetlands through the establishment of indicative biological, physical, and chemical parameters; and ALSO RECALLING that through the Annex to Resolution VII.18 the STRP was also requested to compile information on functional and biodiversity assessment methodologies and the means for their integration in wetland management for dissemination to Contracting Parties, for their adaptation to local situations;
8. HAVING BEEN INFORMED that the STRP has reviewed the available tools and guidelines related to the ecological character of wetlands published in Ramsar Wise Use Handbooks 7 and 8, and has concluded that although there is a substantial range of guidance available and in preparation for use by Contracting Parties, there are gaps and disharmonies in this guidance developed through the Convention process at different times, and that the preparation of further guidance is necessary;
9. AWARE that the STRP recognized the need to develop an overarching “wetland ecosystem assessment framework” for use by Contracting Parties to provide a conceptual framework for defining the ecological character of wetlands and for assessing and addressing change in ecological character and guidance on which available tools and guidelines should be applied in each stage of the process of inventory, assessment, monitoring and management of Ramsar sites and other wetlands;
10. NOTING that the Millennium Ecosystem Assessment (MA) has been developed to provide guidance and information to the Ramsar Convention, *inter alia*, concerning the condition and trends in global ecosystems including wetlands, future scenarios, and response options for decision-makers at global and sub-global scales, and is preparing good practice guidelines and methods for undertaking ecosystem assessments, applicable to wetland assessment, at local, national and regional scales;
11. FURTHER NOTING that other assessment programmes currently underway, including the Global International Waters Assessment, UNESCO’s World Water Assessment Programme, and IUCN’s Freshwater Biodiversity Assessment Programme, will provide information on the status and trends of wetlands, wetland biodiversity, and water resources, and that through the Joint Work Plan 2002-2006 between the Ramsar Convention and the Convention on Biological Diversity (CBD) the World Resources Institute has prepared a review of the status and trends of inland waters biodiversity as a contribution to the review and elaboration of the CBD’s programme of work on inland water ecosystems;
12. AWARE that through the CBD-Ramsar Joint Work Plan 2002-2006 the STRP and Ramsar Bureau are working with the CBD Secretariat in the preparation of guidance on the rapid assessment of inland water biodiversity, including in small island developing states, and of marine and coastal biodiversity for consideration for adoption by Contracting Parties to the Ramsar Convention and CBD;

13. THANKING the STRP's Expert Working Group on Ecological Character for the preparation of the Information Paper available to this meeting of the Conference of the Parties (Ramsar COP8 DOC. 16), which outlines a conceptual framework for the application of integrated wetland ecosystem inventory, assessment monitoring and management, stresses the role of wetland ecosystems and their goods and services in human well-being and poverty alleviation, and summarizes the tools and guidance currently available for use by Contracting Parties; and
14. NOTING that UNESCO's Man and the Biosphere Programme (MAB) is developing a procedure entitled Biosphere Reserve Integrated Monitoring (BRIM) and that through the Ramsar-MAB joint programme of work it is proposed to test this procedure, including indicators, on wetlands that have been designated both as Ramsar sites and Biosphere Reserves;

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15. REQUESTS the Scientific and Technical Review Panel (STRP) to further review and, as appropriate, develop guidance and report to COP9 concerning identified gaps and disharmonies in defining and reporting the ecological character of wetlands through inventory, assessment, monitoring and management of Ramsar sites and other wetlands, giving priority to advice and guidance on practical matters on issues that should include:
 - a) the Ramsar Classification System for Wetland Type and (bio)geographical regionalization schemes and their application in defining and reporting the ecological character of wetlands;
 - b) determining the ecological character of Ramsar sites and other wetlands, including techniques and guidelines for delineating ecological boundaries and mapping wetlands, and for evaluating the values and functions, goods and services provided by wetlands;
 - c) the clear definition of the ecological character features in the Information Sheet on Ramsar Wetlands (RIS), including recommendations for change to the structure and content of the RIS and, as appropriate, further guidance on the application of the Criteria for the identification and designation of Wetlands of International Importance in the *Strategic Framework and future development of the Ramsar List* (Resolution VII.11) and the additional guidelines for the identification and designation of under-represented wetland types (Resolution VIII.11) in the definition of the ecological character of Ramsar sites;
 - d) harmonization of the layout and information fields of the Information Sheet on Ramsar Wetlands (RIS) and the core data fields recommended in the Ramsar *Framework for Wetland Inventory* (Resolution VIII.6);
 - e) incorporation of assessment and management processes and practical methods (including multi-scalar methods for wetland assessment and monitoring) developed by other programmes, including the Millennium Ecosystem Assessment (MA), into the Ramsar "Toolkit" of Wise Use Handbooks;

- f) practical methods, including indicators, for monitoring wetlands and for the rapid assessment of wetland biodiversity, including both inland waters and coastal and marine systems;
 - g) incorporation of environmental impact and strategic environmental assessment into wetland risk assessment procedures;
 - h) the relevance and application of adaptive management methods to Ramsar sites and other wetlands, including as a response to the effects of global climate change; and
 - i) harmonization of definitions and terms throughout the suite of Ramsar guidance on inventory, assessment, monitoring and management of the ecological character of wetlands;
16. ALSO REQUESTS the STRP to consider the consolidation of this additional guidance with that already adopted by the Convention in the form of an integrated framework for wetland inventory, assessment and monitoring, developed from that outlined in the Information Paper available to this meeting of the Conference of the Parties (Ramsar COP8 DOC. 16);
 17. REQUESTS the STRP to ensure that the tools, guidance and mechanisms provided for the benefit of Contracting Parties resulting from this work should be framed in such a way that they can be applied at different scales according to the capacity, priorities, and objectives of Contracting Parties for the wise use of wetlands within their jurisdiction, and that they should also be provided such that any reporting involved does not represent an undue burden on Contracting Parties and divert resources from the on-site conservation and sustainable use of wetlands;
 18. FURTHER REQUESTS the STRP to review and evaluate the Man and the Biosphere Programme's procedure for Biosphere Reserve Integrated Monitoring (BRIM), once developed, and to advise on its application to the monitoring of the ecological character of Ramsar sites and other wetlands;
 19. INSTRUCTS the Ramsar Bureau, working with the secretariat of the Millennium Ecosystem Assessment, to make available to Contracting Parties and other interested organizations the findings and guidance developed by the MA, and URGES Contracting Parties to use, as appropriate, the MA guidance and methods for sub-global ecosystem assessments in their assessment of wetland ecosystems at the local, national and regional (supra-national) scale, including through international cooperation on the assessment of transboundary aquatic ecosystems;
 20. REQUESTS the Ramsar Bureau to maintain contact and develop collaboration with other assessment processes, including the Global International Waters Assessment, UNESCO's World Water Assessment Programme, and IUCN's Freshwater Biodiversity Assessment Programme, so as to ensure that their findings and information on the status and trends of wetlands, wetland biodiversity, and water resources are fully available to, and contribute to the needs of, Contracting Parties;
 21. FURTHER REQUESTS the Ramsar Bureau, in cooperation with the secretariat of the Convention on Biological Diversity (CBD), to make available to all Contracting Parties and

others the findings of the review of the status and trends on inland water biodiversity, prepared in support of the review and elaboration of the CBD's programme of work on inland water ecosystems; and

22. STRONGLY URGES all Contracting Parties to make available to the Ramsar Bureau and the STRP their information gathered on the status of the ecological character of Ramsar sites and other wetlands in order to assist in improving the further assessment of the global status and trends of wetland ecosystems.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.8

Assessing and reporting the status and trends of wetlands, and the implementation of Article 3.2 of the Convention

1. RECOGNIZING that assessment of the status and trends of wetlands, and assessing and reporting on their ecological character and change in ecological character, provide an essential basis for improving understanding of the state of, and pressures on, wetland ecosystems at the global, regional and national scales in support of future policy development, decision-making and prioritisation under the Convention, and for management interventions on Ramsar sites and other wetlands;
2. RECALLING Article 3.1 of the Convention, whereby Contracting Parties have committed themselves to formulate and implement their planning so as to promote the conservation of wetlands included in the List of Wetlands of International Importance, and as far as possible the wise use of wetlands in their territory;
3. RECALLING ALSO that the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11) calls for the establishment of an international network of wetland sites built from coherent and comprehensive networks of Ramsar sites within the territory of each Contracting Party to the Convention, and that Objective 4.1 of the *Strategic Framework* concerns the use of the Ramsar site network for monitoring the status and trends of wetlands, specifically “to use Ramsar sites as baseline and reference areas for national, supranational/regional, and international environmental monitoring to detect trends in the loss of biological diversity, climate change, and the processes of desertification”; and CONCERNED that national and international mechanisms for detecting and reporting such trends under the Convention should be improved;
4. FURTHER RECALLING that under Article 3.2 of the Convention, each Contracting Party has agreed that it will arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change as the result of technological developments, pollution or other human interference, and to report any such change, without delay, to the Ramsar Bureau;
5. NOTING that Resolution VI.1 interpreted ‘change in the ecological character of a site’ as meaning adverse change, caused by human activities, and noted that this excludes the process of natural evolutionary change occurring in wetlands;
6. CONCERNED that, according to available information including the National Reports to COP8, many Contracting Parties do not have in place the mechanisms to comply with Article 3.2, or that these are not being implemented;

7. FURTHER RECALLING that in Recommendation 4.8 the Contracting Parties instructed the Ramsar Bureau to maintain the “Montreux Record” of listed sites where change in ecological character has occurred, is occurring or is likely to occur; that in Resolution 5.4 they established guidelines for the operation of this Montreux Record and determined that its purpose should be, *inter alia*, to identify priority sites for positive national and international conservation attention; and that in Resolution VI.1 they adopted a revised procedure for its operation;
8. RECOGNIZING that many Ramsar sites have undergone or are undergoing change in their ecological character, or are likely to undergo such change, by virtue of the land use and other pressures affecting them, and NOTING that since its establishment 76 Ramsar sites have been included by Contracting Parties on the Montreux Record;
9. RECOGNIZING ALSO that the information fields contained in the Ramsar Information Sheet (RIS), as revised by Resolution VIII.13, used for the designation of Wetlands of International Importance should also form a statement of the ecological character of these wetlands and the factors affecting their character; but ALSO RECOGNIZING that Resolution VIII.7 calls for the Scientific and Technical Review Panel (STRP) to review and prepare further guidance on harmonising statements of ecological character in the RIS for wetland inventory and other purposes;
10. AWARE of the substantial body of tools and guidance already adopted by the Conference of the Parties to assist in the identification, assessment, and maintenance of the ecological character of sites on the List of Wetlands of International Importance and other wetlands, through inventory, assessment, monitoring and management, compiled and published as Ramsar Wise Use Handbooks 7 and 8; and ALSO AWARE that the tools and guidance for application of the *Strategic Framework and guidelines for the future development of the List* (Resolution VII.11) are applicable to all wetlands; and
11. RECOGNIZING that further guidance on these matters has been adopted by this meeting of the Conference of the Parties, notably the *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14), which includes guidance on the assessment and monitoring of ecological character and the factors that affect it, the *Framework for Wetland Inventory* (Resolution VIII.6), and the *Principles and guidelines for wetland restoration* (Resolution VIII.16);

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12. URGES Contracting Parties, as a matter of high priority, to put in place mechanisms in order to be informed at the earliest possible time, including through reports by national authorities and local and indigenous communities and NGOs, if the ecological character of any wetland in its territory included in the Ramsar List has changed, is changing or is likely to change, and to report any such change without delay to the Ramsar Bureau so as to implement fully Article 3.2 of the Convention, and to report on these matters in the National Reports prepared on the occasion of each meeting of the Conference of the Parties;
13. CONFIRMS that Article 3.2 reports should be made for types and causes of adverse, human-induced change in ecological character in order *inter alia* to provide the basis for

analysis of status and trends in Ramsar sites in line with Objective 4.1 of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11);

14. REAFFIRMS that in accordance with Resolution 5.4 this information will be maintained as part of the Ramsar Sites Database reports by Contracting Parties in fulfillment of Article 3.2, and DIRECTS the Ramsar Bureau, in cooperation with Wetlands International, to prepare and circulate to all Contracting Parties a simple format for this reporting;
15. RECOGNIZES that reporting under Article 3.2 of the Convention does not substitute for the requirement as adopted by Resolution VI.13 for Contracting Parties to provide a fully updated Ramsar Information Sheet for each of their designated Ramsar sites at intervals of not more than six years, and URGES Contracting Parties to renew their efforts to provide such updated Ramsar Information Sheets in a timely manner;
16. REQUESTS the Scientific and Technical Review Panel (STRP), with the assistance of Wetlands International, the Ramsar Bureau, and other relevant organizations to prepare an analysis and report of the status and trends in the ecological character of sites in the Ramsar List for consideration by COP9 and each subsequent meeting of the Conference of the Parties, and to set, as far as possible, the status and trends of Ramsar sites within the wider context of the status and trends of marine, coastal and inland wetlands, drawing upon the results of the Millennium Ecosystem Assessment (MA) and other assessment initiatives as appropriate;
17. ALSO REQUESTS the STRP to prepare further consolidated guidance on the overall process of detecting, reporting and responding to change in ecological character, including guidelines for determining when such a change is too trivial to require reporting, having regard to the reasons why a given site is important and to the conservation objectives which have been set for it, and ENCOURAGES Contracting Parties in the meantime to take a precautionary approach;
18. RECOGNIZES that the establishment of a management planning process, in line with the guidance on management planning adopted by this meeting of the COP, on all Ramsar sites greatly facilitates the identification, reporting and resolution of changes in ecological character, and that inclusion in each management plan of an objective of maintenance of the ecological character of the site provides a basis for implementation of Article 3.1 of the Convention;
19. FURTHER RECOGNIZES that several response options and mechanisms are available to the Contracting Party concerned to address and resolve identified negative changes, or likely changes, in the ecological character of sites on the List, including *inter alia*:
 - a) when resources permit, using an established management planning process, including undertaking an environmental impact assessment, to guide implementation of appropriate management action;
 - b) seeking the advice of the STRP, and its National Focal Points, on appropriate issues to take into account in addressing the matter, through the mechanism of requesting the Bureau to circulate the Article 3.2 pro-forma completed by the Contracting Party concerned to the STRP for comment;

- c) for developing countries and countries with economies in transition, requesting resources to implement management action through the emergency assistance category of the Ramsar Small Grants Fund or seeking such resources from other relevant sources; and
 - d) listing, if appropriate, on the Montreux Record and requesting a Ramsar Advisory Mission (RAM) in order to bring international expertise to bear in providing advice on appropriate actions;
- 20. CALLS UPON Contracting Parties to maintain or restore the ecological character of their Ramsar sites, including utilizing all appropriate mechanisms to address and resolve as soon as practicable the matters for which a site may have been the subject of a report pursuant to Article 3.2; and, once those matters have been resolved, to submit a further report, so that both positive influences at sites and changes in ecological character may be fully reflected in reporting under Article 3.2 and in the reporting to all meetings of the COP in order to establish a clear picture of the status and trends of the Ramsar site network at three-year intervals;
- 21. REAFFIRMS, in accordance with the *Guidelines for the operation of the Montreux Record* (Annex to Resolution VI.1), that the Montreux Record is the principal tool of the Convention for highlighting those sites where an adverse change in ecological character has occurred, is occurring, or is likely to occur and which are therefore in need of priority conservation action, and ACKNOWLEDGES that the voluntary inclusion of a particular site on the Montreux Record is a useful tool available to Contracting Parties in circumstances where:
 - a) demonstrating national commitment to resolve the adverse changes would assist in their resolution;
 - b) highlighting particularly serious cases would be beneficial at national and/or international level;
 - c) positive national and international conservation attention would benefit the site; and/or
 - d) inclusion on the Record would provide guidance in the allocation of resources available under financial mechanisms;
- 22. ENCOURAGES Contracting Parties, when submitting a report in fulfillment of Article 3.2, to consider whether the site would benefit from listing on the Montreux Record, and to request such listing as appropriate; and
- 23. REQUESTS Contracting Parties with sites on the Montreux Record to regularly provide the Ramsar Bureau with an update on their progress in taking action to address the issues for which these Ramsar sites were listed on the Record, including reporting fully on these matters in their National Reports to each meeting of the Conference of the Parties.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.9

‘Guidelines for incorporating biodiversity-related issues into environmental impact assessment legislation and/or processes and in strategic environmental assessment’ adopted by the Convention on Biological Diversity (CBD), and their relevance to the Ramsar Convention

1. WELCOMING the adoption by COP6 of the Convention on Biological Diversity (CBD) of the *Guidelines for incorporating biodiversity-related issues into environmental impact assessment legislation and/or processes and in strategic environmental assessment* and *Recommendations for the conduct of cultural, environmental and social impact assessment regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities*;
2. RECALLING Recommendation 6.2, in which the Contracting Parties urged that environmental considerations for wetlands be integrated into planning decisions in a clear and publicly transparent manner, and in which they requested the Convention’s Scientific and Technical Review Panel (STRP) to examine existing environmental impact assessment (EIA) guidelines relevant to wetlands and, if necessary, arrange for the drafting of Ramsar guidelines, as an aid to the wise use of wetlands;
3. FURTHER RECALLING Resolution VII.16, which “calls upon Contracting Parties to ensure that any projects, plans, programmes and policies with the potential to alter the ecological character of wetlands on the Ramsar List or impact negatively on other wetlands in their territory, are subjected to rigorous impact assessment procedures and to formalise such procedures under policy, legal, institutional and organizational arrangements”; and which requested “the Scientific and Technical Review Panel and the Ramsar Bureau to work in cooperation with their counterparts from the CBD and other relevant conventions and expert organizations, to review existing guidelines and available information on environmental impact assessment and economic valuation of wetlands”, and indicated that this could be reported as an Internet-based resource kit on the use of these tools for identifying opportunities to apply the wise use principle;
4. AWARE that the Joint Work Plan 2000-2001 of the CBD and Ramsar encouraged close cooperation in taking forward their respective programmes on impact assessment and minimizing adverse impacts, in consultation with IUCN -The World Conservation Union, the International Association for Impact Assessment (IAIA), and others;
5. ALSO AWARE that CBD Decision V/18 requested the preparation of further guidelines for incorporating biodiversity-related issues into EIA legislation and/or processes and in

strategic environmental assessment, and referred to collaboration with the STRP on matters of impact assessment;

6. ACKNOWLEDGING the adoption by COP7 of the Convention on Migratory Species of Resolution 7.10 on Impact Assessment on Migratory Species which, *inter alia*, requests the CMS Scientific Council to cooperate with the Ramsar STRP in reviewing and identifying gaps in relevant guidance;
7. WELCOMING the signing in June 2001 of a Memorandum of Understanding between the Ramsar Bureau and the IAIA;
8. EMPHASIZING the importance of impact assessment in key processes of the Ramsar Convention, including water allocations and management, management planning, and cases of boundary change and compensation for sites on the List of Wetlands of International Importance, and NOTING that the additional guidance on these matters adopted by this meeting of the Conference of the Parties refers to the application of impact assessments, and that it stresses the importance of the full involvement of local communities and indigenous peoples in an open and transparent manner; and
9. RECOGNIZING the role of impact assessment in wetland restoration and rehabilitation, including the identification of possibilities for mitigation for lost wetlands;

THE CONFERENCE OF THE CONTRACTING PARTIES

10. URGES Contracting Parties to make use, as appropriate, of the *Guidelines for incorporating biodiversity-related issues into environmental impact assessment legislation and/or processes and in strategic environmental assessment*, as adopted by Decision VI/7 of CBD COP6, with the assistance of the guidance prepared by the STRP and imbedded in the text of the CBD Guidelines, as shown in the annex to this Resolution; and to encourage full participation of local communities and indigenous peoples in impact assessments, in line with these guidelines, the *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands* (Resolution VII.8), and the *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14);
11. FURTHER URGES Contracting Parties to make use of the tools and information on impact assessment compiled by IUCN in their Biodiversity Economics Web site, <http://www.biodiversityeconomics.org/assessment/ramsar-503-01.htm>, created in response to Resolution VII.16 in order to assist in their practical application of good practice in impact assessment relevant to wetlands;
12. REQUESTS Contracting Parties to provide feedback to the Ramsar Bureau on the extent to which materials available on the IUCN Biodiversity Economics Web site are useful for their needs, and in light of this to indicate more precisely the nature of their needs for further information, advice and guidance on impact assessment relevant to wetlands;
13. URGES Contracting Parties and others to provide relevant materials to the Ramsar Bureau, including case studies indicating lessons learned, guidelines, sources of advice, and other relevant materials on impact assessment relevant to wetlands for incorporation into the IUCN Biodiversity Economics Web site;

14. REQUESTS the Scientific and Technical Review Panel and the Ramsar Bureau to prepare a synthesis of lessons learned from those case studies submitted, including indications of linkages with existing Ramsar guidance on other topics where relevant, to prepare a report for COP9, and to provide expert assistance when appropriate;
15. ALSO REQUESTS the STRP, in collaboration with IAIA, to continue to identify wetland-related elements of existing guidelines on impact assessment, to identify important gaps where such guidance is failing fully to meet the needs of Contracting Parties, and to investigate possible ways of filling such gaps, taking into account the *Recommendations for the conduct of cultural, environmental and social impact assessment regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities* adopted by CBD's COP6;
16. FURTHER REQUESTS the STRP, with the assistance of the Ramsar Bureau, to conduct a review, as a supplement to that presented in Technical Session A of Ramsar COP6 in 1996, of references to impact assessment in Ramsar COP decisions, guidelines and other Ramsar publications, and in particular to identify and seek to correct if necessary any inconsistencies of approach, and to make the results of such review available as an updated index of references to impact assessment in Ramsar materials;
17. URGES Contracting Parties to establish contact with the relevant national contact points from within the networks of the IAIA with a view to identifying sources of expertise and advice for assisting with wetland-related impact assessment;
18. REQUESTS the STRP to prepare advice for Contracting Parties on applying strategic environmental assessment in the context of the Convention's *Guidelines on reviewing laws and institutions to promote the conservation and wise use of wetlands* (Ramsar Handbook 3) and *Guidelines for developing and implementing National Wetland Policies* (Ramsar Handbook 2); and
19. RECOMMENDS that Contracting Parties and impact assessment practitioners seek to use impact assessments, particularly where they are related to mitigation projects, as opportunities to stimulate the adoption of, and to contribute to, strategically-determined targets for wetland conservation, management, enhancement, rehabilitation and restoration.

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Annex

The following guidelines were prepared by the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the Convention on Biological Diversity (CBD) and adopted (Decision VI/7) by CBD's Conference of the Contracting Parties at its 6th meeting (Den Haag, Netherlands, April 2002). The CBD guidelines were reviewed by Ramsar's Scientific and Technical Review Panel (STRP), which recommended that they are fully appropriate for application for impact assessment concerning wetlands in the Ramsar context.

The STRP has prepared supplementary guidance to assist Ramsar Parties in their application, as appropriate, of the CBD Guidelines to impact assessment on wetlands. This supplementary guidance is provided as boxed italic text in the relevant parts of the CBD guidelines.

CBD Guidelines for incorporating biodiversity related issues into environmental impact assessment legislation and/or processes and in strategic environmental assessment

Ramsar: For the purpose of the use of these Guidelines in a Ramsar Convention context, references to "biodiversity" as the scope of interest covered, or of the type of expertise engaged, can be read as applying equally to the conservation and wise use of wetlands, including limnology and hydrology, addressed by the Ramsar Convention. In applying the definitions given in paragraph 1 below, particular emphasis should be given to analysis of alternatives and inclusion of decision-making in the impact assessment process.

1. For the purpose of these guidelines, the following definitions are used for environmental impact assessment and strategic environmental assessment:
 - (a) Environmental impact assessment is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse. Although legislation and practice vary around the world, the fundamental components of an environmental impact assessment would necessarily involve the following stages:
 - i) Screening to determine which projects or developments require a full or partial impact assessment study;
 - ii) Scoping to identify which potential impacts are relevant to assess, and to derive terms of reference for the impact assessment;
 - iii) Impact assessment to predict and identify the likely environmental impacts of a proposed project or development taking into account inter-related consequences of the project proposal, and the socio-economic impacts.;
 - iv) Identifying mitigation measures (including not proceeding with the development, finding alternative designs or sites which avoid the impacts, incorporating safeguards in the design of the project, or providing compensation for adverse impacts);
 - v) Deciding whether to approve the project or not; and
 - vi) Monitoring and evaluating the development activities, predicted impacts and proposed mitigation measures to ensure that unpredicted impacts or failed mitigation measures are identified and addressed in a timely fashion.

- (b) Strategic environmental assessment is the formalized, systematic and comprehensive process of identifying and evaluating the environmental consequences of proposed policies, plans or programmes to ensure that they are fully included and appropriately addressed at the earliest possible stage of decision-making on a par with economic and social considerations.^{1/} Strategic environmental assessment, by its nature, covers a wider range of activities or a wider area and often over a longer time span than the environmental impact assessment of projects. Strategic environmental assessment might be applied to an entire sector, (such as a national policy on energy for example), or to a geographical area, (for example in the context of a regional development scheme). The basic steps of strategic environmental assessment are similar to the steps in environmental impact assessment procedures^{2/} but the scope differs. Strategic environmental assessment does not replace or reduce the need for project-level environmental impact assessment, but it can help to streamline the incorporation of environmental concerns (including biodiversity) into the decision-making process, often making project-level environmental impact assessment a more effective process.

1. Purpose and approach

2. The objective of these draft guidelines is to provide general advice on incorporation of biodiversity considerations into new or existing environmental impact assessment procedures, noting that existing procedures take biodiversity into consideration in different ways. A draft framework has been developed to address the screening and scoping phases of environmental impact assessment. Further development of the framework will be required to address the incorporation of biodiversity into subsequent stages of the environmental impact assessment process, including impact assessment, mitigation, evaluation and monitoring, and into strategic environmental assessment.
3. Individual countries may redefine the steps in the procedure to their needs and requirements as befits their institutional and legal setting. The environmental impact assessment process, in order to be effective, should be fully incorporated into existing legal planning processes and not be seen as an “add-on” process.
4. As a prerequisite, the definition of the term “environment” in national legislation and procedures should fully incorporate the concept of biological diversity as defined by the Convention on Biological Diversity, such that plants, animals and micro-organisms are considered at the genetic, species/community and ecosystem/habitat levels, and also in terms of ecosystem structure and function.
5. With regard to biodiversity considerations, the ecosystem approach, as described in decision V/6 of the Conference of the Parties and taking into account any further elaboration of the concept within the framework of the Convention, is an appropriate framework for the assessment of planned action and policies. In accordance with the approach, the proper temporal and spatial scales of the problems should be determined as well as the functions of biodiversity and their tangible and intangible values for humans

^{1/} Based on Sadler and Verheem, 1996

^{2/} Saddler and Verheem, 1996; South Africa, 2000; Nierynck, 1997 ; Nooteboom, 1999.

that could be affected by the proposed project or policy, the type of adaptive mitigation measures and the need for the participation of stakeholders in decision-making.

Ramsar: In a Ramsar context, the appropriate spatial scale may sometimes be wider than the ecosystem. In particular, the river basin (water catchment) is an important spatial scale at which to address aspects of wetland-related impacts. Also, where impacts on particularly important species values, such as migratory fish or birds, are at stake, assessment at the scale of the migratory range (flyway) of the relevant populations will be very relevant. This may involve a chain of ecosystems (perhaps disjunct ones), and therefore may need to take a broader perspective than would normally be the case under the ecosystem approach.

6. Environmental impact assessment procedures should refer to other relevant national, regional and international legislation, regulations, guidelines and other policy documents such as the national biodiversity strategy and action plan documents, the Convention on Biological Diversity and biodiversity-related conventions and agreements including, in particular, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on the Conservation of Migratory Species of Wild Animals and the related agreements, the Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, the Convention on Environmental Impact Assessment in a Transboundary Context; the United Nations Convention on the Law of the Sea; the European Union directives on environmental impact assessment, and the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources.

Ramsar: At the national level, reference should also be made to the national wetland policy (see Resolution VII.6) where this exists.

7. Consideration should be given to improving integration of National Biodiversity Strategy and Action Plans (NBSAP) and National Development Strategies using SEA as a tool for such integration to promote the establishment of clear conservation targets through the NBSAP process and the use of those targets for the screening and scoping targets of EIA and for developing mitigation measures.

2. Biodiversity issues at different stages of environmental impact assessment

(a) Screening

8. Screening is used to determine which proposals should be subject to impact assessment, to exclude those unlikely to have harmful environmental impacts and to indicate the level of environmental appraisal required. If screening criteria do not include biodiversity measures, there is a risk that proposals with potentially significant impacts on biodiversity will be screened out.
9. Since a legal requirement for environmental impact assessment on environmental grounds does not guarantee that biological diversity will be taken into account, consideration should be given to incorporating biodiversity criteria into existing or new screening criteria..
10. Types of existing screening mechanisms include:

- (a) Positive lists identifying projects requiring environmental impact assessment. A few countries use (or have used) negative lists, identifying those projects not subject to environmental impact assessment. These lists should be reassessed to evaluate their inclusion of biodiversity aspects;
 - (b) Expert judgement (with or without a limited study, sometimes referred to as “initial environmental examination” or “preliminary environmental assessment”); and
 - (c) A combination of a positive list and expert judgement; for a number of activities an environmental impact assessment is more appropriate, for others an expert judgement may be desirable to determine the need for an environmental impact assessment.
11. The result of screening can be that:
- (a) An environmental impact assessment is required,
 - (b)
 - (i) A limited environmental study is sufficient because only limited environmental impacts are expected; the screening decision is based on a set of criteria with quantitative norms or threshold values;
 - (ii) There is still uncertainty whether an environmental impact assessment is required and an initial environmental examination has to be conducted to determine whether a project requires environmental impact assessment or not, and
 - (c) The project does not require an environmental impact assessment.
12. How to use these guidelines?
- (a) Countries with a positive list identifying projects requiring environmental impact assessment should use, as appropriate, annexes I and II below for guidance on reconsidering their existing positive list with respect to biological diversity considerations. By assessing the possible impacts of categories of activities on biological diversity the existing list can be adjusted, if required;
 - (b) In countries where screening is based on expert judgement, experience has shown that professionals make screening decisions, often using “mini environmental impact assessment” to come to this decision. These guidelines, its annexes and other guidelines such as the information document submitted by the International Association for Impact Assessment (IAIA) help provide these professionals with the means to come to a motivated, transparent and consistent screening decision. Furthermore, the expert teams should include professionals with biodiversity expertise;
 - (c) In countries where screening is based on a combination of a positive list and expert judgement, country-specific thematic or sector guidelines, often including quantitative norms or thresholds, facilitate the responsible people to make a well-

founded and defensible decision. For biodiversity, thematic guidelines could be developed,^{3/} sector guidelines need to be reviewed on biodiversity considerations.

The screening criteria

13. Screening criteria may relate to: (i) categories of activities, including thresholds referring to magnitude of the activity and/or size of the intervention area, duration and frequency or to (ii) a magnitude of biophysical change that is caused by the activity, or to (iii) maps indicating areas important for biodiversity with special legal status or of high biodiversity value and endemism, species patterns, breeding sites, or areas with species of high genetic value.

Ramsar: Projects with possible implications for a listed Ramsar site are an example of the third type of screening criterion given above. This should extend to sites selected according to any of the Ramsar criteria, and not just those relating to the biodiversity importance of the wetland.

14. Determining norms or threshold values is partly a technical and partly a political process of which the outcome may vary for countries and for ecosystems. The technical process should at least provide a description of:
 - (a) Categories of activities that may affect biological diversity and the direct and indirect biophysical changes likely to result from these activities, taking into account characteristics like: type or nature of activity, magnitude, extent/location, timing, duration, reversibility/irreversibility, likelihood, and significance; possibility of interaction with other activities or impacts;
 - (b) Area of influence. Knowing the biophysical changes that result from an activity, the expected area of influence of these changes can be modelled or predicted, including the probability of off-site effects;
 - (c) Biodiversity maps indicating ecosystems and/or land-use types and their use and non-use values (showing the use and non-use values of biodiversity).

Ramsar: In addressing the likelihood of effects and their relevance and significance for Ramsar-related values, reference should be made to Ramsar guidance on ecological character and on risk assessment (see e.g. Resolution VII.10).

15. The process of developing a national biodiversity strategy and action plan can generate valuable information such as conservation priorities and targets which can guide further development of environmental impact assessment screening criteria^{4/} Annex II below presents a generic list of criteria, intended to be a practical reference for further in-country development of criteria.

Ramsar: This also applies to the process for developing a national wetland policy (see Resolution VII.6).

^{3/} Some concrete targets are proposed in the note by the Executive Secretary on a proposal for a global strategy for plant conservation (UNEP/CBD/SBSTTA/7/10).

^{4/} Summarized in the IAIA information document by Treweek, 2001, box 2.

Pertinent questions for screening

16. Considering the objectives of the Convention on Biological Diversity, i.e., in particular, conservation, sustainable use and equitable sharing of benefits derived from biological diversity, fundamental questions need to be answered in an environment impact assessment study:
 - (a) Does the intended activity affect the physical environment in such a manner or cause such biological losses that it influences the chance of extinction of cultivars, varieties, populations of species, or the chance of loss of habitats or ecosystems?
 - (b) Does the intended activity surpass the maximal sustainable yield, the carrying capacity of a habitat/ecosystem or the maximum and minimum 5/ allowable disturbance level of a resource, population, or ecosystem?
 - (c) Does the intended activity result in changes to the access to and rights over biological resources?
17. To facilitate the development of criteria, the questions above have been reformulated for the three levels of diversity, reproduced in annex I below.

Ramsar: The objectives of the Ramsar Convention should be considered in the same way, i.e. promoting the conservation of wetlands, promoting the wise use of wetlands, and the implied objective of maintaining the ecological character of wetlands, as defined by Resolution VII.10. Questions (a) and (b) above remain relevant, but two additional questions should also be asked concerning wetlands:

(d) Does the intended activity cause an imbalance in any biological, physical or chemical components of the wetland ecosystem, or in their interactions, which maintain the wetland and its products, functions and attributes? (i.e. does it cause a change in ecological character as defined under the Convention), and

(e) Does the intended activity constitute a use which would be “unwise” in the sense of conflicting with the tenets of “wise use of wetlands” as defined under the Convention in e.g. Recommendation 3.3, Recommendation 4.10 and Resolution V.6?

(b) Scoping

18. Scoping narrows the focus of the broad issues found to be significant during the screening stage. It is used to derive terms of reference (sometimes referred to as guidelines) for environmental impact assessment. Scoping also enables the competent authority (or environmental impact assessment professionals in countries where scoping is voluntary):
 - (a) To guide study teams on significant issues and alternatives to be assessed, clarify how they should be examined (methods of prediction and analysis, depth of analysis), and according to which guidelines and criteria;
 - (b) To provide an opportunity for stakeholders to have their interests taken into account in the environmental impact assessment;

5/ For example, fire can be too frequent and too infrequent to sustain the integrity/health of a given ecosystem.

- (c) To ensure that the resulting environmental impact statement is useful to the decision maker and is understandable to the public.
19. During the scoping phase promising alternatives can be identified for in-depth consideration during the environmental impact assessment study.
20. The following sequence provides an example of iterative mechanism for scoping, impact assessment and consideration of mitigation measures, which should be carried out with the help of existing information and the available knowledge among stakeholders:
- (a) Describe the type of project, its nature, magnitude, location, timing, duration and frequency;
 - (b) Describe the expected biophysical changes in soil, water, air, flora and fauna;
 - (c) Describe biophysical changes that result from social change processes as a result of the proposed project;
 - (d) Determine the spatial and temporal scale of influence of each biophysical change;
 - (e) Describe ecosystems and land-use types potentially influenced by the biophysical changes identified;
 - (f) Determine for each ecosystem or land-use type if the biophysical changes affect one of the following components of biological diversity: the composition (what is there), the temporal/spatial structure (how are biodiversity components organised in time and space), or key processes (how is biodiversity created and/or maintained);
 - (g) Identify in consultation with stakeholders the current and potential use-functions, non-use functions and other longer-term less tangible benefits of biological diversity provided by the ecosystems or land-use types and determine the values these functions represent for society (see annex III for an indicative list of functions);
 - (h) Determine which of these functions will be significantly affected by the proposed project, taking into account mitigation measures;
 - (i) For each alternative, define mitigation and/or compensation measures to avoid, minimize or compensate the expected impacts;
 - (j) With the help of the biodiversity checklist on scoping (see annex IV below), determine which issues will provide information relevant to decision making and can realistically be studied;
 - (k) Provide information on the severity of impacts, i.e. apply weights to the expected impacts for the alternatives considered. Weigh expected impacts to a reference situation (baseline), which may be the existing situation, a historical situation, or an external reference situation.

Ramsar: In the case of Ramsar sites, the “baseline” should relate to the site’s ecological character, as distinct from the attributes which cause it to qualify as internationally important. Hence the baseline should be the target condition (ecological character) described in management plan objectives. It will therefore not necessarily equate to the condition of the site described at the time of listing (or subsequent updating of the Ramsar Information Sheet) unless at such times the site happens to have achieved its optimal (target) condition, or if there is no better baseline available.

- (l) Identify necessary surveys to gather comprehensive information about the biological diversity in the affected area where appropriate.
21. The expected impacts of the proposed activity, including identified alternatives, should be compared with the selected reference situation and with the autonomous development (what will happen with biodiversity over time if the project is not implemented). There should be awareness that doing nothing may in some cases also have significant effects on biological diversity, sometimes even worse than the impacts of the proposed activity (e.g. projects counteracting degradation processes).
 22. At present, evaluation criteria for biological diversity, especially at ecosystem level, are under-developed and need serious attention when developing in-country mechanisms to incorporate biodiversity in environmental impact assessment.

(c) Impact analysis and assessment

23. Environmental impact assessment should be an iterative process of assessing impacts, redesigning alternatives and comparison. The main tasks of impact analysis and assessment are:
 - (a) Refinement of the understanding of the nature of the potential impacts identified during screening and scoping and described in the terms of reference. This includes the identification of indirect and cumulative impacts, and of the likely causes of the impacts (impact analysis and assessment). Identification and description of relevant criteria for decision-making can be an essential element of this period;
 - (b) Review and redesign of alternatives; consideration of mitigation measures; planning of impact management; evaluation of impacts; and comparison of the alternatives; and
 - (c) Reporting of study results in a environmental impact statement.
24. Assessing impacts usually involves a detailed analysis of their nature, magnitude, extent and effect, and a judgement of their significance, i.e., whether the impacts are acceptable to stakeholders, require mitigation, or are just unacceptable. Biodiversity information available is usually limited and descriptive and cannot be used as a basis for numerical predictions. There is a need to develop or compile biodiversity criteria for impact evaluation and to have measurable standards or objectives against which the significance of individual impacts can be evaluated. The priorities and targets set in the national biodiversity action plan and strategy process can provide guidance for developing these criteria. Tools will need to be developed to deal with uncertainty, including criteria on using risk assessment techniques, precautionary approach and adaptive management.

Ramsar: In addressing the nature of effects and their relevance and significance for Ramsar-related values, reference should be made to Ramsar guidance on ecological character and on risk assessment (see e.g. Resolution VII.10).

(d) Consideration of mitigation measures

25. If the evaluation process concludes that the impacts are significant, the next stage in the process is to propose mitigation ideally drawn together into an “environmental management plan”. The purpose of mitigation in environmental impact assessment is to look for better ways to implement project activities so that negative impacts of the activities are avoided or reduced to acceptable levels and the environmental benefits are enhanced, and to make sure that the public or individuals do not bear costs which are greater than the benefits which accrue to them. Remedial action can take several forms, i.e. avoidance (or prevention), mitigation (including restoration and rehabilitation of sites), and compensation (often associated with residual impacts after prevention and mitigation).

Ramsar: In certain circumstances relating to Ramsar sites, when the consequences of impacts on the site include reduction or deletion of the site, the provision of compensation is governed by Article 4.2 of the Convention and the guidelines adopted under Resolution VIII.20 will apply.

(e) Reporting: the environmental impact statement (EIS)

26. The environmental impact statement is designed to assist: (i) the proponent to plan, design and implement the proposal in a way that eliminates or minimizes the negative effect on the biophysical and socio-economic environments and maximizes the benefits to all parties in the most cost effective manner; (ii) the Government or responsible authority to decide whether a proposal should be approved and the terms and conditions that should be applied; and (iii) the public to understand the proposal and its impacts on the community and environment and provide an opportunity for comments on the proposed action for consideration by decision-makers. Some adverse impacts may be wide ranging and have effects beyond the limits of particular habitats/ecosystems or national boundaries. Therefore, environmental management plans and strategies contained in the environmental impact statement should consider regional and transboundary impacts, taking into account the ecosystem approach.

Ramsar: Concerning transboundary impacts, Ramsar Parties should have regard to Article 5 of the Convention and the Guidelines for international cooperation under the Ramsar Convention on Wetlands (Resolution VII.19).

(f) Review

27. The purpose of review of the environmental impact statement is to ensure that the information for decision-makers is sufficient, focused on the key issues, scientifically and technically accurate, and if the likely impacts are acceptable from an environmental viewpoint and the design complies with relevant standards and policies, or standards of good practice where official standards do not exist. The review should also consider whether all of the relevant impacts of a proposed activity have been identified and adequately addressed in the environmental impact assessment. To this end, biodiversity

specialists should be called upon for the review and information on official standards and/or standards for good practice to be compiled and disseminated.

28. Public involvement, including minority groups, is important in various stages of the process and particularly at this stage. The concerns and comments of all stakeholders are considered and included in the final report presented to decision-makers. The process establishes local ownership of the proposal and promotes a better understanding of relevant issues and concerns.

Ramsar: For guidance on public involvement, refer to the Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands (Resolution VII.8) and the New Guidelines for management planning for Ramsar sites and other wetlands (Resolution VIII.14).

29. Review should also guarantee that the information provided in the environmental impact statement is sufficient for a decision maker to determine whether the project is compliant with or contradictory to the objectives of the Convention on Biological Diversity.

Ramsar: This paragraph should be applied mutatis mutandis to the Ramsar Convention.

(g) Decision-making

30. Decision-making takes place throughout the process of environmental impact assessment in a incremental way from the screening and scoping stages to decisions during data-collecting and analysis, and impact prediction to making choices between alternatives and mitigation measures and finally the decision between refusal or authorization of the project. Biodiversity issues should play a part in decision-making throughout. This final decision is essentially a political choice about whether or not the proposal is to proceed, and under what conditions. If rejected, the project can be redesigned and resubmitted. It is desirable that the proponent and the decision-making body are two different entities.
31. The precautionary approach should be applied in decision-making in cases of scientific uncertainty about risk of significant harm to biodiversity. As scientific certainty improves, decisions can be modified accordingly.

(h) Monitoring and environmental auditing

32. Monitoring and auditing are used to see what actually occurs after project implementation has started. Predicted impacts on biodiversity should be monitored, as should the effectiveness of mitigation measures proposed in the environmental impact assessment. Proper environmental management should ensure that anticipated impacts are maintained within predicted levels, and unanticipated impacts are managed before they become a problem and the expected benefits (or positive developments) are achieved as the project proceeds. The results of monitoring provide information for periodic review and alteration of environmental management plans, and for optimising environmental protection through good practice at all stages of the project. Biodiversity data generated by environmental impact assessment should be made accessible and useable by others and should be linked to biodiversity assessment processes being designed and carried out under the Convention on Biological Diversity.

33. An environmental audit is an independent examination and assessment of a project's (past) performance, is part of the evaluation of the environmental management plan and contributes to the enforcement of EIA approval decisions.

3. Incorporation of biodiversity considerations in strategic environmental assessments

34. The guidelines proposed for the integration of biodiversity in environmental impact assessment are also applicable to strategic environmental assessment, taking into account that for the latter type of assessment, biological diversity concerns should be considered from the early stages of the drafting process, including when developing new legislative and regulatory frameworks (decision V/18, paras. 1(c) and 2 (a)), and at the decision-making and/or environmental planning levels (decision V/18, para. 2 (a)), and that strategic environmental assessments by their nature cover policies and programmes, a wider range of activities over a wider area.
35. Strategic environmental assessment, while not a new process, is not practised as widely as environmental impact assessment. As experience accumulates in countries, it may then be necessary to draw more specific guidelines for the incorporation of biodiversity in the process.

4. Ways and means

(a) Capacity-building

36. Any activity aimed at the incorporation of biodiversity considerations into national environmental impact assessment systems should be accompanied by appropriate capacity development activities. Expertise in taxonomy, ^{6/} conservation biology, ecology, and traditional knowledge is required as well as local expertise in methodologies, techniques and procedures. Environmental impact assessments should involve ecologists with extensive knowledge on the relevant ecosystem(s) in the assessment team.
37. It is also recommended to develop training workshops on biodiversity and environmental impact/strategic environmental assessment for both assessment practitioners and biodiversity specialists to build a common understanding of the issues. School and university curricula should be reviewed to ensure that they incorporate material on biodiversity conservation, sustainable development and environmental impact/strategic environmental assessment.
38. Biodiversity relevant data should be organized in regularly updated and accessible databases, making use of rosters of biodiversity experts.

(b) Legislative authority

39. If environmental impact assessment and strategic environmental assessment procedures are incorporated into legislation, and the requirements for project/policy developers to find

^{6/} See the Global Taxonomy Initiative and the proposed programme of work (decision V/9 of the Conference of the Parties and SBSTTA recommendation VI/6)

the most environmentally sound, efficient options that avoid, reduce or mitigate biodiversity and other adverse impacts are made explicit, this will prompt developers to, at a very early stage, use environmental impact assessment tools to improve the development process prior to the project consent stage or in some cases prior to screening procedures.

(c) Participation

40. Relevant stakeholders or their representatives, and in particular indigenous and local communities should be involved in the development of guidelines or recommendations for environmental impact assessments as well as throughout the assessment processes relevant to them, including decision-making.

Ramsar: Concerning stakeholder participation, including local communities and indigenous peoples, refer here to the Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands, adopted under Resolution VII.8, and the New Guidelines for management planning for Ramsar sites and other wetlands (Resolution VIII.14).

(d) Incentives

41. The possible link between impact assessment and incentive measures is pointed out in decision III/18 of the Conference of the Parties, on incentive measures. In paragraph 6 of that decision, the Conference of the Parties encouraged Parties to incorporate biological diversity considerations into impact assessments as a step in the design and implementation of incentive measures. The endorsement of the impact assessment process and its implementation within a legislative framework can act as an incentive, especially if applied at the policy level, to protect and, in certain cases even restore and rehabilitate biological diversity.²⁷ Financial or other incentives can also be part of a negotiated approval package for a project.

(e) Cooperation

42. Regional collaboration is of particular importance, including for the development of criteria and indicators for the evaluation of impact and possibly criteria and indicators that can provide early warning of potential threats and adequately distinguish the effects of anthropogenic activities from natural processes, and the use of standardized methods of collection, assembly and exchange of information is needed to ensure regional compatibility and accessibility of data. Guidelines and sharing of information and experiences should be made available through *inter-alia*, the Convention's clearing-house mechanism.
43. As a follow-up to the implementation of decision IV/10 C of the Conference of the Parties, collaboration between this Convention and other biodiversity-related conventions, including in particular the Ramsar Convention and the Convention on Migratory Species, which have listed sites and binding agreements on certain species, and other relevant organizations and bodies will facilitate the development and implementation of any guidelines agreed upon for the integration of biodiversity-related issues in environmental impact assessment and strategic environmental assessment. Such a collaborative approach,

²⁷ UNEP/CBD/COP/4/20 and UNEP/CBD/SBSTTA/4/10.

also embodied in resolution VII.16 of the Conference of the Parties to the Ramsar Convention (“The Ramsar Convention and impact assessment: strategic, environmental and social”), could lead to the development of an umbrella set of guidelines on impact assessment for biodiversity-related conventions.

44. Web-based resources such as the clearing-house mechanism of the Convention on Biological Diversity may help to raise awareness about best available methods and useful sources of information and experience, and should be developed and used for the provision and exchange of information on environmental impact assessment.
45. Communication between practitioners of environmental impact assessment and scientists working in the biodiversity domain is in urgent need of improvement and should be enhanced through workshops, case-study assessments.^{8/}

^{8/} See UNEP/CBD/COP/5/INF/34

Appendix 1

Questions pertinent to screening on biological diversity impacts

<i>Level of diversity</i>	<i>Biological diversity perspective</i>	
	<i>Conservation of biological diversity (Non-use values)</i>	<i>Sustainable use of biodiversity (Use values)</i>
Genetic diversity ⁽¹⁾	(I) Does the intended activity cause a local loss of varieties/cultivars/breeds of cultivated plants and / or domesticated animals and their relatives, genes or genomes of social, scientific and economic importance?	
Species diversity ⁽²⁾	(II) Does the intended activity cause a direct or indirect loss of a population of a species?	(III) Does the intended activity affect the sustainable use of a population of a species?
Ecosystem diversity ⁽²⁾	(IV) Does the intended activity lead to serious damage or total loss of (an) ecosystem(s) or land-use type(s), thus leading to a loss of ecosystem diversity (i.e. the loss of indirect use values and non-use values)?	(V) Does the intended activity affect the sustainable exploitation of (an) ecosystem(s) or land-use type(s) by humans in such manner that the exploitation becomes destructive or non-sustainable (i.e. the loss of direct use values)?

- (1) The potential loss of natural genetic diversity (genetic erosion) is extremely difficult to determine, and does not provide any practical clues for formal screening. The issue probably only comes up when dealing with highly threatened, legally protected species which are limited in numbers and / or have highly separated populations (rhinoceros, tigers, whales, etc.), or when complete ecosystems become separated and the risk of genetic erosion applies to many species (the reason to construct so-called eco-ducts across major line infrastructure). These issues are dealt with at species or ecosystem level.

Ramsar: The Ramsar Convention does not currently directly address issues of genetic diversity.

- (2) Species diversity: The level at which “population” is to be defined fully depends on the screening criteria used by a country. For example, in the process of obtaining a special status, the conservation status of species can be assessed within the boundaries of a country (for legal protection), or can be assessed globally (IUCN Red Lists). Similarly, the scale at which ecosystems are defined depends on the definition of criteria in a country.

Ramsar: As a reference for the definition of populations, for waterbirds appropriate biogeographical populations are established in Wetlands International's Waterbird Population Estimates (3rd edition, 2002). Where a site under consideration regularly supports >1% of one or more waterbird populations, and additional question could be: does the intended activity threaten to cause direct or indirect loss of the international importance of waterbird populations?

Appendix 2

The screening criteria

This is a suggested outline of a set of screening criteria, to be elaborated on country level. It only deals with biodiversity criteria and thus is an add-on to already existing screening criteria.

Category A: Environmental impact assessment mandatory:

Only in the case criteria can be based on formal legal backing, such as:

- National legislation, for example in case of impact on protected species and protected areas;
- International conventions such as CITES, the Convention on Biological Diversity, Ramsar Convention on Wetlands, etc.;
- Directives from supranational bodies, such as the European Union directive 92/43/EEC of 21 May 1992 on conservation of natural habitats and of wild fauna and flora and directive 79/409/EEC on the conservation of wild birds

Indicative list of activities for which an environmental impact assessment could be mandatory:

- (a) **At the genetic level** (relates to screening question I in annex I above):
 - Directly or indirectly cause a local loss of legally protected varieties/cultivars/breeds of cultivated plants and / or domesticated animals and their relatives, genes or genomes of social, scientific and economic importance e.g. by introducing living modified organisms that can transfer transgenes to legally protected varieties/cultivars/breeds of cultivated plants and / or domesticated animals and their relatives
- (b) **At species level** (relates to screening question II and III in annex I above):
 - Directly affect legally protected species, for example by extractive, polluting or other disturbing activities;
 - Indirectly affect legally protected species, for example by reducing its habitat, altering its habitat in such a manner that its survival is threatened, introducing predators, competitors or parasites of protected species, alien species or GMOs;
 - Directly or indirectly affect all of the above for cases which are important in respect of e.g. stop-over areas for migratory birds, breeding grounds of migratory fish, commercial trade in species protected by CITES.
 - Directly or indirectly affect non-legally protected, threatened species.
- (c) **At ecosystem level** (screening questions IV and V in annex I above):
 - Are located in legally protected areas ;
 - Are located in the vicinity of legally protected areas;
 - Have direct influence on legally protected areas, for example by emissions into the

area, diversion of surface water that flows through the area, extraction of groundwater in a shared aquifer, disturbance by noise or lights, pollution through air.

Category B: The need for, or the level of environmental impact assessment, is to be determined:

In cases where there is no legal basis to require an environmental impact assessment, but one can suspect that the proposed activity may have a significant impact on biological diversity, or that a limited study is needed to solve uncertainties or design limited mitigation measures. This category covers the frequently referred to but difficult to use concept of “sensitive areas”. As long as so-called sensitive areas do not have any legal protected status it is difficult to use the concept in practice, so a more practical alternative is provided.

The following categories of criteria point towards possible impacts on biological diversity, and further attention is thus required:

- (a) **Activities in, or in the vicinity of, or with influence on areas with legal status having a probable link to biological diversity but not legally protecting biological diversity** (*relates to all five screening questions in annex I above*). For example: a Ramsar site has the official recognition of having internationally important wetland values, but this recognition does not automatically imply legal protection of biological diversity in these wetlands). Other examples include areas allocated to local and indigenous communities, extractive reserves, landscape preservation areas, sites covered by international treaties or conventions for preservation of natural and / or cultural heritage such as the UNESCO Biosphere reserves and World Heritage Sites;
- (b) **Impacts on biological diversity possible or likely, but the environmental impact assessment is not necessarily triggered by law:**
 - (i) **At the genetic level:**
 - Replacing agricultural, forestry or fishery varieties or breeds by new varieties, including the introduction of living modified organisms (LMOs) (*screening questions I and II*).
 - (ii) **At the species level:**
 - All introductions of non-indigenous species (*questions II and III*);
 - All activities which directly or indirectly affect sensitive or threatened species if or in case these species are not yet protected (good reference for threatened species is provided by the IUCN Red Lists); sensitive species may be endemic, umbrella species, species at the edge of their range, or with restricted distributions, rapidly declining species (*question II*). Particular attention should be given to species which are important in local livelihoods and cultures;
 - All extractive activities related to the direct exploitation of species (fisheries, forestry, hunting, collecting of plants (including living botanical

and zoological resources), etc.) (*question III*)

- All activities leading to reproductive isolation of populations of species (such as line infrastructure) (*question II*)

(iii) **At the ecosystem level:**

- All extractive activities related to the use of resources on which biological diversity depends (exploitation of surface and groundwater, open pit mining of soil components such as clay, sand, gravel, etc.) (*questions IV and V*);
- All activities involving the clearing or flooding of land (*questions IV and V*);
- All activities leading to pollution of the environment (*questions IV and V*);
- Activities leading to the displacement of people (*questions IV and V*);
- All activities leading to reproductive isolation of ecosystems (*question IV*);
- All activities that significantly affect ecosystem functions that represent values for society (see annex III below for a list of functions provided by nature). Some of these functions depend on relatively neglected taxa;
- All activities in areas of known importance for biological diversity (*questions IV and V*), such as areas containing high diversity (hot spots), large numbers of endemic or threatened species, or wilderness; required by migratory species; of social, economic, cultural or scientific importance; or which are representative, unique (e.g. where rare or sensitive species occur) or associated with key evolutionary or other biological processes.

Category C: no environmental impact assessment required

Activities which are not covered by one of the categories A or B, or are designated as category C after initial environmental examination.

The generic nature of these guidelines does not allow for the positive identification of types of activities or areas where environmental impact assessment from a biodiversity perspective is not needed. At country level, however, it will be possible to indicate geographical areas where biological diversity considerations do not play a role of importance and, conversely, areas where they do play an important role (biodiversity-sensitive areas).

Appendix 3

Indicative list (non-exhaustive) of examples of functions of the natural environment that are directly (flora and fauna) or indirectly (services provided by ecosystems such as water supply) derived from biological diversity.

Production functions

Natural production

- Timber production
- Firewood production
- Production of harvestable grasses (construction & artisanal use)
- Naturally produced fodder & manure
- Harvestable peat
- Secondary (minor) products
- Harvestable bush meat (food)
- Fish & shellfish productivity
- Drinking water supply
- Supply of water for irrigation and industry
- Water supply for hydroelectricity
- Supply of surface water for other landscapes
- Supply of ground water for other landscapes

Nature-based human production

- Crop productivity
- Tree plantations productivity
- Managed forest productivity
- Rangeland /livestock productivity
- Aquaculture productivity (freshwater)
- Mariculture productivity (brackish/saltwater)

Carrying functions

- Suitability for constructions
- Suitability for indigenous settlement
- Suitability for rural settlement
- Suitability for urban settlement
- Suitability for industry
- Suitability for infrastructure
- Suitability for transport infrastructure
- Suitability for shipping / navigation
- Suitability for road transport
- Suitability for rail transport
- Suitability for air transport
- Suitability for power distribution
- Suitability for use of pipelines
- Suitability for leisure and tourism activities
- Suitability for nature conservation

Processing and regulation functions

Land-based processing and regulation functions

- Decomposition of organic material (land based)
- Natural desalinisation of soils
- Development / prevention of acid sulphate soils
- Biological control mechanisms
- Seasonal cleansing of soils
- Soil water storage capacity
- Coastal protection against floods
- Coastal stabilisation (against accretion / erosion)
- Soil protection

Water related processing and regulation functions

- Water filtering function
- Dilution of pollutants function
- Discharge of pollutants function
- Flushing / cleansing function
- Bio-chemical/physical purification of water
- Storage for pollutants function
- Flow regulation for flood control
- River base flow regulation
- Water storage capacity
- Ground water recharge capacity
- Regulation of water balance
- Sedimentation / retention capacity
- Protection against water erosion
- Protection against wave action
- Prevention of saline groundwater intrusion
- Prevention of saline surface-water intrusion
- Transmission of diseases

Air-related processing and regulation functions

- Filtering of air
- Carry off by air to other areas
- Photo-chemical air processing (smog)
- Wind breaks
- Transmission of diseases
- Carbon sequestration

Biodiversity-related regulation functions

- Maintenance of genetic, species and ecosystem composition
- Maintenance of horizontal and vertical spatial structure, and of temporal structure
- Maintenance of key processes for structuring or maintaining biological diversity
- Maintenance of pollinator services

- **Signification functions**
- Cultural/religious/scientific/landscape functions

Appendix 4

Biodiversity checklist on scoping for the identification of the impacts of proposed projects on components of biodiversity (Not exhaustive).

COMPONENTS OF BIOLOGICAL DIVERSITY				
	<i>Composition</i>	<i>Structure (temporal)</i>	<i>Structure (spatial: horizontal and vertical)</i>	<i>Key processes</i>
Genetic diversity	Minimal viable population (avoid destruction by inbreeding / gene erosion) Local cultivars. Living modified organisms.	Cycles with high and low genetic diversity within a population.	Dispersal of natural genetic variability Dispersal of agricultural cultivars.	Exchange of genetic material between populations (gene flow) Mutagenic influences Intraspecific competition
Species diversity	Species composition, genera, families etc, rarity / abundance, endemism / exotics Population size and trends Known key species (essential role) Conservation status	Seasonal, lunar, tidal, diurnal rhythms (migration, breeding, flowering, leaf development, etc.) Reproductive rate, fertility, mortality, growth rate. Reproductive strategy.	Minimal areas for species to survive. Essential areas (stepping stones) for migrating species. Niche requirements within ecosystem (substrate preference, layer within ecosystem) Relative or absolute isolation	Regulation mechanisms such as predation, herbivory, parasitism, Interactions between species. Ecological function of a species
Ecosystem diversity	Types and surface area of ecosystems Uniqueness / abundance Succession stage, existing disturbances and trends (=autonomous development)	Adaptations to / dependency on regular rhythms: seasonal Adaptations to / dependency of on irregular events: droughts, floods, frost, fire, wind Succession (rate)	Spatial relations between landscape elements (local and remote) Spatial distribution (continuous or discontinuous / patchy); Minimal area for ecosystem to survive. Vertical structure (layered, horizons, stratified).	Structuring process(es) of key importance for the maintenance of the ecosystem itself or for other ecosystems.
LEVELS OF BIOLOGICAL DIVERSITY				

“Wetlands: water, life and culture”

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.10

Improving implementation of the Strategic Framework and Vision for the List of Wetlands of International Importance

1. RECALLING Article 2.1 of the Convention, which states that “each Contracting Party shall designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance” and that “the boundaries of each wetland shall be precisely . . . delimited on a map”;
2. AWARE of Article 3.1 which specifies that “Contracting Parties shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List”;
3. ALSO AWARE of Article 3.2 which provides that “each Contracting Party shall arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change” and that “information on such changes shall be passed without delay” to the Ramsar Bureau;
4. NOTING Recommendation 4.7 which adopted the ‘Information Sheet on Ramsar Wetlands’ (referred to as ‘Ramsar Information Sheet’, RIS) as the means for presenting site descriptions for the Ramsar Sites Database;
5. FURTHER NOTING Resolutions 5.3 and VI.13, as well as Operational Objective 5.3 of the Convention Strategic Plan 1997-2002, which requested Contracting Parties to ensure that RISs and maps have been submitted for all sites, and to update the RIS and map for each designated site at not more than six-year intervals;
6. RECALLING Resolution VII.11 through which Contracting Parties adopted a *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*, whose Vision is “To develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the ecological and hydrological functions they perform”, and which indicates that such an international network is to be built from coherent and comprehensive networks of Wetlands of International Importance established within the territory of each Contracting Party;
7. ALSO RECALLING that Resolution VII.11 established that the objectives for the Ramsar List are:
 - a) to establish national networks of Ramsar sites in each Contracting Party which fully represent the diversity of wetlands and their key ecological and hydrological functions;

- b) to contribute to maintaining global biological diversity through the designation and management of appropriate wetland sites;
 - c) to foster cooperation among Contracting Parties, the Convention's International Organization Partners, and local stakeholders in the selection, designation and management of Ramsar sites; and
 - d) to use the Ramsar site network as a tool to promote national, supranational/regional, and international cooperation in relation to complementary international treaties.
8. FURTHER RECALLING that Objective 4.1 of the *Strategic Framework* is to “use Ramsar sites as baseline and reference areas for national, supranational/regional, and international environmental monitoring to detect trends in the loss of biological diversity, climate change and the processes of desertification”, and that to achieve this Contracting Parties need to put in place mechanisms for monitoring the ecological character of their Ramsar sites, and to report change in ecological character in line with Article 3.2 of the Convention, as recognized by Resolution VIII.8 adopted by this meeting of the Conference of the Parties;
 9. AWARE that Contracting Parties are urged in the “Guidelines for adopting a systematic approach to identifying priority wetlands for designation under the Ramsar Convention” (Section IV of the Annex to Resolution VII.11) to consider the opportunities that Ramsar site designations may provide for contributing to other initiatives under related international and regional environmental conventions and programmes, and that this includes attention to site networks for migratory waterbirds and other migratory species through, *inter alia*, the Convention on Migratory Species and its Agreements such as the African-Eurasian Waterbirds Agreement (AEWA), the North American Waterfowl Management Plan, the Western Hemisphere Shorebird Reserve Network, and the Asia-Pacific Migratory Waterbird Conservation Strategy;
 10. ALSO AWARE that the *Guidelines for international cooperation under the Ramsar Convention* (Resolution VII.19) call upon Contracting Parties to give special attention to identifying shared wetlands and wetland-dependent species, harmonizing implementation of the Ramsar Convention with other conventions and programmes, and working cooperatively with these programmes and organizations to pursue the actions recommended by the guidelines on international cooperation, which include identification and designation of all sites which satisfy the waterbird criteria for Ramsar site designation and the establishment of site networks for shared species;
 11. RECOGNIZING that a coherent national and international network of Ramsar sites and their sustainable management can provide a powerful demonstration and important contribution to countries achieving their sustainable development goals, through the recognition and maintenance of wetland values and functions and the goods and services they provide in water and food security and poverty eradication, especially for local communities and indigenous people;
 12. ALSO RECOGNIZING that the policy paper presented at the World Summit on Sustainable Development (Johannesburg, August 2002) jointly by the government of Switzerland, the World Wide Fund for Nature (WWF), and the Ramsar Bureau (COP8

DOC. 32) encourages an ecosystem approach to the conservation and management of Ramsar sites and other wetlands in the context of basin-scale management as a contribution to sustainable development;

13. FURTHER RECOGNIZING that the designation of a Ramsar site is only the starting point, and that implementation of appropriate management planning for all sites is essential to securing their sustainable use, and that this meeting has adopted *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14);
14. AWARE of the target established in the Convention's Work Plan 2000-2002 of the designation of 2000 Ramsar sites by the time of COP9;
15. NOTING that (as of 15 September 2002) 208 new Ramsar sites covering 31,928,333 ha had been designated since COP7 by 56 Contracting Parties, which represents only an 8% increase in the number of sites, but a 45 % increase in the total area designated; but CONCERNED that this is only just over half the number of the new sites pledged at COP7 for designation (Resolution VII.12);
16. APPLAUDING the support of International Organization Partners and others to Contracting Parties which are developing countries and countries with economies in transition, and to non-Parties preparing for accession to the Convention, for making significant new designations of Ramsar sites;
17. AWARE that the Ramsar subregional meeting for North and Central Africa (Algiers, 20-22 March 2002) proposed that a Resolution be adopted by the Conference of the Parties encouraging all Contracting Parties to communicate, at each meeting of the Conference of the Parties, their minimum plans for the designation during the succeeding triennium of new Ramsar sites, including the number of sites and the total area to be designated; and ALSO AWARE that this proposal was endorsed by the subregional meeting of the Ramsar Convention for West Africa, Madagascar and the Comores (Cotonou, 5-7 June 2002);
18. CONCERNED that 77 Contracting Parties (including 58 Parties which acceded to the Convention prior to COP7) have not made any new Ramsar site designations since COP7, although RECOGNIZING that certain countries with small territories may have no further wetlands which qualify for designation;
19. ALSO CONCERNED that 32 Parties have not made any new Ramsar site designations since their accession to the Convention, in some cases over 20 years ago;
20. FURTHER CONCERNED that for 503 Ramsar sites in 73 countries, RISs have not been provided or updated RISs and maps have not been supplied to the Ramsar Bureau for more than six years; and that adequate maps have yet to be supplied for 411 sites in 52 countries;
21. NOTING that, in their National Reports to COP8, only 29 Parties have indicated that they have a comprehensive national wetland inventory, so that most Parties lack the essential basis for identification and designation of their coherent and comprehensive national network of Ramsar sites, as indicated by Resolution VII.20, and also that a similarly small number of Parties report having national wetland databases;

22. PARTICULARLY CONCERNED that although in their National Reports to COP8, 73 Parties indicated that they have applied a systematic approach to Ramsar site designation, and 74 Parties reported having a directory of potential Ramsar sites, few countries have the comprehensive inventory information that forms the necessary precursor to establishing such a systematic approach, and that in very few countries is there clear evidence of the establishment of the coherent national network of Ramsar sites which fully represent the diversity of wetlands and their key ecological and hydrological functions, or a strategy for achieving this network, as is called for in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*;
23. NOTING that, from their National Reports to COP8, only 24 Parties have management plans in place for all their Ramsar sites, that overall only 513 (45%) Ramsar sites have management plans in place, that this falls significantly short of the targets established by the Convention's Work Plan 2000-2002, and that levels of implementation of existing management plans are still low;
24. AWARE that, despite information provided in their National Reports to COP8 concerning monitoring of the ecological character of Ramsar sites, few Parties have reported to the Ramsar Bureau issues of change, or likely change, in the ecological character of their designated Ramsar sites in line with Article 3.2 of the Convention;
25. HAVING CONSIDERED the Resolutions adopted by this meeting of the Conference which provide further guidance to Contracting Parties on the identification and designation of Wetlands of International Importance, namely Resolution VIII.11, which provides additional guidance for identifying and designating under-represented wetland types (mangroves, coral reefs, peatlands and wet grasslands) as Ramsar sites; Resolution VIII.33, which provides similar guidance for temporary pools; Resolution VIII.38 concerning waterbird population estimates and the application of Criterion 6 of the Strategic Framework; Resolution VIII.13 concerning enhancing the information on Ramsar sites; Resolution VIII.21 on defining Ramsar site boundaries more accurately in Ramsar Information Sheets; and Resolution VIII.22 about issues concerning Ramsar sites that cease to fulfil or never fulfilled the Criteria for designation as Ramsar sites; and
26. ALSO HAVING CONSIDERED the Discussion Paper COP8 DOC. 31 concerning the further elaboration of the Ramsar Criteria and guidelines for the future development of the List, in relation to harmonization with the indicative features of biological diversity established by the Convention on Biological Diversity, including the issue of socio-economic and cultural importance of wetlands;

THE CONFERENCE OF THE CONTRACTING PARTIES

27. CALLS UPON all Contracting Parties to renew their efforts to apply the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11), including, as a matter of priority, the establishment of a strategy and priorities for the further designation of Ramsar sites so as to achieve, as soon as possible, the coherent national networks called for in the Vision for the List;
28. ALSO CALLS UPON all Contracting Parties to identify all wetlands which potentially qualify for designation as Ramsar sites, as a concrete output of their strategy and priorities called for in the preceding paragraph, and to establish targets for future designation in

terms of number of sites to be designated, and to communicate these targets to each meeting of the Conference of the Parties and the Ramsar Bureau as part of their triennial implementation plan for the Convention;

29. URGES all Contracting Parties, as part of their identification of wetlands which potentially qualify for designation as Ramsar sites, and in line with Resolution VII.19 on *Guidelines for international cooperation under the Ramsar Convention*, to collaborate in the identification and designation as Ramsar sites of national and international site networks for migratory species, including migratory waterbirds, as a contribution to other initiatives under related international and regional environmental conventions and programmes, including, *inter alia*, the Convention on Migratory Species and its Agreements such as the African-Eurasian Waterbirds Agreement (AEWA) and other existing arrangements such as the North American Waterfowl Management Plan, the Western Hemisphere Shorebird Reserve Network, and the Asia-Pacific Migratory Waterbird Conservation Strategy;
30. INSTRUCTS the Scientific and Technical Review Panel (STRP), with the assistance of the Ramsar Bureau, interested Contracting Parties, and other relevant organizations to develop, for consideration at COP9, additional criteria and guidelines for the identification and designation of Ramsar sites concerning socio-economic and cultural values and functions that are relevant to biological diversity, as listed in Annex 1 of the Convention on Biological Diversity, which would be applied on each occasion in conjunction with one or more existing criteria for the identification and designation of Ramsar sites; and to include in this work a full analysis of the implications for Contracting Parties of the implementation of such criteria for the management of Ramsar sites, including Contracting Party obligations and responsibilities for maintaining the ecological character of any such sites so selected;
31. REQUESTS all Contracting Parties to use the revised format of the Ramsar Information Sheet (RIS) as adopted by Resolution VIII.13 in their designation of new sites, extensions to existing sites, and updates of existing sites;
32. URGES Contracting Parties when completing or updating an RIS to document fully the ecological, hydrological, socio-economic and cultural importance of the site, using the appropriate sections of the RIS for this purpose, as the basis for identifying processes and features that should be addressed in the management planning process for the site, as outlined in the *New Guidelines for management planning for Ramsar sites and other wetlands* adopted by this meeting (Resolution VIII.14);
33. EXPRESSES DEEP CONCERN that there remain a large number of Ramsar sites for which an official description has not been provided or updated, or has not been provided in one of the three official working languages of the Convention, and/or for which a suitable map has not been submitted;
34. INSTRUCTS the Ramsar Bureau to contact the Contracting Parties listed in the Annex to this Resolution and request them to provide or update, as a matter of high priority, Ramsar site descriptions (Ramsar Information Sheets and/or maps), using the Ramsar Information Sheet as revised by Resolution VIII.13, in one of the Convention's official working languages;

35. URGES Contracting Parties to continue to establish full management planning processes for their Ramsar sites, applying the guidance provided in Resolution VIII.14, and to seek to have these plans being implemented in full, and to establish and report targets for the preparation and implementation of management plans for their Ramsar sites;
36. WELCOMES the statements made in the National Reports to COP8 or during this meeting concerning the number of impending, or planned, extensions to existing Ramsar sites, and future designations of new or extended Ramsar sites, from the following 76 Contracting Parties: Albania (6 sites), Algeria (30 sites), Argentina (3 sites), Armenia (3 sites), Australia (1 site), Austria (3 sites), Belgium (6 sites and 1 extension), Benin (3 sites), Bolivia (2 sites), Botswana (4 sites), Brazil (2 sites), Cambodia (1 site), Chad (3 sites), Chile (2 sites), China (80 sites), Colombia (6 sites), Comoros (1 site) Costa Rica (2 sites and 1 extension), Côte d'Ivoire (4 sites including 1 transboundary with Ghana), Cuba (3 sites), Czech Republic (2 sites), Djibouti (3 sites), Ecuador (1 site), El Salvador (2 sites), Estonia (14 sites), Finland (50 sites), Gambia (2 sites), Georgia (1 site), Ghana (2 sites including 1 transboundary with Côte d'Ivoire), Greece (2 extensions), Guatemala (4 sites), Guinea (5 sites), Hungary (1 site), India (6 sites), Indonesia (3 sites), Italy (4 sites), Jamaica (1 site), Japan (11 sites), Jordan (2 sites), Kenya (3 sites), Latvia (3 sites), Lithuania (5 sites), Madagascar (7 sites), Mali (4 sites), Malawi (1 site), Malaysia (5 sites), Mauritania (3 sites), Mongolia (3 sites), Nepal (7 sites), Nicaragua (2 sites), Niger (8 sites), Nigeria (14 sites), Pakistan (10 sites), Panama (1 site), Papua New Guinea (1 site), Paraguay (1 site), Peru (3 sites), Poland (5 sites), Portugal (5 sites), Slovak Republic (1 site), Spain (14 sites and 2 extensions), Sri Lanka (4 sites), Suriname (3 sites), Syrian Arab Republic (2 sites), Thailand (20 sites), The FYR of Macedonia (3 sites), Togo (3 sites), Trinidad and Tobago (2 sites), Tunisia (4 sites), Turkey (5 sites), Uganda (5 sites), United Republic of Tanzania (3 sites), Uruguay (2 sites), Venezuela (2 sites), and Zambia (5 sites, and 2 extensions); ENCOURAGES these Contracting Parties to forward completed Ramsar Information Sheets and boundary maps for these 8 site extensions and 451 new sites to the Bureau, if they have not already done so; and ALSO WELCOMES the statements made in the National Reports to COP8 concerning an unspecified number of future designations of new Ramsar sites by the following additional countries: Bulgaria, Canada, Congo, Egypt, Iran, Islamic Republic of, Ireland, Israel, Lebanon, Morocco, Netherlands, Norway, Philippines, Republic of Korea, Romania, Slovenia, Ukraine, United Kingdom, United States of America, and Yugoslavia;
37. WELCOMES the statements made by the Independent State of Samoa and by Sudan concerning their imminent accession to the Convention and their plans to designate three sites and one site, respectively, for the Ramsar List;
38. CONGRATULATES International Organization Partners and others, and in particular the Living Waters Programme of the World Wide Fund for Nature (WWF) for their support to Contracting Parties and non-Parties in preparing the designation of Ramsar sites, and URGES the WWF to continue to provide and to enhance this support as a contribution towards their objective of achieving a total area of Ramsar sites of at least 250 million ha by 2010;
39. CONTINUES TO ENCOURAGE Contracting Parties to adopt and apply, as part of their management planning for Ramsar sites and other wetlands, a suitable monitoring regime, such as that provided by Resolution VI.1, and to incorporate within these monitoring regimes the Convention's *Wetland Risk Assessment Framework* (Resolution

VII.10), so as to report change, or likely change, in the ecological character of Ramsar sites in line with Article 3.2 of the Convention;

40. EXPRESSES ITS APPRECIATION to those 50 Contracting Parties which in their National Reports to this Conference provided information, in accordance with Article 3.2 of the Convention, on 153 Ramsar sites where human-induced changes in ecological character that have occurred, are occurring, or may occur, namely: Algeria, Argentina, Armenia, Australia, Austria, Belarus, Belgium, Benin, Botswana, Bulgaria, China, Costa Rica, Croatia, Czech Republic, Denmark, Egypt, Estonia, Finland, Germany, Guatemala, Hungary, India, Islamic Republic of Iran, Israel, Japan, Kenya, Liechtenstein, Mali, Mauritania, Mauritius, Morocco, Namibia, Netherlands, New Zealand, Nicaragua, Norway, Panama, Peru, Senegal, Spain, Sri Lanka, Togo, Turkey, Uganda, Ukraine, United Kingdom, United States of America, Uruguay, Viet Nam and Yugoslavia; and URGES all of these Contracting Parties to consider, at the earliest opportunity, the possible inclusion of these sites onto the Montreux Record, if they are not already included, in line with the further guidance provided in Resolution VIII.8 on the purpose and role of the Record;
41. URGES Contracting Parties and donor organizations to give priority for support to the development of coherent national and international networks of Ramsar sites and their effective management, in recognition of their essential values and functions in combating poverty through the sustainable use of their ecosystems and their role in maintaining the quality and quantity of water, including at the basin scale; and REQUESTS the Standing Committee to give priority to projects addressing these issues in the future operation of the Small Grants Fund; and
42. CONGRATULATES Contracting Parties for their statements made concerning addressing site-specific management and boundary issues, notably:
 - a) The Government of Greece for its stated intention to take appropriate action in line with Resolution VIII.16 on *Principles and guidelines for wetland restoration* for the restoration of Lake Koronia, part of Lakes Volvi and Koronia Ramsar Site, taking into consideration environmental constraints, based on the availability of natural resources, socio-economic characteristics and other peculiarities of the catchment;
 - b) The Government of Iceland for its stated intention to inform the Ramsar Bureau in the near future of the results of the Environmental Impact Assessment carried out on the effects of a planned dam at Thjorsarver Ramsar Site;
 - c) The Government of Trinidad & Tobago for the successful application of the Montreux Record procedure to the Nariva Swamp Ramsar Site and its subsequent removal from the Record, following Ramsar Advisory Missions and implementation of key recommendations; and
 - d) The Government of Spain for the recent designation of 11 new Ramsar sites; and ASKS this Government to ensure the full implementation of the Convention in its national water policies and programmes.

Annex

List of Contracting Parties from which one or more Ramsar Information Sheets or updated Sheets are needed as a matter of priority

Albania	Latvia
Argentina	Lebanon
Austria	Libya
Azerbaijan	Lithuania
Bangladesh	Malawi
Belgium	Mali
Bulgaria	Malta
Burkina Faso	Mauritania
Burundi	Morocco
Canada	Nepal
Chad	Netherlands
Chile	Norway
Comoros	Pakistan
Costa Rica	Panama
Côte d'Ivoire	Papua New Guinea
Croatia	Paraguay
Czech Republic	Peru
Denmark	Philippines
Estonia	Poland
Finland	Portugal
France	Romania
Gabon	Senegal
Georgia	Slovakia
Germany	Slovenia
Ghana	South Africa
Guatemala	Sweden
Guinea	Switzerland
Guinea Bissau	Tajikistan
Honduras	Togo
Hungary	Turkey
Iceland	Uganda
India	USA
Indonesia	Venezuela
Ireland	Viet Nam
Japan	Yugoslavia

"Wetlands: water, life, and culture"
8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002

Resolution VIII.11

Additional guidance for identifying and designating under-represented wetland types as Wetlands of International Importance

1. RECALLING Resolution VII.11, which adopted the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*;
2. FURTHER RECALLING Action 6.2.3 of the Convention's Strategic Plan 1997-2002, which indicated that Contracting Parties should give priority to the designation of new Ramsar sites which include wetland types currently under-represented on the Ramsar List, and in particular, when appropriate, coral reefs, mangroves, seagrass beds, and peatlands; and Action 6.3.1 of the Convention's Work Plan 2000-2002, which requested the Scientific and Technical Review Panel (STRP) to prepare additional guidance for the identification and designation of coral reefs, mangroves, wet grasslands, and peatlands;
3. AWARE that peatlands, mangroves, and coral reefs were recognized by the *Global Review of Wetland Resources and Priorities for Wetland Inventory* report to COP7 as being amongst the wetland ecosystems that are most vulnerable and threatened by habitat loss and degradation, and thus in need of urgent priority action to ensure their conservation and wise use; and
4. EXPRESSING APPRECIATION to the STRP for having developed the guidelines for peatlands, mangroves and coral reefs, and TAKING NOTE that the STRP has not been able during the past triennium to develop guidance related to seagrass beds but has drafted guidance on wet grasslands;

THE CONFERENCE OF THE CONTRACTING PARTIES

5. ADOPTS for application by Contracting Parties the attached additional guidance for identifying and designating peatlands, wet grasslands, mangroves, and coral reefs as Wetlands of International Importance;
6. CALLS UPON Contracting Parties to renew their efforts, as a high priority, to designate examples of peatlands, wet grasslands, mangroves, and coral reefs, where appropriate, for the List of Wetlands of International Importance, taking into consideration the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11, Ramsar Handbook 7) and this additional guidance;
7. REQUESTS Contracting Parties to report to the 9th Meeting of the Conference of the Contracting Parties on their progress with the designation for the List of sites including these wetland types;

8. INSTRUCTS the Ramsar Bureau to incorporate, as appropriate, the Annex to this Resolution into the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11); and
9. REQUESTS the STRP to provide interpretation of the term ‘under-represented type’ in the context of available information on the global extent of different wetland types and representation of these in the Ramsar List, to investigate methods for defining targets for representation of wetland types in the Ramsar List in the context of the Strategic Framework for the future development of the List (Resolution VII.11), and to report the results of this to COP9.

Annex

Guidance for identifying and designating peatlands, wet grasslands, mangroves and coral reefs as Wetlands of International Importance

Introduction

1. Action 6.3.1 of the Convention's Work Plan 2000-2002 requested the Scientific and Technical Review Panel (STRP) to prepare additional guidance for the identification and designation of peatland, wet grassland, mangrove, and coral reef wetland types as Wetlands of International Importance (Ramsar sites).
2. Peatlands, mangroves, and coral reefs were recognised by the *Global Review of Wetland Resources and Priorities for Wetland Inventory* report to COP7 as being amongst the wetland ecosystems that are most vulnerable and threatened by habitat loss and degradation, and thus in need of urgent priority action to ensure their conservation and wise use.
3. This additional guidance provides clarification of aspects of the application of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11) as they apply to peatlands, wet grasslands, mangroves, and coral reefs. In particular, it provides guidance to Contracting Parties on the identification and designation of representative wetlands of these habitat types in accordance with Ramsar Criterion 1 for the designation of Wetlands of International Importance.
4. The reasons for which such wetland types are as yet under-represented in the Ramsar List are various. They may include lack of recognition of the existence of particular wetland types within a particular territory; lack of recognition that coastal and marine wetland types such as mangroves and coral reefs fall within the Ramsar definition of wetlands and so are eligible for designation as Ramsar sites; difficulty in applying the guidance in completing the Ramsar Information Sheet (RIS) for Ramsar site designation, particularly in relation to the delimitation of appropriate boundaries, especially for coral reefs; uncertainty as to which particular features of these habitat types indicate the best representative examples of such wetlands under Ramsar Criterion 1; uncertainty, in the case of peatlands and wet grasslands, as to which wetland types in the Ramsar Classification System for Wetland Type apply, since these habitat types can occur in a number of different categories; and, for peatlands, a lack of recognition that a wetland is a peat-based system if wetlands are assessed only for their vegetational characteristics.
5. All Ramsar Criteria for the designation of Wetlands of International Importance can be applied to the identification and designation of peatland, wet grassland, mangrove and coral reef wetland types.
6. Since each of these wetland types has been identified as being particularly vulnerable and threatened by habitat loss and degradation, the identification and designation of threatened ecological communities, as well as threatened species, under Ramsar Criterion 2 will often be of particular importance.

Identification and designation of peatlands

7. Peatlands are ecosystems with a peat deposit that may currently support a vegetation that is peat-forming, may not, or may lack vegetation entirely. Peat is dead and partially decomposed plant remains that have accumulated *in situ* under waterlogged conditions. It is understood in this guidance that the term “peatland” is inclusive of active peatland (“mire”). An active peatland (“mire”) is a peatland on which peat is currently forming and accumulating. All active peatlands (“mires”) are peatlands, but peatlands that are no longer accumulating peat would not be considered as active peatlands (“mires”). The presence of peat or vegetation capable of forming peat is the key characteristic of peatlands.
8. Since peatlands are defined by the presence of a peat substrate, whilst the Ramsar Classification System is based on vegetation, peatlands occur in a number of categories in the Ramsar Classification System for Wetland Type:
 - a) They may occur as a *Marine/coastal* wetland under categories I (intertidal forested wetlands) and E (sand, shingle or pebble shores, including dune systems), and perhaps marginal areas of K (coastal freshwater lagoons).
 - b) They may occur as an *Inland wetland*, primarily under U (Non-forested peatlands) and Xp (Forested peatlands).
 - c) Peat soils also may be present in all other *Inland wetland* categories except: M (Permanent rivers/streams/creeks), Tp (Permanent freshwater marshes/pools – inorganic soils), Ts (Seasonal/intermittent freshwater marshes/pools – inorganic soils), W (Shrub-dominated wetlands – inorganic soils), Zg (Geothermal wetlands), and Zk(b) (subterranean karst systems).
9. Peatlands contribute to biological diversity, global water issues, global carbon retention relevant to climate change, and wetland functions valuable to human communities.
10. Significant features of peatlands include:
 - a) uniqueness of the peat-forming phenomenon and its ecological and natural resource functions;
 - b) dependence of peatlands on their hydrology and hydrochemistry;
 - c) interdependence between peatlands and their catchments and adjacent watersheds;
 - d) uniqueness of their vegetation;
 - e) provision of habitat for particular taxa of fauna and flora;
 - f) water regulation and buffering functions;
 - g) capacity to regulate local and regional climates;
 - h) capacity to sequester carbon from the atmosphere and store it for long periods of time; and
 - i) ability to serve as geochemical and palaeo archives.
11. In addition to their many natural values, peatlands have important socio-economic values which include, but are not limited to, the absorption and release of drinking water, natural resource provision to local communities and indigenous people, landscape stabilization, flood mitigation, removal of pollutants, tourism, and recreation.

12. Threats to peatlands can arise from both within and outside their area and include:
 - a) direct threats, including drainage and land conversion, excavation, burning, over-grazing, agricultural abandonment, visitor pressure, non-sustainable commercial exploitation; and
 - b) indirect threats, including pollution, excessive water abstraction, reduction in extent and quality of buffer zones, and climate change.
13. Some peatlands that have been modified but remain ecologically valuable are subject to similar threats. Opportunities exist for the restoration of such areas.

Applying the Ramsar Criteria to peatlands

14. Peatlands considered for designation under Criterion 1 should include pristine active peatlands, mature peatlands and peatlands that may be no longer forming peat, naturally degrading peatlands, human-modified and impacted peatlands, and restored or rehabilitated peatlands.
15. Special attention should be given to the designation of peatlands which have at least some of the following attributes:
 - a) an intact hydrology;
 - b) the presence of a peat-forming vegetation;
 - c) the capacity to act as a reservoir of regional/global biodiversity;
 - d) the capacity to act as a carbon store;
 - e) the presence of a carbon sequestration function;
 - f) the ability to maintain a geochemical and/or palaeo archive;
 - g) hydrochemical diversity; and
 - h) macro- and/or micro-morphological features.
16. Special attention should also be given to the designation of peatlands that have high vulnerability, such that minor impacts can lead to major degradation, and to those with potential for restoration after degradation.
17. Large areas of peatland are normally of higher importance than small areas for their hydrological, carbon storage and palaeoarchive values and because they incorporate macro-landscapes: these should be afforded high priority for designation. Consideration should also be given to the capacity of the peatland system to influence regional climate.
18. Where appropriate and desirable, peatlands designated as Ramsar sites should include entire catchments, so as to maintain the hydrological integrity of the peatland system.
19. Designation of both single peatlands and of complex systems that incorporate more than one type of peatland system is appropriate.

Identification and designation of wet grasslands

20. Wet grasslands are natural and near-natural ecosystems with a vegetation characterized and dominated by lower growing perennial grasses, sedges, reeds, rushes and/or herbs. They appear under periodically flooded or waterlogged conditions and are maintained through mowing, burning, natural or human-induced grazing, or a combination of these.
21. Wet grasslands include: floodplain grasslands, washlands, polders, water meadows, wet grasslands with (intensive) water level management, lakeside grasslands, vegetation dominated by relatively large, perennial, competitive herbs, and ground-water dependent dune slacks. These grasslands occur on different soils: heavy clay, loam, sand, gravel, peat, etc., and occur in freshwater, brackish and saline water systems.
22. Vegetation types that fall under this definition can appear in mosaic with one another or with other wetland types, such as peatlands, reedbeds, water-dependent shrubs, forests and others.
23. Wet grasslands are covered by the following wetland types of the Ramsar Classification System:
 - a) They can occur as a *floodplain component*, under T's (seasonal/intermittent freshwater marshes on inorganic soils, including seasonally flooded meadows and sedge marshes), and U (non-forested peatlands, including swamps and fens).
 - b) They can occur as a *human-made* wetland type, under 3 (irrigated land, including irrigation channels and rice fields), and 4 (seasonally flooded agricultural land, including intensively managed or grazed wet meadow or pasture). Irrigation channels with natural vegetation cutting through wet meadows fulfil substantial ecological functions; they are therefore considered part of wet grasslands.
 - c) *Wet grassland habitats* can also occur in other wetland types: E (sand, shingle or pebble shores including dune systems and humid dune slacks) and H (intertidal marshes, including salt meadows, raised salt marshes, tidal brackish and freshwater marshes). They can also occur on the edges of other wetland types, such as J (coastal brackish/saline lagoons), N (seasonal/intermittent/irregular rivers/streams/creeks), P (seasonal/intermittent floodplain lakes), R (seasonal/intermittent saline/brackish/alkaline lakes and flats), and Ss (seasonal/intermittent saline/brackish/alkaline marshes).
24. Wet grasslands support specific biodiversity, comprising rare and threatened plant and animal species and communities, including internationally important bird populations, a range of mammals, invertebrates, reptiles and amphibians.
25. In recent years there has been increasing awareness about the value of wet grasslands in performing hydrological and chemical functions, notably:
 - a) flood alleviation - since wet grasslands can retain floodwater;

- b) groundwater recharge - wet grasslands retain water within a watershed enabling groundwater to be replenished; and
 - c) water quality improvement - riparian wet grasslands retain nutrients, toxic substances and sediment, preventing them from entering watercourses.
26. Economic benefits accrue from these functions. When wet grasslands are destroyed, these functions are lost and have to be replaced at often enormous financial cost. These benefits include:
- a) water supply – wet grasslands can influence both water quantity and quality;
 - b) health of freshwater fisheries – backwaters, ditches and other open water habitats within wet grassland areas are important for river fisheries;
 - c) agriculture – floodplains provide some of the most fertile agricultural land; and
 - d) recreation and sustainable tourism opportunities.
27. From an early stage in human history, floodplains have been subject to modifications. Since the industrial revolution, pressures on rivers and floodplains have increased significantly in many areas. As part of this process, wet grasslands have declined significantly in industrialized areas, but are also exposed to specific threats in other regions. This is being brought about by:
- a) changes in agricultural practices – increased drainage and use of fertilizer, change from hay-making to silage, re-seeding, herbicide use, conversion to arable land, higher stocking densities, neglect or abandonment, use of aquatic herbicides;
 - b) land drainage – modification of natural hydrological regimes, isolation of floodplains from river flows, rapid evacuation of winter floods and early fall of spring water tables, maintenance of low water levels in drainage channels;
 - c) abstraction for drinking water and crop irrigation – leading to lowered river flows and in-channel water levels, lowered water tables, exacerbation of drought-related problems;
 - d) eutrophication – leading to changes in grassland plant communities and increased sward vigour;
 - e) threats to coastal wet grasslands from sea-level rise and construction of flood defences;
 - f) development and mineral extraction – leading to a decline of routinely flooded area and increased frequency of flooding of the remaining washland; and
 - g) site fragmentation – leading to isolation of sites, threatening species restricted to wet grassland and vulnerable to extinction, and to problems with water level control and agricultural management.

Applying the Ramsar Criteria to wet grasslands

28. A wet grassland should be considered for designation under Criterion 1 particularly if it performs specific hydrological functions.
29. Since wet grasslands are particularly dynamic ecosystems, special attention should be paid to the designation of those systems that, as part of river or coastal floodplains, are maintained by periodic floods or waterlogged conditions, either natural or human-induced, and demonstrate hydrological integrity.
30. Where wet grasslands are associated with agricultural or other management practices, special attention should be paid to the designation of systems whose ecological character is maintained through specific management measures or traditional forms of land and wetland resource uses (typically including induced grazing, mowing, or burning, or a combination of these), and whose continuation is critical to preventing gradual vegetation succession that may transform wet grasslands to tall reedbeds, peat bogs, or forested wetlands.
31. Many managed wet grasslands support important assemblages of breeding waterbirds and provide habitat for large populations of non-breeding waterbirds, and attention should be given to the designation under Criteria 4, 5 and 6 for these features.

Identification and designation of mangroves

32. Mangroves swamps are forested intertidal ecosystems that occupy sediment-rich sheltered tropical coastal environments, occurring from about 32° N (Bermuda Island) to almost 39° S (Victoria, Australia). Around two-thirds to three-quarters of tropical coastlines are mangrove-lined.
33. Mangrove swamps can form extensive and highly productive systems where there is adequate low-gradient topography, shelter, muddy substrates, and saline water with a large tidal amplitude.
34. Mangrove swamps are characterized by salt-tolerant woody plants with morphological, physiological, and reproductive adaptations that enable them to colonize littoral habitats. The term mangrove is used in at least two different ways:
 - a) to refer to the ecosystem composed of these plants, associated flora, fauna and their physico-chemical environment; and
 - b) to describe those plant species (of different families and genera) that have common adaptations which allow them to cope with salty and oxygen-depleted (anaerobic) substrates.
35. Mangroves occur under *Marine/ Coastal Wetlands: I* (Intertidal forested wetlands) in the Ramsar Classification System for Wetland Type.
36. Mangroves carry out critical landscape-level functions related to the regulation of fresh water, nutrients, and sediment inputs into marine areas. By trapping and stabilizing fine sediments they control the quality of marine coastal waters. They are also exceptionally

important in maintaining coastal food webs and populations of animals that live as adults elsewhere and live within the mangrove at different stages of their life cycle, such as birds, fish, and crustaceans. Mangroves have an important role in pollution control through their absorptive capacity for organic pollutants and nutrients.

37. Mangroves are key ecosystems whose persistence is critical for the maintenance of landscape and seascape functions well beyond the boundaries of individual forests. Mangroves, coral reefs, and seagrass beds are among the best examples of integrated landscape-level ecosystems. When they occur together, they act as a unit, forming a complex mosaic of interrelated and integrated subsystems linked by physical and biological interactions. They play an important role in storm protection and coastal stabilization.
38. Worldwide, mangrove ecosystems support at least 50 species of mammals, over 600 species of birds, and close to 2,000 species of fish and shellfish, which include shrimps, crabs and oysters. Mangroves are also important for migratory birds and endangered species. A wide variety of species from other taxa make this a highly diverse community with a complex food web that is closely interlinked with adjacent ecosystems.
39. Mangroves are indispensable to the vitality and productivity of marine and estuarine finfish as well as shellfish fisheries. Globally, nearly two thirds of all fish harvested in the marine environment ultimately depend on the health of tropical coastal ecosystems, such as mangroves, seagrass beds, salt marshes and coral reefs, for maintenance of their stocks. The health and integrity of mangroves are critical to maintaining coastal zones and their cultural and heritage assets, and in buffering impacts due to climate change effects, including sea-level rise.
40. Mangroves have played an important role in the economies of tropical countries for thousands of years, and constitute an important reservoir and refuge for many plants and animals. In tropical countries, mangrove ecosystems support extremely valuable subsistence, commercial and recreational fisheries, while also providing numerous other direct and indirect goods and services to society.
41. Mangroves differ from other forested systems in that they receive large inputs of matter and energy from both land and sea, and more organic carbon is produced than is stored and degraded. They display a high degree of structural and functional diversity, placing mangroves among the most complex ecosystems. Because of the diversity of goods and services provided by mangroves, they should not be managed as a simple forest resource.
42. A large proportion of the world's mangrove resource has been degraded by:
 - a) unsustainable exploitation practices, such as over-fishing, bark (tannin) extraction, charcoal and fuel wood production, and exploitation for timber and other products;
 - b) habitat destruction: worldwide, mangroves are threatened by clearing for agriculture, urban, tourism, and industrial development, and particularly to make aquaculture ponds;
 - c) changes in hydrology due to stream diversions for irrigation and dam construction, causing nutrient deprivation and hypersalinization; and

- d) pollution, including industrial and sewage effluents and chronic or catastrophic oil spills.
43. Mangroves are particularly vulnerable to oil pollution and increased coastal erosion, sea-level rise, and natural events such as hurricanes, frosts, tsunamis, and human-induced climate change.

Applying the Ramsar Criteria to mangroves

44. In applying Ramsar Criterion 1 it should be recognized that mangroves occur in two broad biogeographic groups: an Indo-Pacific (Old World) group and a western African and American (New World) group, each with a characteristic but different species diversity.
45. Particular priority should be given to the designation of mangroves that form part of an intact and naturally functioning ecosystem which includes other wetland types, such as coral reefs, seagrass beds, tidal flats, coastal lagoons, salt flats, and/or estuarine complexes, since these are essential for maintaining the mangrove parts of the ecosystem. Under most circumstances, the mangrove, i.e. forested part of the site, should not be designated without inclusion of the other linked parts of the coastal ecosystem.
46. Networks of sites have more value than individual small areas of mangroves, since they contribute to the integrity of whole landscapes and seascapes. Designations that encompass whole landscapes and seascapes are valuable tools to safeguard critical coastal processes, and consideration should be given, where possible, to Ramsar site designations as part of a nested management framework for the coastal zone.
47. In determining the appropriate boundaries for site designation, consideration should be given to the following aspects:
- a) inclusion of critical habitat patches, particular communities, or landforms to focus conservation and management actions;
 - b) provision for conservation actions within the human-dominated portion of the landscape, since a more benign human-dominated landscape can help alleviate negative edge effects;
 - c) provision for the conservation and wise use of large areas with relatively limited human access;
 - d) inclusion of whole landscape units (lagoon-estuarine complexes, salt flats, delta or mudflat/tidal flat systems);
 - e) the maintenance of hydrographical integrity and water quality, including in the context of catchment (river basin) management;
 - f) provision for the effects of sea-level rise and human-induced climate changes that may otherwise lead to loss of habitat and genetic processes; and
 - g) consideration of the possible landward migration of mangroves in response to sea-level rise.
48. In applying Criterion 1 to mangrove swamps, special attention should be given to the listing of areas which are in pristine condition or have biogeographic or scientific importance and protection needs.

49. Mangrove conservation should categorize units on the basis of the most appropriate use such as for protection; restoration; understanding and enjoyment of natural heritage, and conservation with emphasis on sustainable use. The minimum size of a site is that which contains the greatest diversity of habitat types, including habitats for endangered, threatened, rare, or sensitive species or biological assemblages. The “naturalness” should be considered when selecting candidate sites, i.e., the extent to which an area has been protected from or has not been subjected to human-induced change. The ecological, demographic and genetic processes should also be considered because these maintain the structural and functional integrity and self-sustaining capacity of the designated site.
50. When defining the site boundaries, it must be considered that the more complex a system, the larger the site must be in order to be effective for conservation purposes. However, boundary definition becomes more critical the smaller the unit. If in doubt, the site should be made larger rather than smaller.
51. For mangroves, particular attention should be paid to the application of Criteria 7 and 8 since mangrove systems are of critical importance as breeding and nursery areas for fish and shellfish, and Criterion 4 in recognition of the fact that because of their complex ecological, geomorphological and physical structure they can act as refuges, and are important for the persistence of populations of many migratory and non-migratory species. Designation of such areas should take into account that different habitats of coastal complexes of mangroves, seagrass beds, and coral reefs may be essential for different stages of a species’ life-cycle.

Identification and designation of coral reefs

52. Coral reefs are massive carbonate structures built by the biological activity of the stony corals (true corals) and the associated complex assemblage of marine organisms that make up the coral reef ecosystem. They are found throughout the world’s oceans on mud-free coastlines between latitudes 30°N and 30°S. Their estimated total area is 617,000 km², forming about 15% of the marine shallow shelves.
53. There are three general types of coral reefs: fringing reefs, barrier reefs, and atolls. Fringing reefs are found close against the coast; barrier reefs are separated from land by a lagoon; and atolls are ring-shaped coral reefs that enclose a lagoon and have been formed where an island (often volcanic in origin) has progressively sunk below the sea surface. However, coral reefs that develop on continental coastlines are often complex and contain features that are difficult to categorize.
54. Coral reef ecosystems may also occur as a veneer over non-reef substrata. Although geologically these are not “true” coral reefs, they have the same ecological attributes as other coral reefs, and are used by people in the same ways.
55. Coral reefs falls under *Marine/ Coastal Wetlands: C* (Coral reefs) in the Ramsar Classification System for Wetland Type.
56. In many places coral reefs form part of an ecosystem that is functionally and intricately linked to other adjacent marine habitats in the Ramsar Classification System, notably A (Permanent shallow marine waters), B (Marine subtidal aquatic beds – especially seagrass

beds), E (Sand, shingle and pebble shores), H (Intertidal marshes), and J (Coastal brackish/saline lagoons).

57. In terms of sheer beauty of form, colours, and diversity of life, perhaps no other natural area of the world can compare with coral reefs. Coral reefs have the highest species diversity of all marine ecosystems and represent a significant contribution to global biodiversity. There are 4,000 known species of reef fish, and about 10% of these are restricted to island groups or a few hundred kilometres of shoreline. Despite forming a small fraction of marine systems of the world, nearly two thirds of all fish species harvested in the marine environment depend upon coral reefs and associated ecosystems, such as mangroves and seagrass beds.
58. Corals also provide a vital source of life-saving medicines, including anticoagulants and anticancer agents such as prostaglandins.
59. Coral reefs have been valuable to people for as long as communities have lived in coastal areas adjacent to warm seas. They have been exploited for food, building materials, medicines, and decorative objects, and continue to provide many of the basic needs of millions of people living in tropical coastal regions.
60. In tropical regions, coastal ecosystems and marine biodiversity contribute significantly to the economies of many countries. Coral reefs support tourism and recreation and subsistence, commercial and recreational fisheries. Some countries, including Barbados, the Maldives, and the Seychelles, rely on reef tourism for much of their foreign income. The Caribbean region alone receives over 100 million visitors per year, most of whom are destined for the beaches and reefs.
61. Coral reefs function as natural, self-repairing, and self-sustaining breakwaters, protecting the often low-lying land behind them from the effects of storms and rising sea levels. The health and integrity of coral reefs are critical to maintaining tropical coastal zones and their cultural and heritage assets.
62. Despite their ecological and economic importance, coral reefs are in serious decline worldwide. They are threatened by numerous human actions that contribute to coral reef degradation, such as sediment, sewage, agriculture run-off and other pollution sources, mining, dredging of coastal areas, and coastal development. A strong correlation has been found between risk of degradation and coastal population density. The severe anthropogenic stresses from growing populations and their activities on the coastal zone are now coupled with die-offs due to coral diseases and epidemics affecting reef species. Over-fishing, blast fishing, fishing with poisons, and souvenir collecting for national and international trade are major agents of reef destruction. Rising carbon dioxide may reduce the rate of calcification and reef formation.
63. A further and increasing impact on coral reefs is the effect of rising sea surface temperatures linked to global climate change. This causes the phenomenon of coral bleaching – expulsion of symbiotic algae, leading often to the death of the corals themselves with consequent loss of the diverse communities dependent upon them. Coral reefs that are already under stress from other human-induced pressures such as pollution and sediment deposition appear to be most vulnerable to bleaching. Predictions of future sea surface temperatures indicate that bleaching will become increasingly widespread and

frequent. Recent results suggest that bleaching of corals by increased UV-B radiation may be adding to the effects of temperature.

64. Once corals have died, reefs are more vulnerable to physical break-up during storms, thus threatening their function in protecting coastal lands and their people from impacts of rising sea levels and storms. The massive worldwide coral bleaching in 1997-98 suggests that coral reefs may be signaling the first ecosystem-scale damage from human-induced global change. Recovery will depend upon reducing human pressures through sound management and upon whether bleaching events will recur with increased severity and frequency, reversing any coral reef regeneration.
65. As a result of these interacting problems, coral reefs have suffered a dramatic decline in recent years. About 11% of the world's reefs sites have been lost, 27% are under immediate threat, and another 31% are likely to decline in the next 10 - 30 years. At greatest risk are the reefs in the wider Indian Ocean; Southeast and East Asia; the Middle East, mainly in the Arabian-Persian Gulf; and the Caribbean-Atlantic region.
66. Coral reefs support multi-species fisheries. Protected areas are now often used as a tool in fisheries management. Some economically important species may spend part of their life cycle outside the boundaries of the designated area, which should be taken into account in management. On the other hand, fisheries management measures support not only sustainable fisheries but also biodiversity and other valuable characteristics of the site. Many reef fish species need regulatory frameworks beyond the Ramsar Convention to complement Ramsar site designation. These species need protection under complementary conservation frameworks and authorities.
67. In managing coral reefs, conservation needs must be considered along with the needs of local people who may depend on certain reefs for their livelihoods. Some areas are best managed using multiple-use and zoning approaches that can accommodate the needs of different stakeholders. Nested protection frameworks at coastal zone level are required, as opposed to using schemes based on the strict protection of just a few areas. Coastal coral reef areas are best managed within the context of Integrated Coastal Zone Management (ICZM) programmes.

Applying the Ramsar Criteria to coral reefs

68. Contracting Parties should consider, where appropriate, the listing of composite sites under Criterion 1 that include coral reefs and associated systems, in particular adjacent shallow reef flats, seagrass beds, and mangroves, which normally function as intricately linked ecosystems. The designated coral reef area should contain the greatest diversity of habitat types and successional stages possible, and also include the habitat types and successional stages of the associated systems.
69. Special attention should be given also to the listing of networks of sites rather than to individual reefs. Networks have more value than individual sites, contributing to the preservation of the integrity of whole seascapes.
70. Contracting Parties should pay special attention to the listing of coral reef areas that, because of their geographic location ("upstream-reefs"), are sources of pelagic larvae and ensure the seeding of large areas of reefs "downstream".

71. Reefs that buffer coastlines against storm damage, and so protect coastal populations and infrastructure, should also be considered for designation.
72. Consideration should be given to the listing of sites where there is a threat of degradation, and where listing can lead to comprehensive management actions that enhance maintenance of the ecological character of the coral reef.
73. An important consideration in the identification of coral reef sites for designation is the extent to which an area is unaffected by, and can be protected from, human-induced change that alters the quality of coastal waters, since the ecological character of the reefs will be maintained only if the water quality is preserved and coastal zones are appropriately managed.
74. In determining the boundaries of a coral reef site to be designated, Contracting Parties should take into account Article 2.1 of the Convention. Since the outer parts of many coral reef systems as defined in paragraph 53 and the middle of some lagoon systems extend to below six metres water depth, boundaries of coral reefs sites should include all such parts of the reef. Moreover, since coral reef ecosystems as defined in paragraph 53 extend beyond the boundaries of the reef structure, and activities in adjacent areas can harm them, adjacent waters should, as appropriate, be included in the site designation.
75. The size of a designated coral reef site should be appropriate to the geographic scale of the reef and the management approaches necessary to maintain its ecological character. Wherever possible, the area should be large enough to protect an integral, self-sustaining ecological entity. In the sea, habitats are rarely precisely restricted, and it should be noted that many marine species have large ranges and that ocean currents can carry genetic materials of sedentary species over great distances.
76. In addition, consideration should be given also to the listing of sites that:
 - a) support unusual geologic/biologic formations, and/or species of fauna and flora of particular aesthetic, historic or scientific interest;
 - b) have a history of documented long-term research and management by local and international institutions; and
 - c) can be used for the establishment of long-term monitoring programmes for the assessment of environmental change.
77. The importance of coral reefs for fish species should be recognized through the application of Criteria 7 and 8. In applying Criterion 7 it should be noted that the fish species richness of reefs varies regionally, for example from more than 2,000 species in the Philippines to about 200 - 300 species in the Caribbean. Simple species counts (species inventories) are not sufficient to assess the importance of a particular area, and assessments must take into account the characteristics of the fish fauna in each region. Although endemism in coral reef fish is not common, some islands and shoals may be effectively isolated, with fish populations becoming genetically distinct. Such reef systems should be afforded a priority for listing.

78. Sites that support species of special conservation concern, unique biological assemblages, and flagship or keystone species (such as elkhorn coral forests, sponge and sea fan assemblages), and which are in pristine condition, should be a high priority for designation.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.12

Enhancing the wise use and conservation of mountain wetlands

1. ASSOCIATING ITSELF with the celebration of 2002 as the United Nations International Year of Mountains – in the run-up to 2003 as the UN International Year of Freshwater – and WELCOMING the broad extent of international cooperation on mountains, including relevant bilateral and multilateral environmental agreements;
2. RECALLING that at COP5 (1993) the Contracting Parties adopted Resolution 5.6 *Additional Guidance for application of the wise use concept* and AWARE that, referring to the local level, the Guidance states: "In order to achieve wise use of wetlands, it is necessary to attain a balance that ensures the maintenance of all wetlands types through activities that can range from strict protection all the way to active intervention, including restoration";
3. FURTHER RECALLING that Action 5.2.5 of the Convention's Strategic Plan 1997-2002 encouraged Contracting Parties to promote protection measures for Ramsar sites and other wetlands of small size or particular sensitivity, in line with COP5 Recommendation 5.3 on *Essential character of wetlands and the need for zonation related to wetland reserves*;
4. TAKING INTO ACCOUNT Resolution VII.11, which adopted the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*, and NOTING that the first objective for the Ramsar List, as expressed in the Strategic Framework, is: "To establish national networks of Ramsar sites in each Contracting Party which fully represent the diversity of wetlands and their key ecological and hydrological functions";
5. FURTHER TAKING INTO ACCOUNT that Operational Objective 6.2 of the Strategic Plan 1997-2002 was "to increase the area of wetland designated for the List of Wetlands of International Importance, particularly for wetland types that are under-represented either at global or national level" and that the Strategic Plan 2003-2008 adopted by Resolution VIII.25 of the present meeting underlines the priority to be given to designation of further wetland types under-represented in the List;
6. RECOGNIZING that mountain and high-altitude wetlands include a wide range of lakes, rivers, streams, marshes, peatlands and karst systems, including the meltwater channels flowing from glaciers and snowfields, and that such wetlands vary greatly in size and permanence;
7. FURTHER RECOGNIZING that mountain and high-altitude wetlands play an especially important role in capturing and retaining rainwater and/or snow and ice melt, releasing water progressively and therefore acting as suppliers and regulators of water for entire river basins, and TAKING INTO ACCOUNT that many such wetland systems also provide

sustainable sources of mineral water, some of which are of national or international economic significance;

8. ALSO RECOGNIZING the value of these wetlands, of relatively recent origin, as mountain ecosystems with rich biodiversity, including varied and particular species communities and endemic species, and that these wetlands can represent true biogeographical enclaves within zones or regions with arid or semiarid climate;
9. STRESSING that mountain wetlands can yield valuable information for reconstructing palaeoenvironments through sediment records, and for the early detection of local, regional and global changes;
10. CONSCIOUS that mountain wetlands have traditionally supported human communities (e.g., through the provision of drinking water for people and livestock and energy from fast-flowing streams and rivers), and that in many cases the biological richness of these wetlands depends on their continued sustainable management;
11. CONCERNED that mountain ecosystems are particularly fragile and vulnerable to external pressures and NOTING that high altitude wetlands in many parts of the world are suffering adverse impacts due to unsustainable human practices, especially modifications of natural water courses, certain forms of intensive tourism, agriculture, grazing, and forestry;
12. FURTHER CONCERNED that climate change is resulting in the shrinkage of snowfields and glaciers in many mountain ranges and that this is leading to rapid changes in the distribution and functioning of high-altitude wetlands, with negative implications for downstream river systems; and
13. NOTING that mountain and high-altitude wetlands are generally under-represented in the Ramsar List of Wetlands of International Importance, with only a few Contracting Parties having designated such sites;

THE CONFERENCE OF THE CONTRACTING PARTIES

14. CALLS UPON Contracting Parties, the Convention's International Organization Partners, and other interested bodies, to recognize the hydrological, biological, cultural and socio-economic importance of mountain and high altitude wetlands and to take appropriate and timely actions for improving awareness and understanding of their functions and values;
15. URGES relevant Contracting Parties, International Organization Partners, and the Ramsar Bureau to share information, expertise and experience concerning the study, conservation and wise use of mountain and high altitude wetlands, particularly with a view to strengthening coordination of Ramsar implementation with work underway in the framework of bilateral and multilateral environmental agreements, especially the Convention on Biological Diversity and the UN Framework Convention on Climate Change, and those agreements dealing specifically with mountains, as well as with the initiatives of international organizations, including the United Nations Development Programme (UNDP), and REQUESTS the Bureau to report to COP9 on the progress made;

16. ENCOURAGES Contracting Parties to ensure that due attention is given to the role of mountain and high-altitude wetlands, and the importance of their conservation and wise use, in the preparation and implementation of river basin management plans;
17. FURTHER ENCOURAGES Contracting Parties to give priority to assessing the conservation status of mountain wetlands, to reviewing the legislation, policies and practices that may be impacting negatively on these important ecosystems, and to taking the necessary actions for stopping and reversing such impacts;
18. INVITES Contracting Parties to develop, as appropriate, national, regional or local strategies and plans for the wise use and conservation of mountain wetlands, in collaboration with other relevant processes; to designate mountain wetlands for inclusion in the List of Wetlands of International Importance; and to ensure that effective management plans are developed and applied for these Ramsar sites, as a means of ensuring their conservation and wise use; and
19. INSTRUCTS the Scientific and Technical Review Panel, in collaboration with interested Contracting Parties, the International Organization Partners, and institutions and individuals with relevant expertise to propose to COP9 amendments to the Ramsar Classification System for Wetland Type and other technical documents of the Convention that may be needed to ensure that all mountain wetlands are covered, particularly those associated with glaciers, and REQUESTS the Ramsar Bureau, when revising the Ramsar Handbook series following COP8, to take into account specific requirements for the conservation and wise use of mountain wetland systems in all appropriate new volumes of the series.

"Wetlands: water, life, and culture"
8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002

Resolution VIII.13

Enhancing the information on Wetlands of International Importance (Ramsar sites)

1. RECALLING that in Recommendation 4.7 the Contracting Parties established that the “data sheet developed for the description of Ramsar sites be used by Contracting Parties and the Bureau in presenting information for the Ramsar database, and as appropriate in other contexts”, and approved the Ramsar “Classification system for wetland type” to be used in describing sites being designated as Wetlands of International Importance;
2. ALSO RECALLING that the Contracting Parties, in Resolution 5.3, confirmed that a completed “Ramsar datasheet” and site map should be provided upon designation of a Wetland of International Importance (Ramsar site) for the Ramsar List, and that this was reaffirmed in Resolutions VI.13, VI.16, and VII.12;
3. FURTHER RECALLING that the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11) includes a long-term target to have included in the Ramsar List at least one suitable representative of each wetland type according to the Ramsar Classification System in each biogeographic region;
4. AWARE that in Resolution VI.13 the Contracting Parties resolved to give priority to providing updated maps and completed “Information Sheets on Ramsar Wetlands” (RISs) and to revise the data at least every six years;
5. RECALLING that the Contracting Parties adopted Criteria for Identifying Wetlands of International Importance through Recommendation 4.2 and supplied additional criteria based on fish through Resolution VI.2, and that substantially revised Criteria, together with detailed guidance for their application, were adopted by Resolution VII.11 in the *Strategic framework and guidelines for the future development of the List of Wetlands of International Importance*;
6. CONCERNED that the Contracting Parties are continuing to submit to the Ramsar Bureau RISs which do not adequately apply the Criteria for Identifying Wetlands of International Importance as adopted by Resolution VII.11, and CONCERNED AS WELL that information compiled by those submitting a Ramsar site for inclusion in the Ramsar List is often provided inconsistently in the different sections of the RIS;
7. AWARE that in Action 6.3.1 of Ramsar’s Strategic Plan 1997-2002 the Scientific and Technical Review Panel (STRP) of the Convention is requested to keep under review the criteria and guidelines for the identification and designation of Ramsar sites; and FURTHER AWARE that the STRP has recommended that a section be added to the RIS concerning biogeographic regionalisation in the application of Criteria 1, 2 and 3 for the identification and designation of Wetlands of International Importance, and that the

Explanatory Note and Guidelines for completing the Information Sheet on Ramsar Wetlands be revised and clarified, including the addition of guidance on the provision of suitable maps including in digital formats; and ALSO AWARE that this meeting has adopted Resolution VIII.21 concerning defining Ramsar site boundaries more accurately in Ramsar Information Sheets; and

8. CONSIDERING that the Wetlands of International Importance designated under the Ramsar Convention are being considered more and more by the international community as a significant component of the collective efforts to safeguard the environment and to make wise use of its resources, and that, consequently, there is an increasing interest in, and need for, ensuring access to more complete and accurate data about these sites;

THE CONFERENCE OF THE CONTRACTING PARTIES

9. APPROVES the revised Information Sheet on Ramsar Wetlands (RIS) and *Explanatory Note and Guidelines for completing the Information Sheet on Ramsar Wetlands (RIS)* annexed to this Resolution;
10. URGES all Contracting Parties preparing a RIS for the designation of a new site for the Ramsar List and for updating of the RIS for designated sites, in line with Resolution VI.13, to submit this information to the Ramsar Bureau in this revised format;
11. REQUESTS the Ramsar Bureau and Wetlands International, working with interested Contracting Parties, to develop protocols for the electronic submission of RISs, where this is possible and desirable, so as to facilitate the supply of data from the information systems of Contracting Parties to the Ramsar Sites Database;
12. REQUESTS the Bureau and Wetlands International to maintain the Ramsar Sites Database with the RIS data supplied by Contracting Parties; and to manage other relevant data on Ramsar sites, including that supplied by Contracting Parties in addition to the RIS, so that this data can be made publicly available, subject to consultation with the Contracting Party concerned;
13. FURTHER REQUESTS the Bureau and Wetlands International to continue the development of the Ramsar Sites Database so as to reflect the information provided in the RIS as revised by this Resolution, and linked to relevant supplementary data in line with paragraph 12 above, and to make arrangements for the Ramsar Sites Database to be accessible through the World Wide Web, including the inclusion of a regularly updated version of the Ramsar Sites Database for incorporation into the Ramsar Wetland Data Gateway developed by the Centre for International Earth Science Information Network (CIESIN);
14. INSTRUCTS the STRP to provide further guidance on: (i) where the additional information called for in paragraphs 14-16 of Annex III to the RIS *Explanatory Notes and Guidelines* would be incorporated into the RIS; (ii) the value and feasibility of supplying digital mapping (called for in paragraphs 17-22 of Annex III); (iii) the compatibility of such data at a global scale; (iv) the use of such data by third parties; and (v) issues of data licensing, copyright, access and fees;

15. ALSO REQUESTS Wetlands International to continue to prepare site entries for the Ramsar Sites Directory, derived from information provided by Contracting Parties and relevant supplementary data in line with paragraph 12 above, to make these available through the World Wide Web, and to make available, resources permitting, an updated Ramsar Sites Directory to each meeting of the Conference of the Parties;
16. ENCOURAGES all those responsible for compiling an RIS to apply fully the guidance offered in the *Explanatory Note and Guidelines for completing the Information Sheet on Ramsar Wetlands (RIS)*, in order to ensure that the information is submitted correctly in each section of the RIS, and CALLS UPON Contracting Parties to verify that this has been done before submitting RISs to the Ramsar Bureau;
17. URGES Contracting Parties to prepare and supply suitable maps, following the additional guidance in the *Explanatory Note and Guidelines for completing the Information Sheet on Ramsar Wetlands (RIS)*, and taking note of Resolution VIII.21 concerning defining Ramsar site boundaries more accurately in Ramsar Information Sheets, and wherever possible to submit maps in an appropriate digital format;
18. REQUESTS the Ramsar Bureau and Wetlands International to make arrangements to hold digital maps as part of the Ramsar Sites Database, and to make available, as appropriate and taking account of copyright issues and national regulations, such maps for inclusion, *inter alia*, in the further development of the Web presentation of the Ramsar Sites Database by Wetlands International, the Ramsar Wetland Data Gateway maintained by CIESIN, and the Global Database of Protected Areas maintained by the World Conservation Monitoring Centre (UNEP-WCMC);
19. REQUESTS the STRP to examine the Ramsar Classification System of Wetland Type with a view to including additional types and, to facilitate this process, to consider allocating an open field in the Ramsar Information Sheet; and
20. FURTHER REQUESTS the STRP to review the multiple sources of information available on Ramsar sites including RISs, the Directory of Wetlands of International Importance, site management plans, and data that might be collected under other international instruments; and to review the needs for such information, their uses and users, and make recommendations to COP9 as to how the supply and international reporting of information on Ramsar Sites might be better harmonized to give possible efficiency and cost savings.

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Annex

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.

Note for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Bureau. Compilers are strongly urged to provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of maps.

1. Name and address of the compiler of this form:

FOR OFFICE USE ONLY.

2. Date this sheet was completed/updated:

DD MM YY

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Designation date

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Site Reference Number

3. Country:

4. Name of the Ramsar site:

5. Map of site included:

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps.

a) hard copy (required for inclusion of site in the Ramsar List): *yes* ☐ -or- *no* ☐

b) digital (electronic) format (optional): *yes* ☐ -or- *no* ☐

6. Geographical coordinates (latitude/longitude):

7. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

8. Elevation: (average and/or max. & min.)

9. Area: (in hectares)

10. Overview:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

11. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8

12. Justification for the application of each Criterion listed in 11. above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

13. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

b) biogeographic regionalisation scheme (include reference citation):

14. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

15. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

16. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

17. Wetland Types

a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar “Classification System for Wetland Type” present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N • O • P • Q • R • Sp • Ss • Tp • Ts • U • Va •
Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

18. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

19. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

20. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

21. Social and cultural values:

e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

22. Land tenure/ownership:

(a) within the Ramsar site:

(b) in the surrounding area:

23. Current land (including water) use:

(a) within the Ramsar site:

(b) in the surroundings/catchment:

24. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

(a) within the Ramsar site:

(b) in the surrounding area:

25. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

26. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

27. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

28. Current conservation education:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

29. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

30. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

31. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

32. Bibliographical references:

scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

Please return to: **Ramsar Convention Bureau, Rue Mauverney 28, CH-1196 Gland, Switzerland**
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • e-mail: ramsar@ramsar.org

Annex II

Explanatory Note and Guidelines for completing the *Information Sheet on Ramsar Wetlands (RIS)*

Background and context

Recommendation 4.7 of the Conference of Contracting Parties established that the “data sheet developed for the description of Ramsar sites be used by Contracting Parties and the Bureau in presenting information for the Ramsar database, and as appropriate in other contexts”. The Recommendation listed the information categories covered by the “data sheet”, including the “reasons for inclusion” (the Ramsar Criteria) and the Ramsar “*Classification system for wetland type*”.

Resolution 5.3 reaffirmed that a completed “Ramsar datasheet” and site map should be provided upon designation of a Wetland of International Importance (hereafter referred to as a “Ramsar site”) for the List of Wetlands of International Importance (the Ramsar List). This was subsequently reiterated in Resolutions VI.13, VI.16, and VII.12. This datasheet, formally entitled the *Information Sheet on Ramsar Wetlands* and abbreviated “RIS”, provides a standardized format for recording information and data about the Ramsar site.

Resolution 5.3 also stressed that information concerning criteria for inclusion (on the Ramsar List), the functions and values (hydrological, biophysical, floral, faunal, social and cultural) of the site, and conservation measures taken or planned were particularly important categories of information; and it emphasized the importance of applying the Ramsar *Classification system for wetland type* when describing the wetland in the RIS.

Criteria for Identifying Wetlands of International Importance were first adopted in 1974 and refined by subsequent meetings of the Conference of the Parties. The form of the present Criteria was established by Recommendation 4.2 (1990), with additional criteria based upon fish adopted by Resolution VI.2. The Criteria were again substantively revised and, together with detailed guidance for their application, adopted by Resolution VII.11 as part of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*. These Criteria and guidelines are included as Annex II of this Explanatory Note.

The *Information Sheet on Ramsar Wetlands (RIS)* is completed and supplied to the Ramsar Bureau when a Ramsar site is designated by a Contracting Party. In recognition that the status of designated Ramsar sites can and does change, both in terms of their ecological character, the threats to this character, and the conservation management process and actions underway, Resolution VI.13 has urged Contracting Parties to revise the data provided in the RIS at least every six years.

The RISs and their accompanying maps are held by the Ramsar Bureau. The information provided by Contracting Parties in the RIS is used as the basis for entering data and information into the Ramsar Sites Database, managed on behalf of the Convention by Wetlands International under contract from the Ramsar Bureau. The Database is managed so as to provide an information service on Ramsar sites, including undertaking analysis and reporting to meetings of the Conference of the Parties on progress in implementing the Strategic Framework and Vision

for the List of Wetlands of International Importance (Resolution VII.11) and other Resolutions of the Conferences of the Parties.

The information provided by Contracting Parties in the RIS, including any supplementary information provided, and held in the Ramsar Sites Database is also used by Wetlands International to compile the Ramsar Sites Directory for each meeting of the Conference of the Parties. This Directory provides a publicly-accessible standardised summary of the features and conservation status of each designated Ramsar site, and is now also available on Wetlands International's Web site (<http://www.wetlands.org>).

General guidance

The RIS must be completed in one of the Convention's three working languages, namely English, French, or Spanish. The RIS and this accompanying *Explanatory Note and Guidelines* are available in each of the three working languages.

The information provided in the RIS should be clear and succinct, and the total length of a completed RIS should not normally exceed 12 pages.

In the case of a wetland which has been well-studied and well-documented, or which is the subject of special field investigations, far more information may be available than can be accommodated in the RIS. Additional information, such as taxonomic lists of species' status, management plans, copies of published papers or photocopied reports on the site, should be appended to the RIS and are treated as part of the official record of the site. Photographs (prints, transparencies or electronic images) of the wetland are also especially welcome. It is essential that the source providing any such additional information be noted.

Where the Ramsar site being designated is a very large and complex wetland system, or consists of a suite of separate sub-sites, two levels of approach may be advisable: a broad approach for the system as a whole, and a more detailed approach for each key locality or sub-site within the system. Thus for a particularly large wetland complex it may be appropriate to complete an overall RIS for the whole site and a series of separate RIS datasheets for each key area or sub-site within the complex.

Resolution VI.1 highlights the importance of clearly defining the ecological character of Ramsar sites as the basis for monitoring these wetlands in order to maintain their ecological character. Key features of the ecological character of the site which should be maintained should include those identified as the justification for designation under each Ramsar Criterion applied to the designation. Further guidance on defining and describing ecological character features is provided in the *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14).

Where a management plan has been prepared for the site being designated, the information provided in the RIS should be consistent with the plan's description of ecological character features, the values and functions of the wetland, the factors affecting or likely to affect its character, values and functions, and the management planning process, including monitoring.

When a management plan is prepared as part of the management planning process for the site after it has been designated as a Ramsar site, the information in the RIS should be checked and, if necessary, a revised RIS should be completed and sent to the Ramsar Bureau.

The annex to Resolution VI.1 notes that there is a need to increase the value of the information collected for describing and assessing the ecological character of listed sites, and that emphasis should be given to:

- establishing a baseline by describing the functions, products and attributes of the site that give it benefits and values of international importance (necessary because the existing Ramsar Criteria do not cover the full range of wetland benefits and values which should be considered when assessing the possible impact of changes at a site) -sections 12, 14, 16, 17, 18, 19, 20 and 21 of the RIS apply;
- providing information on human-induced factors that have affected or could significantly affect the benefits and values of international importance - section 24 of the RIS applies;
- providing information on monitoring and survey methods in place (or planned) at the site - sections 25 and 26 of the RIS apply; and
- providing information on the natural variability and amplitude of seasonal and/or long-term “natural” changes (e.g., vegetation succession, episodic/catastrophic ecological events such as hurricanes) that have affected or could affect the ecological character of the site - sections 16 and 24 of the RIS apply.

Guidance on information to provide in each numbered section of the *Information Sheet on Ramsar Wetlands (RIS)*

1. **Name and address of the RIS compiler:** The full name, institution/agency, and address of the person who compiled the RIS, together with any telephone and fax numbers and e-mail address.
2. **Date:** The date on which the RIS was completed (or updated). Please use the *name* of the month, not its numerical equivalent. For example use 6 March [year] or March 6 [year] rather than 6/3/year or 3/6/year so as to avoid confusion arising from commonly used but differing formats for expressing dates.
3. **Country:** The official (short) version of the Contracting Party/country name.
4. **Name of the Ramsar site:** The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in brackets after the precise name. Ensure that the site name used is the same in this section and on the maps provided. This name will be used precisely as given when the site is added to the Ramsar List.
5. **Map of the Ramsar Site:** The most up-to-date available and suitable map of the wetland should be appended to the RIS (in hardcopy and, if possible, also in digital format). At least a hardcopy map is required for the inclusion of the site in the List of Wetlands of International Importance. Indicate whether or not a map accompanies the RIS by ticking the appropriate *yes* or *no* boxes. The map must clearly show the boundary of the designated Ramsar site. Annex III provides detailed guidance on the provision of suitable Ramsar site

maps and other spatial data. A list of the maps supplied and any other relevant maps of the Ramsar site that are available should be included in a note annexed to the RIS.

6. **Geographical coordinates:** The geographical coordinates of the *approximate* centre of the site expressed in *degrees, minutes and seconds of latitude and longitude* (e.g. in the format: 01°24'15"S 104°16'01"E or 010°30'00"N 084°51'45"W). If relevant, specify the number of discrete units forming the site. If any disjunct units are situated at least 1.6 km* apart, the coordinates of the approximate centres of each of these units should be given separately (along with individual names or differentiating labels, e.g. "A, B, C"... , etc.). Any discrete units so identified in an RIS should also be clearly labelled on the site map(s). A single site occupying less than 1,000 hectares needs only one central set of coordinates. Location information on larger areas should be supplemented by providing the coordinates of the southwest and northeast corners of the Ramsar site. (See also sections 5. Map and 9. Area).

*This is approximately equivalent to one (1) minute of latitude or longitude (at the equator, in the case of longitude).

If the site is shaped in such a way that the approximate centre point cannot be easily specified, or if such a point falls outside the site or within a very narrow portion of the site, please explain this with a note, and provide the coordinates for the approximate centre point of the largest part of the site.

7. **General Location:** A description of the general location of the wetland. This should include the name of the large administrative region(s) (i.e., state, province, territory, canton, etc.) within which the site lies (e.g., Alberta, Canada; Punjab, Pakistan; Andalucía, Spain) and the site's distance (as either a straight line distance or distance by road) and compass bearing from the nearest "provincial", "district" or other significant administrative centre, town, or city. The human population of the listed centre and its administrative regions (if possible, including at least two levels of administration/ jurisdiction) should also be stated.
8. **Elevation:** The average and/or minimum and maximum elevation of the wetland in metres above mean sea level. Clearly label each elevation provided, with e.g. "average", "maximum" or "minimum").
9. **Area:** The total area of the designated site, in hectares. If the areas of discrete site units are known, please also list each of these together with the names (or labels) used to identify and differentiate these units (see also section 5. Map).
10. **Overview:** A brief paragraph about the wetland, providing a 'word picture' of the type of wetland and its importance, its main physical and ecological character features, its most important values and functions, and any particularly interesting features. Note also the most significant wetland types, especially if they are the most dominant as identified in 17 b).
11. **Ramsar Criteria:** Circle or underline the code for each *Ramsar Criterion for identifying wetlands of international importance* that is being applied to the designation of the site. Refer to Annex II of these guidelines for the Criteria and the detailed guidance provided for their application established by Resolution VII.11.

Note that many sites qualify for designation under more than one Criterion: be thorough and precise in selecting all of the Criteria that apply. The specific reasons justifying the application of each Criterion selected should be provided in section 12. Justification of Criteria selected under section 11.

- 12. Justification for the application of each Criterion listed in 11. above:** For each Criterion selected under section 11. Ramsar criteria above, a specific individual explanation of how that Criterion applies to the site. This section of the RIS is central to the concept of “**international importance**”. The Criteria codes alone do not convey information on the specific way in which each Criterion applies to a particular site – therefore it is essential to provide sufficient precise description to explain and support each of the Ramsar Criteria codes selected. This text must not just restate the Criterion, but should provide the necessary details to describe the way in which a particular Criterion applies specifically at the site being designated. Refer to Annex II for the detailed guidance for the application of the Criteria (adopted by Resolution VII.11)

A number of points concerning the correct use of specific Criteria and the Guidelines for their application should be particularly taken into account when preparing the justification for the application of the Criteria selected for designation:

- i) The guidelines for the application of **Criteria 1 and 3** stress that these Criteria should be applied to a wetland in the context of the biogeographic region within which it occurs, but recognises that biogeographic regions can differ between wetland types. The biogeographical region context can also apply to certain reasons for the designation of threatened ecological communities under **Criterion 2**. The biogeographic region encompassing the Ramsar site and the biogeographic regionalisation scheme applied should be provided in section 13. Biogeography;
- ii) Concerning **Criterion 5** the guidelines indicate that the actual total number of waterbirds should be stated, and preferably, when available, the average total number from several recent years. It is not sufficient simply to restate the Criterion, i.e., that the site supports >20,000 waterbirds;
- iii) For justification of designation under **Criterion 6** it is particularly important to recognise that this Criterion must be applied to the regular occurrence of >1% of a biogeographic population of a species or subspecies of waterbird, and to recognise that in most cases the biogeographic range of waterbird populations is larger than the territory of one Contracting Party. For each population listed under Criterion 6 the name of the biogeographic population, as well as the number of birds of this population regularly occurring in the site, should be listed. Recommended 1% thresholds for the application of Criterion 6 are provided by Wetlands International's publication *Waterbird Population Estimates 3rd Edition* (2002), which also provides a description of the biogeographic range of each population. Note that this Criterion should be applied only to those waterbird populations for which a 1% threshold is available. However, for populations of waterbird species in taxa not presently covered by *Waterbird Population Estimates 3rd Edition*, the guidelines indicate that this Criterion may be applied if a reliable population estimate and 1% threshold is available from another source, and that in such cases the information source must be clearly specified. It is not sufficient simply to restate the Criterion, that the site

supports >1% of a population, nor is it a correct justification to list populations with numbers in the site >1% of their *national* population, except when the population is endemic to that country.

- iv) For all or some applications of **Criteria 2, 3, 4, 5, 6, 7 and 8**, the name(s) of the species concerned (scientific name and vernacular name in English, French or Spanish) should be provided in the justification.
- v) The Guidelines for the application of **Criterion 7** concerning fish and shellfish diversity indicate that a species list alone is not sufficient justification for the use of this Criterion, and that other features of high diversity, including life-history stages, species interactions, and level of endemism are required for the application of this Criterion.

- 13. Biogeography:** The *biogeographic region* encompassing the Ramsar site and the *biogeographic regionalisation scheme* applied (with full reference citation) should be provided. Biogeographical specification is essential for the correct application of Criteria 1 and 3 and certain applications of Criterion 2 (see also sections 11. Ramsar Criteria and 12. Justification of Criteria). In this context the guidelines for the application of the Ramsar Criteria (see Annex II) define “bio(geographic) region” as “a scientifically rigorous determination of regions as established using biological and physical parameters such as climate, soil type, vegetation cover, etc.” Note that for non-island Contracting Parties, in many cases biogeographic regions will be transboundary in nature and will require collaboration between countries to establish the locations of representative, rare or unique examples of different wetland types. It is also recognised that the nature of biogeographic regionalization may differ between wetland types according to the nature of the parameters determining natural variation (see Annex II of this *Explanatory Note and Guidelines*).

There are a variety of different global and supranational/regional biogeographic schemes in use. No single scheme may be universally appropriate or acceptable and Contracting Parties are urged (in the annex to Resolution VII.11) to apply a regionalization scheme which they determine to be the most appropriate and scientifically rigorous approach available.

- 14. Physical features of the site:** A succinct description of the principal physical characteristics of the site covering the following features (where relevant):
- Geology and geomorphology (general features);
 - Soil type and chemistry range (Soil family name(s); indication of mineral vs. organic content; typical pH range of soil);
 - Sediment characteristics;
 - Origins (natural or artificial);
 - Hydrology (including seasonal water balance, inflow, infiltration and outflow, salt-water intrusion). Further detail, notably the hydrological values and functions of the site should be included in section 15. Hydrological values;
 - Water quality (typical physico-chemical characteristics);
 - Depth, fluctuations and permanence of water;
 - Tidal range and variations;

- Downstream area (especially in the case of wetlands that are important in flood control);
- Climate – include here only the most significant regular climatic features, e.g., annual rainfall and average temperature range, distinct seasons, typical flooding and drought periods, and any other normal climatic factors affecting the wetland. Recent major or extreme climate events, e.g. flood, drought, hurricane, cyclone or other storm, atypical period of extreme temperatures, etc, that have had an adverse impact on the site should be detailed under section 24. Factors adversely affecting the site's ecological character).

15. Physical features of the catchment area: A succinct characterisation of the catchment area, covering:

- surface area;
- general geology and geomorphological features;
- general soil types
- general land use
- climate (including characterisation of climate type);

16. Hydrological values: A description of the principal hydrological *values* of the wetland, for example, the ecosystem services that they provide to people. This may include, but not necessarily be limited to, its role in flood control, groundwater replenishment, shoreline stabilization, sediment & nutrient retention and export, climate change modification, and water purification and maintenance of water quality. Hydrology of the site (as opposed to its hydrological values and functions) should be covered under section 14. Physical features.

17. Wetland Type: In this section first list, by circling or underlining, the full range of wetland types occurring within the site, and then list the wetland types selected in order of their dominance (by area) starting with the wetland type with the largest area. The Ramsar Classification System for Wetland Type (see Annex I of this *Explanatory Note and Guidelines*) provides the description of what types of wetland are covered by each of the wetland type codes. Note that the wetland types are grouped in three major categories: marine-coastal, inland, and human-made wetlands, and that wetland types under two or more of these categories may be present within a Ramsar site, particularly if it is large.

Since some Marine/Coastal wetland types (e.g. Estuarine waters (type *F*) or Intertidal Forested Wetlands (type *I*)) can occur far inland from the coastline, and conversely Inland Wetlands types can occur close to the coastline, please also indicate with additional text in this section the general geographical location of the site relative to the coastline, as either inland or marine/coastal.

When listing the areal dominance of the wetland types, if possible provide the area or percentage of the total area of the designated site composed of each wetland type, although it is recognised that this may be difficult for large sites with a wide variety of wetland types. If the site is composed of more than one discrete unit and different wetland types or different dominance of types occur in different site units, also list the wetland type dominance for each unit (see also the guidance on sections 5. Map, 6. Geographical coordinates, and 9. Area).

If the designated site includes areas of non-wetland habitat, for example where such parts of a catchment are included, it is helpful here to also list the area, or percentage of the total area, of the site formed of these habitats.

18. **General ecological features:** A description of the main habitats and vegetation types, listing the dominant plant communities and species, and describing any zonation, seasonal variations, and long-term changes. Include a brief note on the native natural plant communities in adjacent areas, as well as the present plant communities (including cultivation) if different from the native vegetation. Information on specific food chains should be included in this section.
19. **Noteworthy flora:** Additional/supplemental information on plant species or communities for which the wetland is particularly important or significant should be provided here. **Do not duplicate** information that has already been provided in support of the site's international importance (in section 12. Justification of Criteria) or in section 18. General ecological features. Specify *why* each species or community listed is considered noteworthy (e.g., if it is an economically important species).

Endemic plant species, if they have not been considered towards the application of Criterion 3 at the site (e.g., if the *number* of endemic species was not considered "significant", following the guidance for that Criterion) can be listed here.

Also list here plant species that have been introduced (accidentally or intentionally) and/or those that are invasive. (Description of the impacts by invasive and/or alien species on the site should be provided in section 24. Factors adversely affecting the site's ecological character).

General species (occurrence) lists should not be included here or under other RIS sections, but such lists (properly labelled with site details) should be appended to the RIS when they are available.

20. **Noteworthy fauna:** Additional/supplemental information on animal species or communities for which the wetland is particularly important or significant should be provided here. **Do not duplicate** information that has already been provided in support of the site's international importance (in section 12. Justification of Criteria) or in section 18. General ecological features. Specify *why* each species or community listed is considered noteworthy (e.g., if it is an economically important species, or a "keystone" species, or a species associated with high wetland biodiversity values, e.g., turtles, crocodiles, otters, dolphins).

Endemic animal species that have not been considered towards the application of relevant Criteria at the site (e.g., because either the number of endemic species was not considered "significant" (Criterion 3) or the percentage of endemic fish did not reach the threshold *percentage* for the application of Criterion 7) should be listed in this section. Noteworthy zoogeographical features (relict populations, unusual range extensions, etc.) should be noted here.

Also list here animal species that have been introduced (accidentally or intentionally) and/or those that are invasive. (Description of the impacts by invasive and/or alien

species on the site should be provided in section 24. Factors adversely affecting the site's ecological character).

General species (occurrence) lists should not be included here or under other RIS sections, but such lists (properly labelled with site details) should be appended to the RIS when they are available.

21. **Social and cultural values:** An account of the site's principal social and economic values and functions and "wise use" features presented in Ramsar Handbooks 1 to 6 (e.g., tourism, outdoor recreation, education and scientific research, agricultural production, grazing, water supply, fisheries production) and cultural values and functions (e.g., archaeological sites, historical associations and/or religious significance including its significance to indigenous peoples). For more information see the *Guiding principles for taking into account the cultural values of wetlands for the effective management of sites*, annexed to Resolution VIII.19. Whenever possible, indicate which of these values are consistent with the maintenance of natural wetland processes and ecological character. Details about values derived from non-sustainable exploitation or which result in detrimental ecological changes should be described in section 24. Factors adversely affecting the site's ecological character.
22. **Land tenure/ownership:** Details of ownership/tenure both of the Ramsar site and of the areas surrounding the site. If possible, express different tenure/ownership categories as the percentage of the site to which each applies (e.g., "50% state-owned"). Explain any complex tenure arrangements or formulas. Also explain terms which have a special meaning in the country or region concerned. In the next section (23. Current land use), describe the linkages between the different land tenures described in this section and specific land uses.
23. **Current land (including water) use:** All of the principal human activities in (a) the Ramsar site itself and (b) in the surroundings and catchment. Give information on the human population in the area, with a description of the principal human activities and main forms of land and water use at the wetland, e.g., water supply for domestic and industrial use, irrigation, agriculture, livestock grazing, forestry, fishing, aquaculture and hunting. Also mention here activities and uses related to research, education and recreation/tourism at the site, but provide the details about each of these in sections 27, 28 and 29, respectively). Some indication of the relative importance, scale and trend of each land and water use should be given whenever possible. Make note if activities or uses are restricted to certain distinct parts of the site (e.g., in only part of a large site or in distinct zones or within particular wetland types). In (b), summarize land and water use in the areas surrounding the site and in its greater catchment that may directly or indirectly affect the status of the designated wetland, and any land uses in downstream areas likely to be affected by the wetland. For further reference on water use, see the *Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands* adopted by Resolution VIII.1.
24. **Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:** The human and natural factors affecting the ecological character of the site, from both within and around the site (including the greater catchment, if relevant). These may include new or changing activities/uses, major development projects, etc., which have had,

are having, or may have a detrimental effect on the natural ecological character of the wetland. For all adverse and change factors reported, supply measurable/quantifiable information (when such data exist), as well as information on the scale, extent and trend of the change factor and its impact: this information should provide a basis for monitoring of ecological character of the site.

It is important to specify both the agent for the change (e.g., diversion of water, drainage, reclamation, pollution, over-grazing, excessive human disturbance, or excessive hunting and fishing, etc.) and the resulting change and its impact (e.g., siltation, erosion, fish mortality, change in vegetation structure, habitat fragmentation, disturbed reproduction of species, physical or ecological change due to climate change, etc.). It is also important to differentiate between factors coming from within the site itself and those factors emanating from outside the site, but which are having or may have an impact on the site. One should also distinguish between potential and existing adverse factors.

When reporting on pollution, special notice should be taken of toxic chemical pollutants and their sources. These should include industrial and agricultural-based chemical effluents and other emissions.

Natural events, including episodic catastrophes (e.g., an earthquake or volcanic eruption) or natural vegetative succession which have had, are having, or are likely to have an impact on the ecological character of the site should be detailed, in order to facilitate monitoring.

Provide information on the history of introductions (accidental or deliberate) of invasive and/or alien species identified in sections 19. Noteworthy flora and 20. Noteworthy fauna and the impacts of any invasions.

25. **Conservation measures taken:** Details of any nationally relevant protected area status, international conservation designations (in addition to Ramsar site status), and, in the case of transboundary wetlands, bilateral or multilateral conservation measures which pertain to all or part of the site. If a reserve has been established, give the date of establishment and size of the protected area. If only a part of the wetland is included within a protected area, the area of wetland habitat that is protected should be noted. Also describe any other conservation measures taken at the site, such as restrictions on development, management practices beneficial to wildlife, closures of hunting, etc.

Describe here the management planning process, including any management plan, for the site, if this has been developed and is being implemented, including whether it has been officially approved. Cite the management plan document(s) in section 32. Bibliographic references, and whenever possible provide a copy of the management plan as supplementary information to the RIS.

Include information here on any monitoring schemes and survey methods in place at the site. Describe any application at the site of the Ramsar *Guidelines for the implementation of the wise use concept* (Recommendation 4.10), *Additional guidance for the implementation of the wise use concept* (Resolution 5.6), or any other instance of the application of other more recently advanced wise use guidelines (“wise use” is a central concept of the Ramsar Convention).

When updating the RIS for an existing Ramsar site, mention if the site is included on, or has been removed from, the Montreux Record and provide details of any Ramsar Advisory Missions that have been undertaken to the site.

Any application of integrated basin-scale/catchment management planning, or integrated coastal/marine zone management planning, involving or affecting the site should be noted. Provide a brief assessment of the effectiveness of protected area legislation or status of any protected areas whenever possible. Involvement of local communities and indigenous people in the participatory management of the site should also be described, in the context of the Ramsar guidelines on this process (Resolution VII.8).

26. **Conservation measures proposed but not yet implemented:** Details of any conservation measures that have been proposed, or are in preparation, for the site, including any proposals for legislation, protection and management

Summarize the history of any long-standing proposals which have not yet been implemented, and differentiate between those proposals which have already been officially submitted to the appropriate government authorities and those which have not as yet received formal endorsement, e.g., recommendations in published reports and resolutions from specialist meetings. Also mention any management plan which is in preparation but has not yet been completed, approved or implemented.

27. **Current scientific research and facilities:** Describe here any current scientific research programmes, including monitoring, and projects taking place in the site, and provide information on any special facilities for research that were mentioned in section 23. Current land (including water) use.
28. **Current conservation education activities related to communications, education and public awareness (CEPA) related to or benefiting the site:** Describe here any existing programmes, activities and facilities for communications, education and public awareness (CEPA), including training, that were mentioned in section 23. Current land (including water) use. Also provide comment on the educational potential of the wetland. For further information on CEPA issues and the Convention on Wetlands, see the Ramsar Web site at http://ramsar.org/outreach_index.htm.
29. **Current recreation and tourism:** Provide details of any present use of the wetland for recreation and tourism that was mentioned in section 23. Current land (including water) use. Provide details of existing or planned visitor facilities or centres for recreation and tourism, and indicate the annual number of tourists visiting the site, if known. Also indicate the type of tourism and whether the tourism is seasonal.
30. **Jurisdiction:** Provide the full name and address of the government authority with a) *territorial jurisdiction* over the wetland, e.g., the state, region or municipality; and b) the name of the authority with *functional jurisdiction* for conservation purposes, e.g., the Department of Environment or Department of Fisheries, etc.
31. **Management authority:** Provide the name and address of the local office(s) of the agency(ies) or organization(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with

responsibility for the wetland. Also provide details of any special or unique arrangements that pertain to the site's management.

32. **Bibliographical References:** A list of key technical references relevant to the wetland, including management plans, major scientific reports, and bibliographies. Please list any functional/active Web site addresses dedicated to the Ramsar site or which prominently feature the site (e.g., a Web site detailing all of a country's Ramsar sites), and include the date that the Web site was most recently updated. When a large body of published material is available about the site, only the most important references need be cited, with priority being given to recent literature containing extensive bibliographies. Reprints or copies of the most important literature, including a copy of any management plan, should be appended whenever possible.

Annex I

Ramsar Classification System for Wetland Type

The codes are based upon the Ramsar Classification System for Wetland Type as approved by Recommendation 4.7 and amended by Resolutions VI.5 and VII.11 of the Conference of the Contracting Parties. The categories listed herein are intended to provide only a very broad framework to aid rapid identification of the main wetland habitats represented at each site.

Marine/Coastal Wetlands

- A -- **Permanent shallow marine waters** in most cases less than six metres deep at low tide; includes sea bays and straits.
- B -- **Marine subtidal aquatic beds**; includes kelp beds, sea-grass beds, tropical marine meadows.
- C -- **Coral reefs**.
- D -- **Rocky marine shores**; includes rocky offshore islands, sea cliffs.
- E -- **Sand, shingle or pebble shores**; includes sand bars, spits and sandy islets; includes dune systems and humid dune slacks.
- F -- **Estuarine waters**; permanent water of estuaries and estuarine systems of deltas.
- G -- **Intertidal mud, sand or salt flats**.
- H -- **Intertidal marshes**; includes salt marshes, salt meadows, saltings, raised salt marshes; includes tidal brackish and freshwater marshes.
- I -- **Intertidal forested wetlands**; includes mangrove swamps, nipah swamps and tidal freshwater swamp forests.
- J -- **Coastal brackish/saline lagoons**; brackish to saline lagoons with at least one relatively narrow connection to the sea.
- K -- **Coastal freshwater lagoons**; includes freshwater delta lagoons.
- Zk(a) – **Karst and other subterranean hydrological systems**, marine/coastal

Inland Wetlands

- L -- **Permanent inland deltas**.
- M -- **Permanent rivers/streams/creeks**; includes waterfalls.
- N -- **Seasonal/intermittent/irregular rivers/streams/creeks**.
- O -- **Permanent freshwater lakes** (over 8 ha); includes large oxbow lakes.
- P -- **Seasonal/intermittent freshwater lakes** (over 8 ha); includes floodplain lakes.
- Q -- **Permanent saline/brackish/alkaline lakes**.
- R -- **Seasonal/intermittent saline/brackish/alkaline lakes and flats**.
- Sp -- **Permanent saline/brackish/alkaline marshes/pools**.
- Ss -- **Seasonal/intermittent saline/brackish/alkaline marshes/pools**.
- Tp -- **Permanent freshwater marshes/pools**; ponds (below 8 ha), marshes and swamps on inorganic soils; with emergent vegetation water-logged for at least most of the growing season.
- Ts -- **Seasonal/intermittent freshwater marshes/pools on inorganic soils**; includes sloughs, potholes, seasonally flooded meadows, sedge marshes.
- U -- **Non-forested peatlands**; includes shrub or open bogs, swamps, fens.
- Va -- **Alpine wetlands**; includes alpine meadows, temporary waters from snowmelt.
- Vt -- **Tundra wetlands**; includes tundra pools, temporary waters from snowmelt.

- W -- **Shrub-dominated wetlands**; shrub swamps, shrub-dominated freshwater marshes, shrub carr, alder thicket on inorganic soils.
- Xf -- **Freshwater, tree-dominated wetlands**; includes freshwater swamp forests, seasonally flooded forests, wooded swamps on inorganic soils.
- Xp -- **Forested peatlands**; peat swamp forests.
- Y -- **Freshwater springs; oases.**
- Zg -- **Geothermal wetlands**
- Zk(b) – **Karst and other subterranean hydrological systems, inland**

Note: “floodplain” is a broad term used to refer to one or more wetland types, which may include examples from the R, Ss, Ts, W, Xf, Xp, or other wetland types. Some examples of floodplain wetlands are seasonally inundated grassland (including natural wet meadows), shrublands, woodlands and forests. Floodplain wetlands are not listed as a specific wetland type herein.

Human-made wetlands

- 1 -- **Aquaculture** (e.g., fish/shrimp) **ponds**
- 2 -- **Ponds**; includes farm ponds, stock ponds, small tanks; (generally below 8 ha).
- 3 -- **Irrigated land**; includes irrigation channels and rice fields.
- 4 -- **Seasonally flooded agricultural land** (including intensively managed or grazed wet meadow or pasture).
- 5 -- **Salt exploitation sites**; salt pans, salines, etc.
- 6 -- **Water storage areas**; reservoirs/barrages/dams/impoundments (generally over 8 ha).
- 7 -- **Excavations**; gravel/brick/clay pits; borrow pits, mining pools.
- 8 -- **Wastewater treatment areas**; sewage farms, settling ponds, oxidation basins, etc.
- 9 -- **Canals and drainage channels, ditches.**
- Zk(c) – **Karst and other subterranean hydrological systems, human-made**

Annex II

Criteria and guidelines for Identifying Wetlands of International Importance

Adopted by the 7th Meeting of the Conference of the Contracting Parties (1999), superseding earlier Criteria adopted by the 4th and 6th Meetings of the COP (1990 and 1996), to guide implementation of Article 2.1 on designation of Ramsar sites.

Group A of the Criteria. Sites containing representative, rare or unique wetland types

Criterion 1: A wetland should be considered internationally important if it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.

Group B of the Criteria. Sites of international importance for conserving biological diversity

Criteria based on species and ecological communities

Criterion 2: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

Criterion 3: A wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.

Criterion 4: A wetland should be considered internationally important if it supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.

Specific criteria based on waterbirds

Criterion 5: A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.

Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

Specific criteria based on fish

Criterion 7: A wetland should be considered internationally important if it supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity.

Criterion 8: A wetland should be considered internationally important if it is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend.

Annex III

Additional guidelines for the provision of maps and other spatial data for Ramsar Sites

The following guidance has drawn from the experience of Wetlands International and the Ramsar Bureau, the World Heritage Convention, and the UNEP-World Conservation Monitoring Centre, and also from the guidance provided in: World Heritage Convention. 1999. *Meeting to recommend digital and cartographic guidelines for World Heritage site nominations and state of conservation reports*. In: WHC-99/CONF.209/INF.19. Paris, 15 November 1999. WWW document: <http://www.unesco.org/whc/archive/99-209-inf19.pdf>

1. The provision of a suitable map or maps is a requirement under Article 2.1 of the Convention – it is fundamental to the process of designating a Wetland of International Importance (Ramsar site), and is an essential part of the information supplied in the *Information Sheet on Ramsar Wetlands (RIS)*. Clear mapped information about the site is also vital for its management.
2. This additional guidance recognises that Contracting Parties have increasing capacity to prepare and supply Ramsar site maps in digital formats (for example, through the use of electronic Geographical Information System (GIS) software) and to delineate site boundaries through the establishment of precise Global Positioning System (GPS) way-points.
3. Maps provided by a Contracting Party on designation of a Ramsar site should, as far as possible, and as high priority attributes:
 - i) be prepared to professional cartographic standards: maps not prepared to professional cartographic standards are problematic, since even moderately-opaque hand-drawn site boundaries or cross-hatching (e.g., to indicate zonation) often obscure other important map features. Although coloured annotations may appear distinguishable from the underlying map features on the map original, it is important to remember that most colours cannot be differentiated in any black and white photocopies. Such additional information should be provided on additional outline maps;
 - ii) show the Ramsar Site in its natural or modified environment and should be within the scale ranges specified below, depending upon the size of the site;
 - iii) clearly show the boundary of the Ramsar site, and distinguish this from any existing or proposed buffer zones;
 - iv) if the site is adjacent to, or now includes, a previously designated Ramsar site, the (former or active) boundaries of all of such sites should be shown, making clear the current status of all such previously designated areas;
 - v) include a key or legend that clearly identifies the boundary and each other category of feature shown on the map and relevant to the designation of the site; and
 - vi) show the map's scale, an indication of geographical coordinates (latitude and longitude), an indication of compass bearing (north arrow) and, if possible, information on the

map's projection. The map (or a companion map) should also show the position of several other features if feasible.

4. The most suitable map or set of maps for the designation of a Ramsar site will also clearly show the following, although provision of such information is of lower priority than the attributes listed in paragraph 3 above:
 - i) basic topographical information;
 - ii) the boundaries of relevant protected area designations and administrative boundaries (e.g., province, district, etc.);
 - iii) clearly delineated wetland and non-wetland parts of the site, and depiction of the wetland boundary with respect to the site's boundary, especially where the wetland extends beyond the site being designated. Where available, information on the distribution of the main wetland habitat types and key hydrological features is also useful. Where there is substantial seasonal variation in the extent of the wetland, separate maps showing the wetland extent in the wet and in the dry seasons are helpful;
 - iv) major landmarks (towns, roads, etc.); and
 - v) distribution of land uses in the same catchment.
5. A general location map, showing the location of the Ramsar site within the territory of the Contracting Party, is also extremely useful.
6. Maps should not be trimmed, so that data managers and Ramsar Bureau staff can consult any printed marginal notes or coordinate tick marks.
7. A map having all the above attributes, including being at the appropriate scale (see guidance below), will facilitate digitization of maps for inclusion in a Geographic Information System (GIS) if the map (or maps) are supplied only in printed form (i.e., when no digital coordinates are available).
8. To allow for subsequent digitization to be undertaken accurately and without distortion, the map should be an original print (two copies of which should be supplied) and not a photocopy,
9. Additionally, to facilitate copying and presentation, it is extremely helpful to include two other versions of the principal map(s):
 - i) a colour photocopy of the map reduced to A4 size; and
 - ii) a TIFF file or other digital image file (e.g., JPEG, PDF).

Scale of maps

10. The optimum scale for a map depends on the size of the site depicted. The optimal scales of maps for different sizes of Ramsar sites are:

Size of site (ha)	Preferred (minimum) scale of map
> 1,000,000	1:1,000,000
100,000 to 1,000,000	1:500,000
50,000 to 100,000	1:250,000
25,000 to 50,000	1:100,000
10,000 to 25,000	1:50,000
1,000 to 10,000	1:25,000
< 1,000	1:5,000

11. In summary, the map should be of suitable scale to depict the detail necessary to clearly indicate the features of the site described in the RIS and, particularly, to show a precise boundary.
12. For moderate to large sites, it is often difficult to show sufficient detail on standard A4 (210mm x 297mm) or Letter-format (8.5" x 11") sheets at the desired scale, so generally a sheet larger than this format is more appropriate. However, whenever possible, each map should be no larger than A3 (420mm x 297 mm) as larger formats present difficulties for subsequent copying.
13. When the site is large or complex and/or when it is composed of several sub-sites with discrete boundaries, a larger-scale map of each section or sub-site should be provided, accompanied by a smaller scale location map of the whole site which indicates the location of each sector or sub-site relative to the others. All such maps should follow the scale guidance above.

Boundary description (text)

14. When detailed topographical maps are not available, a description of the boundaries of the site should be provided to accompany the map(s), indicating topographic and other legally defined national, regional, or international boundaries followed by the site boundaries, together with the relationship of the Ramsar site boundary with the boundaries of any other existing protected area designations which cover part or all of the Ramsar site.
15. If the precise position of the site boundary has been determined using a Global Positioning System (GPS), Contracting Parties are encouraged to include an electronic or paper file listing each GPS latitude/longitude way-point determined and identifying these on a printed copy of the site map.
16. Where a revision to the boundary of a designated Ramsar site is being made in accordance with Resolution VIII.21, *Defining Ramsar site boundaries more accurately in Ramsar Information Sheets*, under the following circumstances:
 - a) the site boundary has been drawn incorrectly and there has been a genuine error; and/or
 - b) the site boundary does not accurately match the description of the boundary as defined in the RIS; and/or
 - c) technology allows for a higher resolution and more accurate definition of the site boundary than was available at the time of Listing;

any change should be made clear in the revised RIS and/or on the site map, and the reasons for such refinement should be documented in the RIS.

Boundary description (digital)

17. Contracting Parties are encouraged, where possible, to submit geographic information about the Ramsar site in digital form, suitable for incorporation into a Geographic Information System (GIS).
18. For boundary and buffer zone delineation, data should be presented in vector form, prepared at the largest scale.
19. Other information, for example on wetland types and land uses, whether vector- or raster-based, should be submitted on one or more separate layers at the largest scale possible.
20. Metadata concerning the digitised formats should accompany the digital map(s) and should include digitising scale, projection system, attribute tables for each map layer, file format(s), and layering conventions used to prepare the data layers.
21. The primary native format files generated by the “Arc-Info” family of GIS (ESRI Corporation) or by “MapInfo” (Corporation) GIS enjoy increasingly wide use and can be imported and used by many GIS applications.
22. The Open GIS Consortium (OGC), a large group of GIS organizations including industry leaders, is addressing the issue of incompatible standards in geographic information technology. Progress on GIS standards, compatibility, and interoperability achieved under the OGC initiative should be noted and will be considered in the preparation of any updated advice on GIS file specifications for provision of digital maps for Ramsar sites.

"Wetlands: water, life, and culture"
8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002

Resolution VIII.14

New Guidelines for management planning for Ramsar sites and other wetlands

1. TAKING INTO ACCOUNT Article 3.1 of the Convention, which specifies that “Contracting Parties shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List [of wetlands of international importance]”;
2. ALSO TAKING INTO ACCOUNT Article 3.2, which provides that “each Contracting Party shall arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change” and that “information on such changes shall be passed without delay” to the Ramsar Bureau;
3. RECALLING Resolution 5.7, which adopted *Guidelines on management planning for Ramsar sites and other wetlands*; Recommendation 6.13, which called upon the Scientific and Technical Review Panel (STRP) to review the most recent advances in this area; and Resolution VII.12, which reaffirmed the continuing value of these Guidelines;
4. FURTHER RECALLING that in Resolution VII.12 the Contracting Parties instructed the STRP, with support from the Ramsar Bureau, to prepare for consideration at COP8 further guidance with respect to management planning, which reviews the latest approaches to environmental, social and economic impact assessment and cost-benefit analysis, zonation and multiple use, design and maintenance of buffer zones, and the application of the precautionary approach;
5. HAVING BEEN INFORMED that in preparing the further guidance called for in Resolution VII.12, the STRP determined that, to ensure that the overall management planning guidance available to Contracting Parties would reflect recent advances in this area and yet remain coherent and easy to follow, a full revision of the Guidelines as adopted by Resolution 5.7 would be necessary;
6. NOTING that in Resolution VII.12, the Contracting Parties also urged that, by COP8 in 2002, management plans should be in preparation, or in place, for at least three quarters of the Ramsar sites in each Contracting Party and that these plans, once in place, should be implemented in full; and FURTHER NOTING the indications provided in the National Reports for this meeting of the Conference of the Parties that this is the case for at least 397 Ramsar sites, or 35 per cent of those included in the Ramsar List;
7. RECOGNIZING that the establishment and implementation of a management plan for a Ramsar site or other wetland is part of an integrated management planning process which

helps to decide upon the objectives of site management; identify and describe the management actions required to achieve the objectives; determine the factors that affect, or may affect, the various site features; define monitoring requirements for detecting changes in ecological character and for measuring the effectiveness of management; demonstrate that management is effective and efficient; maintain continuity of effective management; resolve any conflicts of interest; obtain resources for management implementation; enable communication within and between sites, organizations and stakeholders; and ensure compliance with local, national and international policies; and

8. AWARE that the Joint Programme of Work 2002-2003 between the Ramsar Bureau and UNESCO's Man and the Biosphere Programme (MAB) includes actions to review, and as far as possible to harmonize, management planning guidance, including inventory, assessment, monitoring and zonation for Ramsar sites and Biosphere Reserves;

THE CONFERENCE OF THE CONTRACTING PARTIES

9. ADOPTS the *New Guidelines for management planning for Ramsar sites and other wetlands*, as annexed to this Resolution;
10. STRONGLY URGES Contracting Parties to apply the New Guidelines to establish and implement management planning processes, particularly for those Ramsar sites within their territory that do not yet have such processes and plans in place;
11. RECOGNIZES that other management planning processes exist, especially where other designations apply to the same areas that are listed as Ramsar sites, and that these may be valid alternatives for delivering management planning where such approaches adequately and fully implement clearly stated conservation objectives to ensure the conservation and wise use of these wetlands;
12. REQUESTS the Ramsar Bureau to develop a field guide for the practical application of the guidelines, recognizing that there may be circumstances that limit the application of the guidelines in full;
13. NOTES that these guidelines recommend that the management and planning processes include regular review and revision of the management plan, and URGES Contracting Parties to apply the New Guidelines when reviewing and updating existing management plans for Ramsar sites and other wetlands;
14. ENCOURAGES Contracting Parties to utilize all the available Ramsar tools and guidance to assist in their management planning processes, including *inter alia* the description and maintenance of ecological character and designing a monitoring programme (Resolution VI.1), the wetland risk assessment and indicators (Resolution VII.10), the guidance on impact assessment (Resolution VIII.9) and on wetland restoration, including identification of sites appropriate for restoration (Resolution VIII.16), and the *Guidelines for Global Action on Peatlands* (Resolution VIII.17);
15. REQUESTS the Ramsar Bureau to transmit the *New Guidelines for management planning for Ramsar sites and other wetlands* to the Convention on Biological Diversity (CBD), the World Heritage Convention, the Convention on Migratory Species (CMS) and the African-Eurasian Migratory Waterbird Agreement (AEWA), Eurosite, and other agreements and

organizations concerned with the management of wetland ecosystems, particularly with regard to management planning processes for sites of common interest;

16. REQUESTS the Scientific and Technical Review Panel (STRP), assisted by the Ramsar Bureau and in cooperation with the MAB Programme, the CBD, and other relevant organizations, to review and prepare further guidance on zonation and monitoring programmes and methodologies for Ramsar sites and other wetlands, including indicators and rapid assessment methodologies and the use of remote sensing;
17. RECOMMENDS that Contracting Parties, when planning the management of Ramsar sites and other wetlands, should take into account the wider management implications of activities within river basins and other catchments, applying Resolution VII.18 on *Guidelines for integrating wetland conservation and wise use into river basin management* (Ramsar Handbook no. 4), as well as the guidance adopted by this meeting on integrated coastal zone management (Resolution VIII.4) and on the allocation and management of water for maintaining the ecological functions of wetlands (Resolution VIII.1);
18. URGES Contracting Parties to take note of the emphasis in the *New Guidelines for management planning for Ramsar sites and other wetlands* on ensuring the full involvement of all stakeholders in all stages of the management planning process, and to utilize the guidelines adopted by Resolution VII.8 on *Establishing and strengthening local communities' and indigenous peoples' participation in the management of wetlands* (Ramsar Handbook no. 5) and the guiding principles on cultural aspects of wetlands annexed to Resolution VIII.19 to assist in this process;
19. NOTES that the *New Guidelines for management planning for Ramsar sites and other wetlands* will, *inter alia*, form the basis of the criteria for the acceptance of sites onto the "San José Record" for the promotion of wetland management adopted by this meeting of the Conference of the Parties (Resolution VIII.15); and
20. STRONGLY URGES Contracting Parties to utilize the management planning process and the *New Guidelines for management planning for Ramsar sites and other wetlands* to establish for each site on the Ramsar List a monitoring programme, including indicators of ecological character features, and to put into place national mechanisms so as to be informed when the ecological character of a site has changed, is changing, or is likely to change, and FURTHER URGES Contracting Parties to report such matters, without delay, to the Ramsar Bureau in accordance with Article 3.2 of the Convention.

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Annex

New Guidelines for management planning for Ramsar sites and other wetlands

Contents

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I. Introduction

1. These Guidelines replace the Ramsar *Guidelines on management planning for Ramsar sites and other wetlands* adopted by Resolution 5.7 of COP5 in 1993 and published in Ramsar Handbook 8 (January 2000). They provide additional guidance on environmental, social and economic impact assessment and cost-benefit analysis, zonation and multiple use, design and maintenance of buffer zones, and the application of the precautionary approach.
2. The guidelines are relevant to the requirements of the Convention concerning the conservation of wetlands included in the List of Wetlands of International Importance and the wise use of all wetlands in the territory of Contracting Parties (Article 3 of the Convention), as well as the establishment of nature reserves (protected areas) at wetlands, whether or not they are included in the Ramsar List (Article 4.1).
3. These guidelines focus on the site-based scale of management planning. It is recognized, however, that designated Ramsar sites include a wide range of different applications of 'site' since they range in size from less than 1 hectare to over 6 million hectares, and that whilst some have boundaries delimiting just a discrete wetland area, others include surrounding non-wetland buffer zones, habitat mosaics, or catchment areas within their boundaries. It is therefore recognized that the application of these guidelines will need to

be flexible, depending upon the particular characteristics and circumstances of each Ramsar site or other wetland.

4. Ramsar site management plans should be integrated into the public development planning system at local, regional or national level. The integration of site management plans into spatial and economic planning at the appropriate level will ensure implementation, public participation and local ownership. Furthermore, integration will enhance the possibility of local as well as external funding.
5. The guidelines also recognize that site-based management planning should be one element of a multi-scalar approach to wise use planning and management and should be linked with broad-scale landscape and ecosystem planning, including at the integrated river basin and coastal zone scales, because policy and planning decisions at these scales will affect the conservation and wise use of wetland sites.
6. These new guidelines place further emphasis on the role of a management plan as part of an overall management planning process and provide additional advice on incorporating good practice in management planning, including adaptable management, outcomes, quantified objectives, and integrated monitoring.

II. General guidelines

7. Wetlands are dynamic areas, open to influence from natural and human factors. In order to maintain their biological diversity and productivity (i.e., their ‘ecological character’ as defined by the Convention¹), and to permit the wise use of their resources by people, an overall agreement is essential between the various managers, owners, occupiers and other stakeholders. The management planning process provides the mechanism to achieve this agreement.
8. The management plan itself should be a technical document, though it may be appropriate for it to be supported by legislation and in some circumstances to be adopted as a legal document.
9. The management plan is part of a dynamic and continuing management planning process. The plan should be kept under review and adjusted to take into account the monitoring process, changing priorities, and emerging issues.
10. An authority should be appointed to implement the management planning process, and this authority should be clearly identified to all stakeholders. This is particularly important on a large site where there is a need to take account of all interests, users, and pressures on the wetland, in a complex ownership and management situation.
11. Although conditions vary at individual wetlands, these guidelines may be applied worldwide. The guidelines provide a conceptual background to, and framework for,

¹ The **ecological character** of a wetland is “the sum of the individual biological, physical, and chemical components of the wetland ecosystem, and their interactions, which maintain the wetland and its products, functions, and attributes” (Resolution VII.10).

wetland management planning and an outline of the main sections of a management plan. It is emphasized that the guidelines do not provide a prescription for the detailed contents of a complete management plan itself, which will be a much more detailed document and should be prepared at regional or local level.

12. A management plan, and the management planning process, should only be as large or complex as the site requires. The production of a large, elaborate and expensive plan will not be possible, and certainly not justifiable, for many sites. The size of a plan, and (perhaps more importantly) the resources made available for its production, must be in proportion to the size and complexity of the site, and also to the total resources available for the safeguarding and/or management of the site. Thus for small uncomplicated sites, brief, concise plans will suffice. For large or zoned sites, it may be appropriate to develop separate detailed plans for different sections of the site, within an overall statement of objectives for the whole site.
13. Often management planning should not be restricted to the defined site boundary, but rather should also take into account the wider context of planning and management, notably in the basin or coastal zone within which the site is located, which can be transboundary in nature. It is important to ensure that the site planning takes into account the external natural and human-induced factors and their influence on the site, and also to ensure that the management objectives for a site are taken into account in the wider planning processes. For further guidance see Ramsar's *Guidelines for integrating wetland conservation and wise use into river basin management* (Ramsar Handbook 4); the *Principles and guidelines for incorporating wetland issues into integrated coastal zone management (ICZM)* (Resolution VIII.4); and *Guidelines for international cooperation under the Ramsar Convention on Wetlands* (Ramsar Handbook 9) concerning transboundary wetlands. The link between site-based and wider-scale management is further elaborated in the following section.

III. Integrating wetland site management within broad-scale environmental management planning, including river basin and coastal zone management

14. It is the permanent presence of water in wetlands, or at least for some significant period of time, that creates the soils, micro-organisms, and plant and animal communities such that the land functions in a different way from terrestrial habitats. Wetland ecosystems are adapted to the hydrological regime and are vulnerable to change. For most wetlands, direct rainfall provides only a small proportion of the water regime, with the primary source being rivers or aquifers. Similarly, wetlands in the coastal zone are influenced by the quantity and quality of freshwater flowing into them from rivers and other land-based discharges and of oceanic and marine waters from further offshore.
15. Successful management of wetland sites therefore requires maintenance of these sources of water. The inter-connectedness of the hydrological cycle means that changes some distance from the wetland can have a detrimental impact. Insufficient water reaching wetlands, due to climate change, land use change, abstractions, storage and diversion of water for public supply, agriculture, industry and hydropower, are all major causes of wetland loss and degradation. A key requirement for wetland conservation and wise use is to ensure that adequate water of the right quality is allocated to wetlands at the right time.

For further information, see the *Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands* (Resolution VIII.1).

16. The fundamental unit for water issues is normally the river basin (or catchment), as this demarcates a hydrological system in which components and processes are linked by water movement. The river basin will normally include a mosaic of different land types, including wetlands, forests, grasslands, agricultural and urban areas. The term 'integrated river basin management' (IRBM) has developed into a broad concept that takes a holistic approach (see Ramsar Wise Use Handbook 4, *Integrating wetland conservation and wise use into river basin management*).
17. However, it is important to recognize that in some cases the river basin within which the wetland lies may not be the most appropriate unit for wider-scale planning. This is when groundwater plays a significant role in supplying water to a wetland, since the underlying aquifer does not always coincide with the surface river basin. If this is the case, more than one basin overlying the aquifer may constitute the appropriate unit of water resource management. It is therefore important to establish the hydrological relationships between the wetland and its sources of surface and ground water as the basis for appropriate site-based management planning.
18. Integrated River Basin Management is complementary to Integrated Water Resource Management (IWRM), which has come to the fore as a strategy proposed in Chapter 18 of Agenda 21 to implement the Dublin Principles². Agenda 21 affirms that "Such integration must cover all types of interrelated freshwater bodies, including both surface water and groundwater, and duly consider water quantity and quality aspects. The multisectoral nature of water resources development in the context of socio-economic development must be recognized, as well as the multi-interest utilization of water resources for water supply and sanitation, agriculture, industry, urban development, hydropower generation, inland fisheries, transportation, recreation, low and flat lands management and other activities."
19. A key element of IWRM is that river basins are usually the most appropriate physical entity in which to plan the management of water. The concept of Ecosystem Management has broad similarities with IRBM, where the ecosystem boundary is synonymous with the river basin boundary, but in which the focus is on maintaining ecosystem functioning.
20. The aim of Integrated River Basin Management or Integrated Water Resource Management is to bring together stakeholders at all levels, from politicians to local communities, and to consider water demands for different sectors within the basin³. Achieving adequate allocation of water to wetlands requires that the water needs of the wetland, including those in the estuary and coast, are defined and communicated to other stakeholders. It is also essential that the benefits of wetlands, such as their hydrological and ecological functions and their provision of goods and services, are determined in order to justify the required allocation.
21. The ease with which adequate water allocation for wetlands can be achieved will depend upon the legislative drivers. Some states will have legislation regarding allocation of water

² The Dublin Principles were adopted by the 1992 Dublin International Conference on Water and the Environment.

³ See Ramsar Wise Use Handbook 4, *Integrating wetland conservation and wise use into river basin management*.

to the environment, such as South Africa's Water Law or the European Union's Habitats Directive and Water Framework Directive. In these cases, procedures may be in place to allocate sufficient water for wetlands.

22. In other cases, water allocation will be made on the basis of the benefits that water use will bring. Other stakeholders with competing water allocation requirements will include representatives of public water supply, energy, agricultural and industrial communities. All will have powerful arguments to justify their water requirements in terms of public health, food, and economic output, including employment.
23. Consequently, achieving water allocation for wetlands will often be a long process that needs careful planning and will include training and awareness-building about the benefits of wetlands. These benefits need to be presented in a manner in which the trade-offs with other water users can be evaluated. Some benefits, such as fisheries, can be given a monetary value that fits into a traditional financial analysis, but this is generally not the case for social, cultural and ecological benefits⁴. A framework for decision-making needs to be established, such as multi-criteria analysis, that allows evaluation of all social, cultural and ecological values of wetlands as well as their economic values.
24. To implement IRBM, many countries (or groups of countries that share a river basin) have established river basin management authorities or commissions, such as those for the Niger, Mekong, and Zambezi Rivers and Lake Chad Basin. However, many river basin authorities and water agencies have as yet insufficient appreciation of the benefits provided by wetlands in terms of their productivity, e.g. fisheries and livestock grazing, and their social importance, e.g. their traditional usage by local communities and indigenous peoples or their cultural heritage. Indeed, many perceive wetlands only as competing users of water, with high evaporative demand. It is vital that river basin planners and managers recognize that wetland ecosystems are key elements within a basin and are the resource from which the commodity of water is derived, rather than only a competing user of water. Thus judicious management of wetlands, such as use of wetlands to improve water quality, can be a solution to IRBM rather than a restriction.
25. IRBM can be seen as an opportunity to promote the wise use of wetlands since it establishes a forum for dialogue where the benefits of wetlands can be demonstrated. It also provides an opportunity to question the wisdom of proposed infrastructure developments, such as dams, that might have a negative impact on wetlands⁵ (see also Resolution VIII.2, *The report of the World Commission on Dams (WCD) and its relevance to the Ramsar Convention*).
26. Where river basin authorities or similar bodies are not already in place, it will be necessary to initiate a process for defining water allocation, which will include creation of a forum for stakeholder interaction⁶.
27. In developing a management planning process for a wetland site, it is important that wetland managers take into account the wider context of basin-scale, aquifer or coastal

⁴ Barbier, E., Acreman, M.C. & Knowler, D. 1997. *Economic valuation of wetlands: a guide for policy makers and planners*. Ramsar Convention, Gland, Switzerland.

⁵ *Dams and development: a new framework for decision-making*. Report of the World Commission on Dams, Cape Town, South Africa, 2000

⁶ See Resolution VIII.1, *Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands*.

zone management processes for the region in which their wetland occurs, and interact with these processes so as to ensure that the needs of the wetland are recognized and fully incorporated in this wider planning and management.

IV. The functions of wetland management planning

28. The most important functions of a wetland management planning process and a management plan are:

Function I. To identify the objectives of site management

This is the single most important function of the planning process. It is essential that management objectives be defined for each important feature of the ecological character of the site and for all other important features related to the functions and values of the site, including socio-economic, cultural and educational values. In other words, those responsible for developing the management plan must be clear about what they are trying to achieve.

Function II. To identify the factors that affect, or may affect, the features

The ability to achieve wise use and conservation objectives for wetlands will always be influenced to some extent by a number of factors, including trends, constraints and obligations, in fact anything that has influenced, is influencing, or may influence the features of the site for which objectives are set. It is essential that all the important factors should be identified, and that their impact on the site, particularly on the features of its ecological character, be considered. For the most significant factors, it may be necessary to undertake Environmental Impact Assessments (EIA) as part of the planning process.

Function III. To resolve conflicts

On most sites there will be some conflicts of interest and difficulty in identifying priorities. It is essential that the planning process should be recognized as a forum for resolving conflicts and establishing commitments for the future.

Function IV. To define the monitoring requirements

A function of monitoring, in the context of management planning, is to measure the effectiveness of management. It is essential to know, and to be able to demonstrate to others, that the objectives are being achieved. Thus, monitoring must be recognized as an integral component of management and planning. It should be designed to identify and manage change in ecological character of the site⁷.

Function V. To identify and describe the management required to achieve the objectives

⁷ **Change in ecological character** is “the impairment or imbalance in any biological, physical, or chemical components of the wetland ecosystem, or in their interactions, which maintain the wetland and its products, functions and attributes” (Resolution VII.10).

In most cases where habitats or species require safeguarding, some action, i.e. management, will be necessary. Having established that a plan identifies the objectives of management, it follows that it must also identify, describe, and estimate the cost of the action required.

Function VI. To maintain continuity of effective management

Continuity of effective management and monitoring is essential. Management processes must be adapted to meet a wide range of varying factors. Although management will change as circumstances require, the purpose of management should remain more or less constant. This is why continuity of effective management must be maintained, and not simply the continuity of any specified process. Continuity of monitoring is as important as is continuity of management.

Function VII. To obtain resources

Management planning must identify and quantify the resources required to manage a site, and this should include the preparation of a detailed budget. This information can then be used to support and justify bids for resources. It is often difficult, particularly in developing countries, to allocate funds for the implementation of management plans, but it is essential that the management plan identify mechanisms for financing management. These mechanisms may include generating income on the site, for example, through tourism, harvesting of reeds, fishing, etc., and/or the establishment of a Trust Fund for the site or other long-term funding mechanism. In many cases it may be necessary to assess the capacity of the organization responsible for implementing the management plan at an early stage in its preparation. Shortfalls identified in the capacity assessment should be addressed in the Action Plan section (see section XVII of these guidelines).

Function VIII. To enable communication within and between sites, organizations and stakeholders

Communication is essential within organizations, and also between organizations and individuals. Management plans and the management planning process are a means of presenting information in a structured and accessible format that will inform others about the site, the aims of management, and the management processes. Planning and management for the maintenance of ecological character are largely dependent on the availability of information. It is also important that those responsible for developing the plan should be aware of management techniques and procedures developed or improved elsewhere. The communications, education and public awareness (CEPA) components of the plan from its inception to full implementation should be clearly defined (see Resolution VIII.31).

Function IX. To demonstrate that management is effective and efficient

Those responsible for developing the plan must always be in a position to demonstrate that they are making the best use of resources and that management will be effective. In other words, the plan should provide the basis for any cost benefit analysis. It is also important that the need for accountability is recognized.

Function X. To ensure compliance with local, national, and international policies

It is essential that the management plan recognizes and is compliant with a wide range of policies, strategies, and legislation. Occasionally policies may be contradictory, and consequently one of the functions of a plan must be to integrate the various policies. A National Wetland Policy and related national biodiversity plans and policies provide the context and framework for the development of a site management plan (see Ramsar Handbook no. 2, *Guidelines for developing and implementing National Wetland Policies*, for further guidance). In particular the plan should contribute to the implementation of the National Wetland Policy and/or national biodiversity strategy and other related plans and policies.

V. Stakeholders, including local communities and indigenous people

29. Wetland management, and particularly the planning process, should be as inclusive as possible. Legitimate stakeholders, particularly local communities and indigenous people, should be strongly encouraged to take an active role in planning and in the joint management of sites. It is highly desirable that positive steps be taken to ensure that gender issues, including women and their interests, are fully taken into account at all stages in the process. If necessary, appropriate incentives to ensure full stakeholder participation should be identified and applied. Further guidance on involving local communities and indigenous peoples in the participatory management of wetlands is contained in the guidelines adopted by Ramsar Resolution VII.8 (Ramsar Wise Use Handbook 5).
30. A 'stakeholder' is taken to mean any individual, group or community living within the influence of the site, and any individual, group or community likely to influence the management of the site. This will obviously include all those dependent on the site for their livelihood.
31. Stakeholder interests can have considerable implications for site management, and will place significant obligations on managers. Public interest, at all levels, must be taken into account. Wetland managers must recognize that other people may have different, and sometimes opposing, interests in the site. It is essential that these interests be safeguarded wherever possible, but this must not be to the detriment of the features of the ecological character of the site. Any use of the site must ultimately meet the test of compatibility with the wise use and conservation purpose and objectives, and this is of added significance where the site has been designated as a Wetland of International Importance.
32. The involvement and understanding of local communities and indigenous peoples in the management of wetlands is of particular importance where the wetland is under private ownership or in customary tenure, since then the local communities are themselves the custodians and managers of the site, and in these circumstances it is vital that the management planning process is not seen as one imposed from outside upon those who depend on the wetland for their livelihoods.

Consultation with, and participation by, stakeholders

33. It is particularly important that stakeholders be informed at the earliest possible stage about an intention to produce a management plan, but at this stage this should not be confused with formal negotiation. The most important early message is that everyone will be consulted and involved and that all interests will be given proper consideration. Management planners must convey the message that they are open-minded and will deal as

objectively as possible with all issues. Relevant stakeholders should include not only local communities but also local government (including all sectors whose decisions can affect the management planning process and its objectives) and the private sector.

34. Consultation and negotiation should be about presenting ideas or proposals for discussion and seeking views about specific issues. A structured planning process should generate ideas and proposals – unfocused discussion is rarely conclusive and can be counterproductive. Before any consultation, managers must know what they are attempting to achieve, and should define those areas that are open to negotiation. For issues that are open to discussion, a range of well-considered options should be given. Every effort must be made to be inclusive and to achieve consensus, supporting the wise use of resources without compromising the natural integrity of the unit. In some cases, especially when management is not the direct responsibility of local communities or indigenous peoples, the process will be ‘citizen-assisted’ rather than ‘citizen-driven’, because management decisions will ultimately rest with the responsible agency.
35. Before embarking upon a plan, it will be necessary to collect or collate all available relevant information about the site in order to describe its ecological character and its functions and values, including all relevant socio-economic, cultural and educational features. Professionals in the natural and social sciences should be involved to ensure effective collection of all relevant data. Local people and other stakeholders are usually an important source of information, and they should be involved through appropriate and proven techniques that are sensitive, *inter alia*, to gender and cultural issues, in the data and information collation stage of the process.
36. Once data collation and the preparation of the descriptive sections of the plan are complete, the process moves on to preparing management objectives concerning the maintenance of the ecological character and other aspects of interests to stakeholders. The protection of the features of the ecological character is the prime concern for a Ramsar site, and should not be considered negotiable. However, it is important to bear in mind that these features are very often present because they are, and will need to be, maintained by local people. It is very important when introducing the concepts of designation and management planning to stakeholders that they do not gain the impression that the process will curtail legitimate activities, unless such activities could threaten important features or are potentially unsustainable.
37. Once the obligations are known, planners can then move on to identify the management requirement. At this stage, negotiation with stakeholders becomes essential. While the objectives concerning the maintenance of the ecological character should not be negotiable, it is often possible to identify a range of alternative management approaches that would meet them whilst at the same time assisting in achieving other objectives of interest to different stakeholders.
38. Finally, management plans should be regarded as public documents, and all stakeholders should be given access to the plan.

VI. The precautionary approach as applied to environmental management

39. When considering the carrying capacity of a site for any human use, activity or exploitation (i.e., its sustainability), the best available evidence should indicate that the activity will not be a threat to the features of the ecological character of the site.
40. Contracting Parties are, when implementing their wetland management planning process, invited to take into consideration the precautionary approach, as established in Principle 15 of the 1992 Rio Declaration on Environment and Development adopted by the United Nations Conference on Environment and Development (UNCED), which affirms that

“In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

VII. Management planning is a process

41. Management planning must be regarded as a continuous, long-term process. It is important to recognize that a management plan will grow as information becomes available. Planning should begin by producing a minimal plan that meets, as far as resources allow, the requirements of the site and of the organization responsible for managing the site, and no more.
42. All available information should be collated and assessed (see paragraph 35 above). Any shortfall of relevant information must be recorded, and projects should be planned to correct this deficiency. In time, as further information is collected and resources become available, the plan can grow, and may eventually meet all site management requirements.
43. The planning process is adaptable and dynamic. It is essential that the plan change, or evolve, to meet changing features, factors and priorities, both within and outside the site.
44. The overall management planning process for Ramsar sites and other wetlands is supported by the substantial range of the Convention's tools and guidances compiled in the Ramsar Wise Use Handbooks. Of particular relevance to the different stages of the management planning process are:

Identification and designation of wetlands

Definitions of “ecological character” and “change in ecological character” (Resolution VII.10, Appendix VI).

A Framework for Wetland Inventory (Resolution VIII.6)

Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance (Resolution VII.11)

Enhancing the information on Wetlands of International Importance (Ramsar sites) (Resolution VIII.13)

Wetland assessment

Wetland risk assessment framework (Resolution VII.10)

‘Guidelines for incorporating biodiversity related issues into environmental impact assessment legislation and/or processes in strategic environmental assessment’ adopted by the Convention on Biological Diversity (CBD), and their relevance to the Ramsar Convention (Resolution VIII.9)

Gaps and harmonization of Ramsar guidance on wetland ecological character, inventory, assessment and monitoring (Resolution VIII.7)

Wetland monitoring

A Framework for designing a wetland monitoring programme (Annex to Resolution VI.1)

In situ Wetland management

New Guidelines for management planning for Ramsar sites and other wetlands (Resolution VIII.14)

Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands (Resolution VII.8)

Guiding principles for taking into account the cultural values of wetlands for the effective management of sites (Resolution VIII.19)

Ex situ Wetland management

Guidelines for integrating wetland conservation and wise use into river basin management (Resolution VII.18)

Principles and guidelines for integrating wetlands into Integrated Coastal Zone Management (Resolution VIII.4)

Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands (Resolution VIII.1)

The Report of the World Commission on Dams (WCD) and its relevance to the Ramsar Convention (Resolution VIII.2)

VIII. Inputs, outputs, and outcomes

45. Managers must differentiate between inputs, outputs and outcomes.

Inputs	=	Resources
Outputs	=	Policies, management plans, management
Outcomes	=	Condition of the features of the ecological character of the site and other management objectives

46. These terms are defined as:

- i) **Inputs.** The resources provided for site management, for example, finance, staff and equipment.
- ii) **Outputs.** The consequential by-products of management or the management planning process. For example, policies are developed for the various management activities, management plans are prepared, interpretation is provided, and a management infrastructure is developed and maintained. Often, outputs are used as a means of assessing whether management is appropriate. Organizations will claim that they have successfully managed their sites because they have achieved a number of outputs. This can be very misleading because it is possible to carry out a wide range of management activities and still fail to protect the ecological character features and/or, for example, to enlist the full support and involvement of local communities. One of the worst mistakes that can be made in ecosystem management is to believe that a feature is being successfully protected when, in reality, it is not.

- iii) **Outcomes.** This is the purpose of management. These are the favourable conditions of the ecological character features, such as habitats and species on the sites, which in turn may depend upon the effective management of particular socio-economic parameters, such as ensuring sustainable fisheries or adequate marketing of rice production and/or equitable distribution of the benefits of tourism. It will often be necessary to undertake restoration management followed by maintenance management to ensure that the required conditions or processes are maintained. The condition of features must be defined and quantified. If this is not done, it will not be possible to judge whether the required conservation or sustainable use outcomes have been achieved.
47. The only means of judging whether or not inputs and outputs are adequate is by considering the outcomes of management. When this has been done, and only then, it will be possible to determine whether the management is appropriate.

IX. Adaptable management

48. In order to safeguard sites and their features, managers must adopt a flexible approach that will allow them to respond to the legitimate interests of others, adapt to the ever-changing political climate, accommodate uncertain and variable resources, and survive the vagaries of the natural world.
49. The adaptable management process as incorporated in the Ramsar planning approach is as follows (see Figure 1):
- i) A decision is made about what should be achieved (i.e., quantified management objectives are prepared for the important features).
 - ii) Appropriate management, based on the best available information, is implemented to achieve the objectives.
 - iii) The features are monitored in order to determine the extent to which they meet the objectives.
 - iv) If objectives are not being met, management is modified.
 - v) Monitoring is continued to determine if the modified management is meeting the objectives, and step iv) is repeated for any further adjustments, as necessary.
50. In exceptional circumstances, it may be necessary to modify the objectives.
51. The adaptable management cycle is usually repeated at predetermined intervals. The interval should be established to take into account the nature and in particular the fragility and rate of change of the site features. However, many countries and organizations will impose a mandatory cycle. In all cases, the cycle should be repeated at any time when emergencies or unforeseen threats become apparent.
52. This adaptable approach enables wetland managers to:

- i) learn through experience;
- ii) take account of, and respond to, changing factors that affect the features;
- iii) continually develop or refine management processes; and
- iv) demonstrate that management is appropriate and effective.

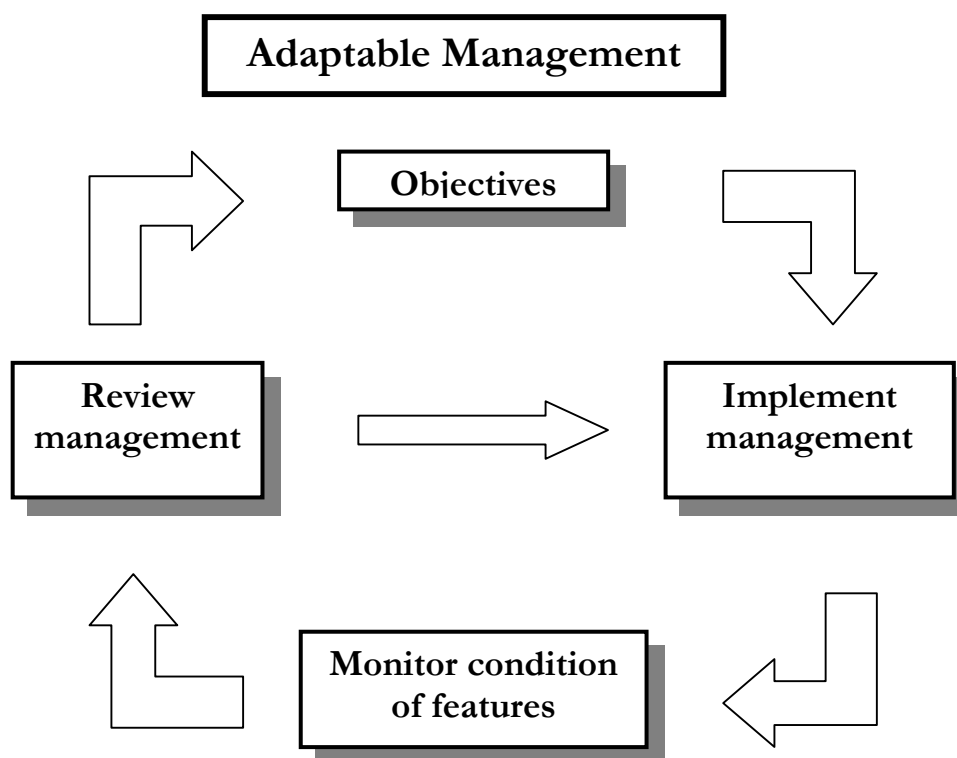


Figure 1. The adaptable management cycle

X. Management units, zonation and buffer zones

- 53. In general, the management planning process and management plan should cover the entire site. However, where a wetland site is composed of more than one discrete sub-site separated by areas of other land use (for example, discrete wetlands along the floodplain of a major river), separate management plans for each sub-site may be appropriate. However, such individual sub-site plans must fit under the umbrella of an overview plan that should be prepared before those for the sub-sites.
- 54. Likewise, where the wetland is very large, it may be helpful to divide the site for management planning purposes into several contiguous zones or regions, and to develop separate management plans for each of these zones, again under the umbrella of an overall plan prepared in advance.
- 55. Several other types of zonation may be appropriate for application to different sites, depending on their characteristics and their relationship to other land uses in the surrounding area. Ramsar sites range from only the area of wetland itself to the inclusion of substantial areas of surrounding non-wetland habitats, often with multiple land-uses.

This great variety of what is included within the boundaries of Ramsar sites means that any zonation scheme applied under the Convention must be sufficiently versatile and flexible to cover this variety of site characteristics.

56. When the Ramsar site itself does not include a buffer zone, it is generally appropriate for management planning purposes to identify and establish such buffer zone around the core wetland area defined within a Ramsar site or other wetland. The buffer zone should be that area surrounding the wetland within which land use activities may directly affect the ecological character of the wetland itself, and the objective for land use within the buffer zone should be one of sustainable use through ecosystem management, consistent with the maintenance of the ecological character of the wetland. When a wetland site is composed of discrete sub-sites, a buffer zone should be defined for each, including, where appropriate, all the area between the sub-sites.
57. The location of a buffer zone in relation to the core wetland area of a designated Ramsar site will vary depending upon what ecosystems are included within the site boundaries. Where the designated site is only the wetland itself, then for management purposes a buffer zone should be defined in the surrounding area outside the designated site. In contrast, where the site encompasses the wetland and its surroundings, the buffer zone should extend to the boundaries of the designated site, and then a 'core area', perhaps the wetland ecosystem itself, defined within the site.
58. As described in Section III, the dependence of wetlands on water supply from outside the wetland means that for the purposes of wetland management planning the river basin or catchment area of the coastal zone should be viewed in effect as a buffer zone for the wetland, since water and land-use in these extended areas indirectly affect the ecological character of the wetland. However, particularly in the case of a wetland within a very large river basin, basin-scale or coastal zone management may be seen as a third, outer zone for management purposes, and a more limited buffer zone immediately surrounding the wetland may still be a necessary management planning tool.
59. The Biosphere Reserve zonation concept, in which the site may include up to three zones - core zone, buffer zone (for research and training) and transition zone (for sustainable use) - is potentially applicable to all Ramsar sites, and should be applied whenever feasible and appropriate. Its application is particularly important where a site is designated as both a Ramsar site and Biosphere Reserve, and here the relationship between the Ramsar site boundary and the zonation established for the Biosphere Reserve should be clearly established.
60. Although many Ramsar sites are within protected areas, where the primary land-use within the site is wetland conservation, many are, like Biosphere Reserves, multiple use sites. In the latter, the management objectives for the use of the core wetland are broadly to ensure that the ecological character of the wetland is maintained or enhanced so as to continue to provide its values and functions for people's livelihoods and for biodiversity conservation.
61. Any zonation scheme should recognize the existing multiple uses of Ramsar sites and their surroundings, and ensure that management objectives for the core zone are designed primarily to maintain the ecological character of the wetland, as well as that those for any form of surrounding buffer zone are consistent with this maintenance of the ecological

character. Clear, separate but complementary and mutually supportive management objectives should be established for each zone.

62. Another approach to zonation, and one that is not mutually exclusive to the 'core/buffer zonation' approach, is that of establishing zonation for a particular use of a site. An example could be the use and development of a wetland for ecotourism. Here zonation would be used to establish in which parts of a site ecotourism access can occur, where ecotourism infrastructure should be placed (e.g., the sensitive siting of a visitor centre), and from which parts of a site ecotourism should be excluded owing to the sensitivity of those parts of the ecosystem to disturbance. Such zonation schemes will generally cut across the core and buffer zones.
63. The experience of the Man and the Biosphere Programme, under which zonation is recognized as an important part of the delimitation and management of Biosphere Reserves as multiple use sites, is that zonation plays an important role in minimizing user conflicts by separating potentially conflicting activities whilst ensuring that legitimate land uses can continue with minimal conflict.
64. The establishment of a zonation scheme should involve full stakeholder participation from the earliest stage, since it is in 'drawing the lines' between zones that many conflicts can materialize. Establishing zonation and management objectives for each zone (and hence what activities should and should not be permitted within each zone) is an important part of the process of establishing a close involvement of local communities, indigenous peoples, and other stakeholders in the management of the wetland.
65. Some general rules should be applied when establishing zones, regardless of their type and purpose:
 - i) zonation should be established with the full involvement of stakeholders, including local communities and indigenous peoples;
 - ii) a full and detailed rationale should be made to explain the basis for establishing and delineating zones, and this is particularly important when establishing the limits of buffer zones;
 - iii) a concise description of the functions and/or restrictions applied within each zone must be prepared as part of the management plan;
 - iv) zones should be identified with a unique and, if possible, meaningful code or name: but in some cases, a simple numerical code may be adequate;
 - v) a map showing the boundaries of all zones must be prepared;
 - vi) where possible, zone boundaries should be easily recognizable and clearly identifiable on the ground: physical features (for example, fence lines and roads) provide the best boundaries, and boundaries based on dynamic features, such as rivers, mobile habitats, and soft coastlines, must be identified with some form of permanent marker; and

- vii) on large, uniform sites, or in areas of homogeneous habitat crossed by a zone boundary, fixed permanent markers with locations mapped using a Global Positioning System (GPS) should be used.

XI. Format of the management plan

66. The format of the management plan, as recommended in these guidelines, should comprise five main sections, reflecting the main steps in the management planning process:
- Preamble/policy
 - Description
 - Evaluation
 - Objectives
 - Action Plan
67. Note that the steps of this process are repeated several times through the plan – they are applied to ecological character, socio-economic interests, cultural values, and any other features of interest. In general, it is good practice to begin with ecological character, but there is no implied hierarchy.
68. The recommended structure and content of each of these sections is further described below and illustrated in Figure 2.

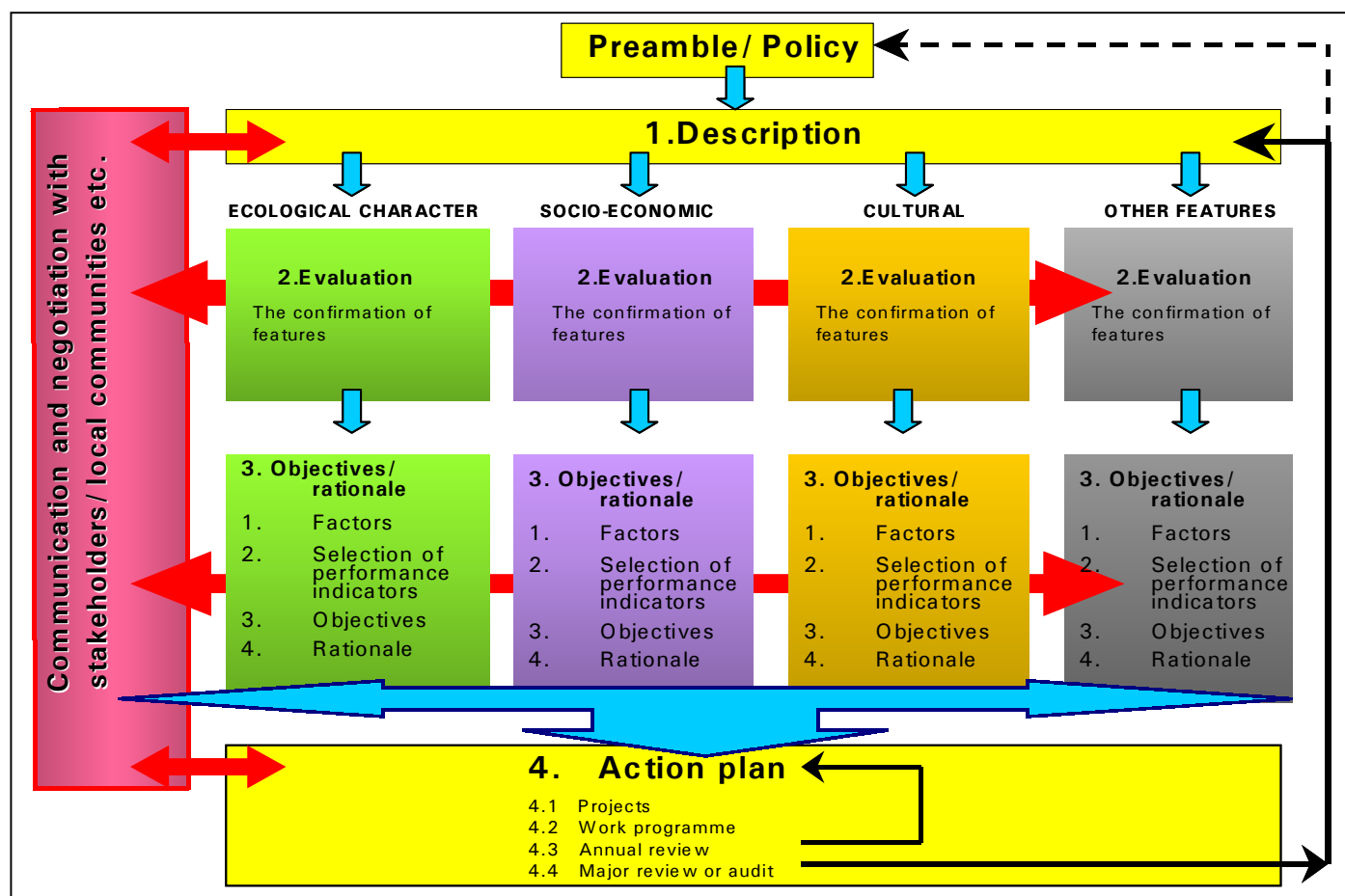


Figure 2. Recommended structure and content of a management plan for a Ramsar site or other wetland.

XII. Preamble / policy

69. The preamble is a concise policy statement that should reflect, in broad terms, the policies and/or practices of supranational, national, or local authorities and other organizations and traditional management systems, including, for example, non-governmental bodies, local communities or private owners' resource management arrangements that are concerned with the production and implementation of the management plan. The preamble should also recall the broad Ramsar Convention requirements; namely the maintenance of the ecological character of sites on the Ramsar List of Wetlands of International Importance, the wise use of all wetlands, the establishment of nature reserves at wetlands, whether or not they are included in the Ramsar List, and international cooperation where appropriate to the management of the site, in particular in the case of shared wetlands and water systems.

XIII. Description

70. The description is an important part of the management planning process. It provides the information used to fuel the rest of that process.
71. The description is fundamentally a collation and synthesis of existing data and information. The identification of any shortfall of relevant data and information is also a key function of this part of the process (see paragraphs 34 and 42 above).
72. In many cases, not all information needed for the basis of management planning will be available. Collection of more detailed data on these features and/or the factors influencing them, in order to fill any identified essential gaps, may be necessary, but care should be taken to ensure that only additional information essential for the establishment of management objectives for the site is the subject of further data collection.
73. The description should be regularly reviewed and updated, so as to incorporate new sources of data and information, including updates from time-series monitoring.
74. For Ramsar sites, particular attention should be given to the description of the features of the site which have formed the justification for its designation under each of the applied Ramsar *Criteria for Identifying Wetlands of International Importance*.
75. All relevant data may be located and arranged under the headings provided in the 'Information Sheet on Ramsar Wetlands (RIS)' as amended by COP8 (Resolution VIII.13), used by Contracting Parties for the designation of Ramsar sites. It follows that the description in the RIS should clearly describe the overall ecological characteristics of the site, and identify the specific ecological character features for which the site has been designated and which need to be maintained in favourable conservation status through the management planning process. In addition, all other entries in the RIS which are not strictly related to the ecological character should also be carefully considered and incorporated in the description. It should be noted that whilst the information compiled in the RIS can form a starting point for the site description, the level of detail of information

required for site management planning processes will generally go beyond that necessary in the RIS for site designation.

76. However, it is important that the information derived from the existing data is presented in the plan description in a concise manner and in a language and presentation that is easy for all stakeholders to understand, rather than full of detailed scientific terms and jargon of interest only to scientific and technical experts in those particular subjects.
77. The plan description should make reference to, but should not contain sensitive data on, rare or endangered species - this should remain confidential.
78. The plan description should also include information on any particular local features or characteristics of the site, especially its values and functions for people, that may be helpful in establishing priorities and setting management objectives.
79. All descriptions should include a bibliography containing references that provide an 'audit trail' to all papers, reports, journals, books, etc., and unpublished sources used during the preparation of the plan.

XIV. Evaluation

80. Evaluation is the process of identifying or confirming the important features or foci for management planning. Figure 2 indicates that evaluation of important features should be undertaken for each of four major areas of interest, and the evaluation process must be applied to each in turn. For Ramsar sites and other wetlands, evaluation should be undertaken for ecological character features, as well as for socio-economic features, cultural features, and any other important features identified.
81. Evaluation criteria must be developed for each feature of interest. A list of criteria, with examples, recommended for evaluating ecological character features is provided below, along with an indicative list for socio-economic and cultural criteria which should be further developed for each site to take into account its specific socio-economic and cultural characteristics.

Evaluation of ecological character (habitats, species and natural processes)

82. The important features of the ecological character (habitats, populations, and processes) of a site, as defined by Resolution VII.10, provide a focus for the planning process. The main purpose of this section of the management plan is to provide a list of the features and to confirm their status. The status of features that have been previously recognized should be confirmed. An evaluation process is required for features where there has been no previous, or formal, recognition of the features.
83. The evaluation process should utilise the guidance adopted by the Convention for wetland inventory and assessment which provide tools for evaluation of ecological character and the status of wetlands.
84. In some cases, the presence of the important ecological character features on a site will have been recognized prior to planning. For example, the site may contain legally protected species or habitats. It is essential that the legal status of such features be recognized.

85. The list of criteria below is recommended for the evaluation of ecological character features. The list is not intended to be fully comprehensive, nor is there any suggestion that it will be appropriate to all features on all sites. Only the relevant or useful criteria should be used, and additional criteria should be added as circumstances require.
86. Note that the criteria often overlap or are interdependent. For example, it is difficult to discuss fragility without considering rarity. Fragile features are, by their nature, generally rare.
87. The criteria should always be regarded as having negative as well as positive aspects. For example, high levels of biological diversity (i.e., habitat or species richness) are usually regarded as of high importance, but such assumptions should be evaluated with care, and in the context of the general biodiversity characteristics of particular wetland types and their location, since high diversity can be the consequence of human intervention in a habitat that is naturally species-poor rather than a naturally occurring phenomenon.
88. The recommended criteria for evaluating ecological character features are as follows.

Criterion 1 for evaluating ecological character features: Size

89. In most cases, the importance of a feature will increase with size. However, size as a criterion must always be linked to other qualities. Small areas of high-quality habitat can often be more highly valued than large areas of low-quality habitat.
90. Size is of particular importance where habitats are fragmented and populations isolated. The viability of small, and isolated, features and sites is usually questionable. Very small populations are often extremely vulnerable and can become extinct simply through chance, despite appropriate management. Nevertheless, such places may, at times, represent the last remaining examples of a habitat or population and may therefore be significant in the maintenance of overall biological diversity.

Criterion 2 for evaluating ecological character features: Biological diversity

91. The maintenance of biological diversity is usually regarded as one of the most important aims of nature conservation and the sustainable use of biological resources. This is largely because one of the most obvious, and serious, effects of human intervention on the environment has been the destruction of habitats and extinction of species. Consequently, management is frequently carried out in order to maintain, or even improve, site diversity. However, it must be recognized that there are occasions when high diversity is undesirable. For example, cut, over-drained, or otherwise modified peat bogs will contain a greater diversity of communities and species than an intact, natural bog.
92. High diversity is sometimes a feature of dynamic or disturbed habitats, giving rise to an opportunity for seral vegetation succession. Where this instability is natural, the resultant high diversity is highly valued. Conversely, where the disturbance is a consequence of human intervention, the value of the resultant diversity is doubtful.

Criterion 3 for evaluating ecological character features: Naturalness

93. Naturalness is one of the most important criteria applied to ecological character features. In general, the more natural a feature is, the greater the value of its ecological character. However, very few, if any, wetlands in the world can be regarded as wholly natural, and it is recognized that even highly modified habitats can be extremely important for wildlife.

Criterion 4 for evaluating ecological character features: Rarity

94. Rarity is the one aspect of biodiversity conservation that has generally received most attention, and, as a consequence, managers are usually aware of the most rare and endangered habitats and species on their sites. These will feature prominently in any management plan. Often it is the presence of rare habitats or species that leads to the selection of sites for protection management – for Ramsar sites, through the application of Ramsar Criterion 2 concerning threatened species and ecosystems.

Criterion 5 for evaluating ecological character features: Fragility

95. To a greater or lesser extent, all ecological character features demonstrate a degree of fragility. Fragility should always be considered within a time scale, and the degree to which the damage is permanent is a crucial consideration. Fragility is almost invariably linked to rarity; fragile features are, or soon become, rare.
96. Fragility should not always be dismissed as a negative factor. Many natural communities rely on disturbance for their survival. These usually ephemeral communities often occur during the early successional stages of dynamic habitats. Intentional disturbance is often a necessary and legitimate part of management aimed at setting back succession for the purpose of maintaining community vigour, as in the case of burning or grazing to enhance grasslands.
97. Species may also be fragile, most often as a result of habitat change or destruction. Some have such specialized and complex requirements that a seemingly obscure or minor change can have devastating effects.

Criterion 6 for evaluating ecological character features: Typicalness

98. Sites are usually selected and valued because they contain the best, or at least a good, example of a particular feature, for example through Criterion 1 for the identification and designation of Ramsar sites. The qualities that render a feature exceptional are most often the unusual or rare. It is also important, however, that the typical and commonplace should not be undervalued. This criterion is particularly useful for providing the justification for safeguarding the typical features in an area.

Criterion 7 for evaluating ecological character features: Potential for improvement and/or restoration

99. Most features are, to a greater or lesser extent, imperfect. This criterion is used to assess the potential for improvement or restoration. Severely degraded features may have varying degrees of potential for improvement; some will have none at all, while others will have potential for total recovery, given appropriate management. The need to identify this potential is crucial. There can be no justification for wasting resources in attempting to

manage a degraded feature when the underlying reasons for the damage cannot be reversed.

100. The *Principles and guidelines for wetland restoration*, adopted by COP8 Resolution VIII.16, provide further guidance on the selection of wetlands appropriate for restoration.

Evaluation of other features of importance on wetland sites

101. In addition to the ecological character features, most sites will contain other features of equal importance, for example, cultural, socio-economic, geological and geomorphological features, landscape and palaeo-environmental features. It is important that these features be given appropriate attention and that the full management planning process be followed for each. This is particularly important in relation to ensuring the involvement and input of all stakeholders (see section IV).
102. The evaluation should focus on the values and functions, goods and services provided by the wetland in support of human well-being and on the presence of cultural features, both cultural artefacts and structures and their religious and faith significance, especially for local communities and indigenous peoples. Geological, geomorphological and landscape significance should also be evaluated in this section of the plan.
103. Some wetlands can also have additional features that do not fall under ecological character or socio-economic or cultural features, and these should also be identified and evaluated. An example would be the importance of a wetland for scientific research or long-term monitoring.
104. In evaluating socio-economic features of the wetland, it is appropriate to apply the techniques of economic valuation of wetlands and draw on information provided by these techniques. For further information on economic valuation, see the 1997 Ramsar publication on *Economic valuation of wetlands: a guide for policy makers and planners*.
105. An indicative list of socio-economic values and functions of wetlands is given in Box 1. Note that not all these features will be applicable to all wetlands.

BOX 1. Indicative list of wetland values and functions for the evaluation of socio-economic features of wetlands for management planning

(derived from Annex III of CBD's *Guidelines for incorporating biodiversity related issues into environmental impact assessment legislation and/or processes in strategic environmental assessment*, see Resolution VIII.9.)

Production functions

Timber production
Firewood production
Production of harvestable grasses (construction & artisanal use)
Naturally produced fodder & manure
Harvestable peat
Secondary (minor) products
Harvestable bush meat (food)
Fish & shellfish productivity
Drinking water supply
Supply of water for irrigation and industry
Water supply for hydroelectricity
Supply of surface water for other landscapes
Supply of ground water for other landscapes
Crop productivity
Tree plantations productivity
Managed forest productivity
Rangeland /livestock productivity
Aquaculture productivity (freshwater)
Mariculture productivity (brackish/saltwater)

Carrying functions – suitability for:

constructions
indigenous settlement
rural settlement
urban settlement
industry
infrastructure
transport infrastructure
shipping / navigation
road transport
rail transport
air transport
power distribution
use of pipelines
leisure and tourism activities

Processing and regulation functions

Decomposition of organic material (land based)
Natural desalinisation of soils
Development / prevention of acid sulphate soils
Biological control mechanisms
Seasonal cleansing of soils
Soil water storage capacity
Coastal protection against floods
Coastal stabilisation (against accretion / erosion)
Soil protection
Water filtering
Dilution of pollutants
Discharge of pollutants
Bio-chemical/physical purification of water
Storage for pollutants
Flow regulation for flood control
River base flow regulation
Water storage capacity
Ground water recharge capacity
Regulation of water balance
Sedimentation / retention capacity
Protection against water erosion
Protection against wave action
Prevention of saline groundwater intrusion
Prevention of saline surface-water intrusion
Transmission of diseases
Carbon sequestration
Maintenance of pollinator services

106. Landscape and wilderness qualities are often overlooked in management plans when they apply to protected areas. For sites where habitat management and maintenance is important, and there are few human-made structures, the management of the habitat will usually also cover most landscape issues. For most natural protected areas, landscape management will be concerned with minimising, or removing, the influence of people where this is regarded as visually damaging.

107. In the case of sites where there are significant anthropogenic artefacts with historical, cultural or religious values, these should also be safeguarded through the management

planning process. Such features could be included in a plan's section on landscape, but their protection and maintenance is probably best achieved by regarding them as features of interest, and dealing with them as any other feature.

108. An indicative list of cultural features of wetlands is provided in Box 2.

BOX 2. Indicative list of cultural features of wetlands for evaluation for wetland management planning

(derived from *Cultural aspects of wetlands* (Ramsar COP8 DOC. 15))

Palaeontological and archaeological records
 Historic buildings and artefacts
 Cultural landscapes
 Traditional production and agro-ecosystems e.g. ricefields, salinas, exploited estuaries
 Collective water and land management practices
 Self-management practices, including customary rights and tenure
 Traditional techniques for exploiting wetland resources
 Oral traditions
 Traditional knowledge
 Religious aspects, beliefs and mythology
 "The arts" – music, song, dance, painting, literature and cinema

109. For further guidance on the identification and incorporation of cultural issues and features, including cultural artefacts and cultural landscapes, see the *Guiding principles for taking into account the cultural values of wetlands for the effective management of sites* annexed to Resolution VIII.19.

XV. Objectives

110. Through undertaking the evaluation, a list of the important site features will have been identified. The next step is to prepare management objectives for each of these features.

111. An objective is an expression of something that should be achieved through management of the site. Objectives should have the following characteristics:

- i) **Objectives must be measurable.** Objectives must be quantified and measurable. If they are not measurable, it will be impossible to assess through monitoring whether they are being achieved.
- ii) **Objectives should be achievable, at least in the long term.** This is a very obvious, but often forgotten, characteristic – there can be little purpose in pursuing unattainable objectives.
- iii) **Objectives must not be prescriptive: they define the condition required of a feature and not the actions or processes necessary to obtain or maintain that condition.** Objectives are an expression of purpose. A differentiation should be made between the purpose of management and the management process, because the management undertaken to safeguard a feature will vary according to the condition of that feature. For example, in the case of a derelict feature, recovery

management may be applied until the feature reaches the desired condition, at which time maintenance management can be substituted. These two management approaches can be fundamentally different, or may simply vary in intensity.

Preparing measurable objectives

112. There are three key steps in the process of preparing measurable objectives:

- i) Describe the condition that is required for a feature.
- ii) Identify the factors that influence the feature, and consider how the feature may change as a consequence.
- iii) Identify and quantify a number of performance indicators for monitoring progress in achieving the objectives for that feature.

113. The process of applying the three steps is outlined below.

Step 1. Describe the condition that is required for a feature

114. Most current management plans avoid describing the conditions required of the features. Typically, the plan will discuss maintaining or improving a feature, but will not explain what is to be maintained or how it will be established that it has improved. In order to judge whether or not the objectives are being achieved, there must be a clear description of the conditions that are required for the features.

115. The first step is to provide a description, using plain language, of the conditions that the plan is attempting to obtain or maintain. This is perhaps the long-term vision for the feature. There is no need to focus too strongly upon quantification at this stage – that should be done at a later point in the process.

116. A useful approach for habitats and species, which can be applied anywhere, has been developed by the European Union for Natura 2000 conservation sites. It is a generic approach towards defining the condition in which it is wished to maintain a feature. The European Union requires that features on European sites be maintained at “favourable conservation status”.⁸

117. Habitats are in favourable conservation status when:

- i) they are stable or increasing in area;
- ii) they are sustainable in the long term;
- iii) the condition of typical species is also favourable; and
- iv) the factors that affect the habitat or its typical species are under control.

118. Species are in favourable conservation status when:

- i) the population is viable in the long term;

⁸ Further information about the EU Natura 2000 sites and the Habitats and Birds Directives can be found in <http://europa.eu.int/comm/environment/nature/natura.htm>

- ii) the range is not contracting;
 - iii) sufficient habitat exists to support the species in the long term; and
 - iv) the factors that affect the habitat, or its typical species, are under control.
119. These generic definitions of favourable conservation status for habitats and species are simply an expression of what would be wished of any habitat or species that requires management and could be applied to any feature on any site. Clearly, the generic statement must be developed into one with rather more meaning for particular features of the site, but this is an excellent starting point.
120. Similar statements about “favourable status” should also be developed for features related to human activities and/or practices within the site and/or the buffer zone, in particular in relation to their sustainability and the carrying capacity of the site.

Step 2. Identify the factors that influence the feature, and consider how the feature may change as a consequence

121. The ability to achieve objectives will always be influenced by factors. Factors include policies, strategies, trends, constraints, practices, conflicts of interest and obligations, in fact anything that influences, or may influence, the features. In terms of the Convention, these are essentially those activities that are causing, or are likely to cause, change in ecological character. It is important that both negative and positive factors be considered, since both will have implications for management.
122. The conservation management of habitats and species is mainly about controlling factors, and in particular the consequences of human intervention, past, present and future, and the conflicts of interest among different stakeholders. When attempting to safeguard natural habitats, managers have to control, as far as possible, damaging human activities or influences and to encourage those that contribute to long-term conservation. For example, hunting, timber extraction, and burning are often controlled. For habitats which have been created or modified by human influence, and have become valued as conservation sites, managers often maintain human influence, though they usually call this management (for example, the controlled burning or grazing of grassland to prevent it from reverting to scrub).
123. Uncontrollable factors that may or may not be of human origin must also be taken into account. For example, climate change and invasive species can alter stability and frustrate the ability to measure, predict or sustain desired conditions, and avoidance or control may be impossible. Early recognition of these management limitations can facilitate the development of contingency measures.
124. The influence of factors should be considered for each feature in turn, and then consolidated for statement in the plan as necessary. For example, one factor may influence several features identified for the site, and establishing an appropriate management intervention for that factor needs to take into account the possibility of it having simultaneous positive and negative influences upon different features.
125. Factors, both positive and negative, can be identified and grouped under the following headings:

- i) Internal natural factors
- ii) Internal human-induced factors
- iii) External natural factors
- iv) External human-induced factors
- v) Factors arising from legislation and tradition
- vi) Factors arising as a result of conflicts/communality of interest
- vii) Physical considerations and constraints
- viii) Institutional factors

126. Examples, both positive and negative, of these categories of factors with implications for ecological character features are given below.

- i) **Internal natural factors** - include natural succession in vegetation and variations in water level caused by precipitation.
- ii) **Internal human-induced factors** - include the spread of invasive alien species, on-site pollution, and inappropriate, or unsustainable, agricultural practices (for further guidance on managing invasive alien species, see Resolution VIII.18).
- iii) **External natural factors** - include factors arising outside the wetland, such as positive or negative impacts of climate change and variations in currents or sea level (for further guidance on mitigating the impacts of climate change and sea-level rise through wetland management, see Resolution VIII.3).
- iv) **External human-induced factors** - include diversion of water supply, changing natural pattern and variability of water flows, effective water allocation regimes, increased or decreased sedimentation caused by upstream engineering works, and pollution.
- v) **Factors arising from legislation, tradition** - include legal and traditional rights and obligations placed on the managers of the site. Legal obligations can arise from national or local legislation or international commitments, with national and local laws likely to be the more important factor. Traditional and culture issues may include grazing, fishing, and logging rights and/or religious aspects (see Ramsar's *Guidelines for establishing and strengthening local communities' and indigenous peoples' participation in the management of wetlands*, Resolution VII.8, and *Guiding principles for taking into account cultural values of wetlands for the effective management of sites*, Resolution VIII.19).
- vi) **Conflicts/communality of interest** – includes the likely opposition or support of different stakeholders, depending on whether they see the management plan as contributing to maintain their benefits or not, or providing an opportunity to develop their interests.
- vii) **Physical considerations and constraints** - include physical factors, such as inaccessibility, which may affect the achievement of management objectives.
- viii) **Institutional factors** – includes any limitations to the capacity and authority of organisations responsible for plan implementation, and the inter-relationship (or lack of it) between the organisations or agencies responsible for wetland conservation

and wise use and those responsible for other sectors directly or indirectly affecting the wetland, at local, regional (sub-national) and national scales.

The relationship between factors and features

127. Once the factors have been identified, the effect that they will have on the feature must be considered. The influence of factors should be considered for each identified feature in turn.
128. Features will change as a consequence of the factors, and it is important that the direction of change and any potential indicators of change should be identified. This relationship between factors and the selection of appropriate performance indicators is very important. It is not possible to measure everything on a site; managers must focus, therefore, on monitoring those indicators that are most likely to change.
129. It is essential that both the features and the factors which influence these features be monitored.

Operational limits

130. The purpose of operational limits is to define a range of values for each factor which will be considered acceptable and tolerable levels.
131. The most significant factors provide a focus for surveillance or monitoring. These factors will have a positive or negative impact on the ability to manage features. Acceptable levels should be defined for any factors known to have a significant impact on the features. For example, it is often necessary to set a level of tolerance for an invasive alien species, which could be anything from total exclusion to accepting the presence of a species providing the population remains below a given limit. Other examples could include biological limits, such as a limit on the extent of scrub cover in wet grassland, and limits on human activities such as hunting or fishing.
132. Operational limits require an upper or a lower limit, or sometimes both. In reality, though, both upper and lower limits are seldom applied to the same factor. Upper limits are usually applied to undesirable factors - they define the maximum tolerance - and lower limits are applied to positive factors.
133. In most instances it will not be possible to set precise, scientifically defined limits. This should not be considered a major issue, however. Operational limits are an early warning system, acting as a trigger for action, reached long before there is any significant threat to the long-term viability of the feature. If scientific information is not available, then professional experience comes into play.
134. Key questions concerning operational limits for factors are:
 - i) to what extent can a negative factor be allowed to influence a feature before there is any need for concern; and
 - ii) to what extent is it necessary to ensure that positive factors are maintained.

135. It should be remembered that limits, like objectives, are not fixed forever – they can be revised later if experience, or new scientific information, suggests that it is expedient to do so.
136. An example to illustrate the process and links between identifying a feature, a factor affecting it, an objective for its management, and the setting of operational limits is given in Box 3.

BOX 3. An example of the management planning process for identifying features, factors, objectives and operational limits.

Feature: an important population of a globally threatened endemic fish species (for which the site was selected for Ramsar designation under Criteria 2 and 7).

Factor: the fish species is targeted for capture by recreational fisherman, which may be threatening the viability of the fish population.

Objective: the maintenance of a viable population of the fish species, through the establishment of controls on the recreational fishery.

Operational limits (adopted under the management plan following consultation and agreement with local stakeholders):

- a) a limit on the number of fisherman allowed to catch the fish (through establishing a permit system);
- b) a limit on the number of fish of this species that may be taken (e.g., each fisherman may take only three individuals during one fishing season, with all others to be released); and
- c) a limit on the minimum size of fish of this species that may be taken (e.g., only adult fish longer than 20 cm may be taken, with all others to be released).

Monitoring of factors

137. It is essential that the factors which are influencing or may influence the features are monitored or recorded.
138. Factors which have been quantified and are subject to the operational limits described in the preceding paragraphs must be monitored. For example, the degree of tolerance of an alien invasive species in a habitat will be expressed as an upper limit. Once a limit has been set, the invasive species must be monitored to ensure that its population does not exceed the limit. When and if the limit is exceeded, management or control will be implemented.
139. Recording or surveillance will be required when the relationship between a feature and a factor is unclear. For example, one of the factors that will affect grassland is grazing by wild animals. When the impact of the animals on the vegetation is unknown, it will not be possible to identify the appropriate stocking levels. In this case, a recording programme is required to record, in a structured and consistent manner, the number of grazing animals. In time, it may be possible to establish what the stocking levels should be, and move from surveillance to monitoring.

Environmental Impact Assessments (EIA)

140. The preceding section explains why the important factors must be identified and monitored, and recommends that their impact on the wetland features must be considered in the management plan. Minor, or easily controllable, factors can be dealt with as set out above. However, any major proposals for development or land use changes, on or off the site, may require that an Environmental Impact Assessment be undertaken before the site management plan can be completed. In circumstances where there is more than one proposal, the EIA should take into account the cumulative impact of the proposals.
141. In addition, any new factors, including development proposals, on or off the site, that are likely to have a significant impact on the ecological character of the site, should be subject to a full EIA. A monitoring system should be set in place to ensure that unforeseen impacts are detected, and a process to address negative impacts put in place before the project commences.
142. An EIA may conclude that a development proposal is likely to have a significant negative impact on all or part of the site. If, for overriding reasons, the project is still planned to go ahead, minimization of damage, mitigating measures, and/or compensating measures should be established.
143. For further guidance on impact assessment for wetland sites, see Resolution VII.16 and the guidance adopted by Resolution VIII.9.

Step 3. Performance indicators, limits and monitoring

144. Objectives must be quantified and measurable. This stage in the planning process identifies the performance indicators that will be used to provide evidence about the condition of a feature.
145. Because it is not possible to measure the totality of a feature, there is a need to focus on a limited range of performance indicators. For example, under a management objective of maintaining water quality, this feature is made up of many components including salinity, pH, conductivity, dissolved oxygen concentration, nutrient concentration, heavy metal concentration, etc. Not all of these are likely to be easy or cost-effective to monitor, but an appropriate performance indicator for water quality, because it meets the four criteria below, would be nutrient concentration.
146. In general, performance indicators:
 - i) are characteristics, qualities or properties of a feature that are inherent and inseparable from that feature;
 - ii) should be indicators of the general condition of a feature, and should be informative about something other than themselves;
 - iii) must be quantifiable and measurable; and
 - iv) should provide an economical method for obtaining the evidence required to enable the current condition of a feature to be determined.

147. Some general examples of performance indicators for the species and habitat components of ecological character features are:

i) **Performance indicators for species:**

a) *Quantity:*

The size of a population, for example:

- the total number of individuals present
- the total number of breeding adults
- the population at a specified point in an annual cycle
- the extent or distribution of a population

b) *Quality:*

- survival rates
- productivity
- age structure

ii) **Performance indicators for habitats:**

a) *Quantity:*

- size of area occupied by the habitat
- distribution of the habitat

b) *Quality:*

- physical structure
- individual or groups of species indicative of condition
- individual or groups of species indicative of change

148. Performance indicators for socio-economic and cultural features should also be identified and incorporated into the management plan.

Specified limits

149. Specified limits represent thresholds for action and should trigger an appropriate response. They define the degree to which the value of a performance indicator is permitted to fluctuate without creating any cause for concern. Thus, ideally, two values are required, an upper limit and a lower limit. Unfortunately, it is not always possible to define both limits.

150. The key to understanding limits is an appreciation of what should happen when a limit is exceeded.

151. In order to define what happens when a limit is exceeded, it is necessary:

- i) to check the monitoring project and the data collected to ensure that there are no errors. If everything is in order, proceed to the next step. If not, amend the monitoring project.

- ii) if a change has taken place and the limit has been exceeded, to find out why the change has occurred. Changes happen because of the impact of a factor, or factors, or the lack of appropriate management. Where the factors, or failure of management, are known, it may be necessary to carry out remedial management to deal with the factor or improve existing management.
 - iii) when a change has taken place and the reason is unknown, to establish a research project to identify the cause.
152. Limits for ecological character features should be developed in recognition of the natural dynamics and cyclic change in populations and communities. In reality, there are very few features for which the natural fluctuations are fully understood. For a population, the lower limit might be the threshold beyond which a population will cease to be viable. The upper limit could be the point at which a population threatens another important population, or where a population becomes so large that it compromises the habitat that supports it.
153. Even if a viability threshold is known, it would be very unlikely that a manager would set a limit close to a point of possible extinction. A sufficient safety margin must always be allowed to account for the possibility of unexpected changes or unforeseen impacts. In many ways, limits can be regarded as limits of confidence. When the values of all performance indicators fall within the limits, it can be confidently considered that the feature is at favourable conservation status; when the limits are exceeded, that confidence disappears.
154. Limits for ecological character features may be closely related to suitable use and carrying capacity limits. Thus, limits of human activities/interventions should also be clearly established and monitored.

Monitoring performance indicators

155. Whenever performance indicators are established they must be monitored. That is their entire purpose. The measurement of the performance indicators provides the evidence that is used, in part, to determine the condition of the features.
156. For further guidance on indicators and monitoring, including designing a wetland monitoring programme, see Resolution VI.1 and Ramsar's *Wetland Risk Assessment Framework*, including guidance on early warning indicators (Resolution VII.10).

Recommended structure for presenting objectives

157. Once appropriate indicators and a monitoring programme have been identified, the remaining task is to write a succinct and easily understood objective statement.
158. For each feature, begin with the description of the condition required for the feature, followed by the operational limits and the selected performance indicators, with defined limits.

XVI. Rationale

159. The rationale section of the plan is devoted to identifying and describing, in outline, the management considered necessary to maintain the site features in (or restore them to) favourable status. Decisions in this section are based on a second assessment of the factors. This time, the discussion focuses on seeking management solutions in order to bring the factors under control. Control can mean the removal, maintenance or application of factors. For example, grazing is an obvious factor for wet grassland habitats. Options to be considered here could include removing, reducing, maintaining current levels, increasing, or introducing grazing.
160. On all sites there will be a number of other responsibilities, obligations, and tasks that will need to be addressed, but which arise for reasons other than the management of features. It is important that these other obligations be included in the management plan, particularly since they can have substantial resource implications.

Compliance with legal and other obligations

161. Operational objectives need to be prepared to ensure compliance with legal and other national obligations (for example, health and safety regulations). These are not strictly objectives in the same sense as the objectives which are defined for the features. They are, in fact, prescriptions, or the operations that must be carried out in a site to ensure that the prime feature objectives are met. However, for most sites it is difficult, and would be extremely cumbersome, to attempt to associate all activities with the individual feature objectives. This would be particularly repetitive when an activity is being carried out in respect of many of the features.

Management of site infrastructure and major operational and logistical support services

162. This section of the management plan is devoted to the development of operational objectives and associated management projects to ensure that an infrastructure adequate to meet the purposes of the site is provided. It will also include objectives for major operations and for support services. For example, for many sites it will be necessary to maintain a network of access routes within the site in order to undertake the management actions to implement the plan.

XVII. Action plan (management projects and review)

Management projects

163. This section is a continuation of the rationale. In the rationale, the need for, and the nature of, possible management will have been discussed. The outcome should be an outline of the management processes considered most appropriate to safeguard each feature. The function of the management project is then to describe in detail all the management work that will be associated with each feature.
164. For each management project, it is important that the following issues be given attention:

When	when the work will be carried out and for how long
Where	where on the site activities will take place
Who	who will do the work and how much time will be required

Priority	what priority is given to the project
Expenditure	how much the work will cost

165. Once the management projects have been developed, for operational purposes it can be appropriate to compile the suite of management projects into an annual Operational Plan which is designed to guide and assist in monitoring implementation.

Planning for visitors, tourism and recreation

166. Objectives, prescriptions and management projects should be developed for public access and tourism based upon an approach similar to that used for features. Public access and tourism are taken in their widest meaning and include anyone who visits the site for any reason other than official purposes. Access and tourism can make a significant contribution towards the costs of managing Ramsar sites. Ramsar sites can attract significant numbers of visitors, and this can often be of considerable benefit to the local, and even national, economy. There should be a positive presumption in favour of providing access and appropriate facilities for visitors.
167. All activities carried out in a Ramsar site require planning, and the provision of interpretation is no exception. Interpretation is concerned with providing information in an attempt to enhance the visitors' experience and to help them understand, and thus appreciate, the value of the protected area's environment and its features. Interpretation is an essential tool that can be used for a variety of purposes. Interpretation is not an end in itself but a means, through influencing others, of helping to achieve organizational and site-specific objectives.
168. For further guidance, see the Convention's Programme on Communication, Education, and Public Awareness (CEPA), adopted by Resolution VIII.31 and the Convention's CEPA Web site (http://ramsar.org/outreach_index.htm).

Annual or short term reviews

169. A short-term review should be made to confirm that a site is being managed in accordance with the requirements of the plan.

Major review or audit

170. Major reviews or audits should be considered as an essential component of any planning process. The functions of audit are to:
- i) assess whether or not a site is being managed at least to the required standard;
 - ii) confirm, as far as possible, that management is effective and efficient; and
 - iii) ensure that the status of the site features is being accurately assessed.
171. The audit process is best, though not always necessarily, carried out by external auditors. It is a constructive process which should identify any problems or concerns and seek to provide recommendations for resolving any issues.

172. Reviews and audit will usually be carried out in accordance with a predetermined timetable. The interval between reviews will be a reflection of the confidence that managers have in their ability to protect the site features. For sites with robust features which are easily managed, the interval may be five years or more. However, for fragile sites, where threats are not readily controlled, the interval should be much shorter.
173. On all sites, reviews should be undertaken at any time if new or unforeseen threats become apparent. It is essential that the timing of the planning process be adjusted to meet the requirements of the site.
174. For sites on the Ramsar List which have been included in the Montreux Record owing to recognized threats to their ecological character, a Ramsar Advisory Mission can be regarded as one form of review and/or audit.

"Wetlands: water, life, and culture"
8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002

Resolution VIII.15

The 'San José Record' for the promotion of wetland management

1. RECALLING that Resolution VII.12 of Ramsar COP7, held in San José, Costa Rica, directed the Ramsar Bureau, with assistance from the Scientific and Technical Review Panel (STRP), to investigate and report to COP8 on the feasibility of the Convention establishing a record, to be called the "San José Record", of sites where management plans are being implemented which are models for demonstrating application of the Ramsar *Guidelines for the implementation of the wise use concept*;
2. WISHING to contribute to an ongoing consideration of the management of Ramsar sites and to encourage managers to share their experience and know-how;
3. SEEKING to support a process to enhance and exchange experiences between countries from all regions;
4. CONSIDERING the need to promote better management through full participation of local communities;
5. ALSO CONSIDERING the importance of training and transfer of technical know-how for the implementation of sustainable use of wetlands; and
6. TAKING ACCOUNT of the recommendations of the STRP, which considered that it is appropriate to establish the 'San José Record';

THE CONFERENCE OF THE CONTRACTING PARTIES

7. APPROVES the establishment of the 'San José Record' for the promotion of wetland management and the mechanisms for its operation, as annexed to this Resolution, subject to the availability of resources;
8. DECIDES that the purpose of the 'San José Record' is to focus attention upon examples of effective management and exemplary practices implemented at Ramsar sites and other wetlands, including the process used to develop management plans and information about their costs, if available, and to make those plans, practices, and personal contacts available as examples and resources to other practitioners;
9. FURTHER DECIDES that the criteria for the acceptance of examples of effective management and exemplary practices onto the San José Record should be in line with national guidelines and/or local requirements and/or the *New Guidelines for management planning for Ramsar sites and other wetlands* adopted by this meeting through Resolution

VIII.14, and that such management examples should demonstrate and follow application of these guidelines;

10. INVITES Contracting Parties to make voluntary contributions towards the development and maintenance of the logistics of this Record;
11. REQUESTS the Ramsar Bureau, with the assistance of the STRP, to establish, resources permitting, the necessary procedures for the creation and maintenance of the San José Record;
12. ENCOURAGES Contracting Parties, the STRP, National Focal Points for Communication, Education, and Public Awareness (CEPA), the Convention's International Organization Partners, Ramsar site managers, and other bodies to identify examples of effective management and exemplary practices at Ramsar sites and other wetlands for listing on the San José Record, and to submit nominations for consideration through the approved procedure, once established; and
13. REQUESTS the Ramsar Bureau, with the assistance of the STRP, to assess the implementation of the San José Record and to report to COP9 on its achievements.

Annex

San José Record for the promotion of wetland management

1. Nomination –

- 1.1 Examples of effective management and exemplary practices are proposed by the interested Contracting Party and management authority, with the endorsement of the corresponding National Ramsar/Wetland Committee (or equivalent) where it exists.
- 1.2 The Contracting Party shall submit:
 - 1.2.1 a copy of the management plan (or hyperlink);
 - 1.2.2 a case study¹;
 - 1.2.3 certification of an authorized budget by the management authority; and
 - 1.2.4 a description of mechanisms for community participation.

2. Review –

- 2.1 The Nomination package is reviewed by the concerned Ramsar Bureau's Regional Coordinator.
- 2.2 The Regional Coordinator prepares an evaluation report and recommends to the Standing Committee inclusion or not in the San José Record. Once accepted, the nomination package must be posted on the Ramsar Web site.
- 2.3 The Contracting Party must reapply every five years.

¹ Case study prepared in a peer review technical journal; format: background, performance assessment, lessons learned, training, etc.

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Resolution VIII.16

Principles and guidelines for wetland restoration

1. RECALLING Recommendation 4.1 in which the Conference of the Contracting Parties encouraged wetland restoration by all Parties; and FURTHER RECALLING Recommendation 6.15, which requested the Scientific and Technical Review Panel (STRP) to define principles and guidelines for restoration and urged the Contracting Parties to give higher priority to wetland restoration;
2. RECALLING ALSO Resolution VII.17 in which the Parties requested further development of guidelines and tools that could be used to advance wetland restoration;
3. FURTHER RECALLING Resolution VII.20 in which the Contracting Parties resolved to complete comprehensive national wetland inventories of their wetland resources, including, where possible, wetlands with potential for restoration;
4. EXPRESSING GRATITUDE to the Expert Working Group of the STRP for its work in establishing a wetland restoration Web site, as part of the Convention's Web site, which includes restoration case studies, and for the contribution to this made by the Society of Wetland Scientists and the Greek Biotope/Wetland Centre (EKBY);
5. REITERATING the view expressed in Recommendation 4.1 and further emphasized in Resolution VII.17 that programmes of wetland restoration that are ecologically, economically, and socially feasible and that are coordinated with wetland protection provide substantial benefits for both people and wildlife, even though restoration of wetlands cannot replace lost natural wetlands;
6. WELCOMING the acknowledgement by the World Summit on Sustainable Development (WSSD) in its Plan of Implementation (paragraph 37d) of the potential role of wetland restoration in reducing the risks of floods and droughts in countries that are vulnerable to them;
7. RECOGNIZING the relevance of principles and guidelines for wetland restoration to the provision of compensation under Article 4.2 of the Convention and the guidelines for such provision of compensation adopted by this meeting of the Conference of the Contracting Parties through Resolution VIII.20; and
8. RECOGNIZING ALSO that, through a number of Resolutions, this meeting of the Conference of the Contracting Parties has adopted new guidance for the Contracting

Parties on wetland management planning (Resolution VIII.14), a framework for wetland inventory (Resolution VIII.6), impact assessment (Resolution VIII.9), global action for peatlands (Resolution VIII.17), climate change and wetlands (Resolution VIII.3), and the maintenance of the ecological character of wetlands (Resolution VIII.8), all of which contribute to the implementation of the restoration of wetlands;

THE CONFERENCE OF THE CONTRACTING PARTIES

9. ADOPTS the *Principles and guidelines for wetland restoration* as annexed to this Resolution;
10. CALLS UPON all Contracting Parties to recognize in this regard that the restoration or creation of wetlands cannot replace the loss of natural wetlands;
11. URGES all Contracting Parties to integrate fully the *Principles and guidelines for wetland restoration* into their National Wetland Policies and plans, paying particular attention to issues of legislation, impact assessment, incentive measures, and the mitigation of impacts of climate change and sea-level rise;
12. CALLS UPON Contracting Parties to apply the *Principles and guidelines for wetland restoration* as a further means to address vulnerability to floods and droughts, as outlined in the WSSD Plan of Implementation;
13. CALLS UPON Contracting Parties to utilize these principles and guidelines in undertaking national inventories of wetlands with the potential for restoration, applying the Framework for Wetland Inventory adopted by this Conference (Resolution VIII.6), to develop programmes to implement restoration on sites so identified, and to report their progress on these matters in their triennial National Reports to the COP;
14. URGES Contracting Parties to pay particular attention to the restoration of peatlands, in line with the priority afforded to the wise use of this wetland type through the adoption by this meeting of the *Guidelines for Global Action on Peatlands* (Resolution VIII.17);
15. FURTHER URGES all Contracting Parties to pay particular attention to the role of wetland restoration in management at the catchment and river basin level in relation to the allocation and management of water for maintaining the ecological functions of wetlands (Resolution VIII.1), integrating the conservation and wise use of wetlands into river basin management (Resolution VII.18), and transboundary action (Resolution VII.19);
16. CALLS UPON all Contracting Parties to apply the *Principles and guidelines for wetland restoration* when considering the provision of compensation under Article 4.2 of the Convention and using the guidelines for such provision of compensation adopted by this meeting through Resolution VIII.20);
17. ENCOURAGES Contracting Parties to investigate opportunities to link poverty relief to wetland restoration, by incorporating the provision of work, skills and opportunities into restoration projects and by focusing on the restoration of ecosystem goods and services upon which communities depend;
18. ENCOURAGES Contracting Parties to disseminate the attached principles and guidelines to community stakeholders who have an interest in wetland restoration, and to involve

local communities and indigenous peoples in restoring and maintaining wetlands, in line with the guidance in Resolution VII.8 concerning establishing and strengthening local communities' and indigenous peoples' participation in the management of wetlands;

19. CALLS UPON all Contracting Parties, when implementing the *Principles and guidelines for wetland restoration*, to ensure that the cultural and archaeological heritage significance of wetlands being considered for restoration is fully recognized so as to ensure that this significance is maintained, taking into account the *Guiding principles for taking into account the cultural values of wetlands for the effective management of sites*, annexed to Resolution VIII.19;
20. ENCOURAGES Contracting Parties to utilize the information and resources of Ramsar's restoration Web site, which includes illustrated case studies, a guide to restoration terminology, searchable bibliographies, links to Web-based restoration tools, and papers dealing with restoration incentives, socioeconomic aspects of restoration, and restoration site selection, in their implementation of wetland restoration projects, and FURTHER ENCOURAGES Contracting Parties and other bodies with relevant information to contribute information on their wetland restoration projects and experience to the Web site, in one of the Convention's official languages, so as to increase the wide availability of such information, and particularly to provide demonstration projects that illustrate the application of the principles and guidelines adopted by this Resolution;
21. REQUESTS Contracting Parties, as part of their national training needs assessments, to identify their training needs in wetland restoration, and FURTHER REQUESTS the Ramsar Bureau, in collaboration with the STRP, Wetlands International and others, to identify training opportunities and expertise in wetland restoration and to create relevant training modules as part of the Ramsar Wetland Training Initiative, once established; and
22. REQUESTS the STRP, in cooperation with the Coordinating Committee for Global Action on Peatlands once established (in line with Resolution VIII.17), to further develop tools and guidance on wetland restoration, including a glossary of wetland restoration terminology and guidance on small dams and wetland restoration; and FURTHER REQUESTS the Panel, with the assistance of the Government of Canada and other interested Parties, to prepare guidance on compensation for wetland losses in response to Resolution VII.24, and to report on these matters to COP9.

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Annex

Principles and guidelines for wetland restoration

Introduction

1. The need to reverse wetland degradation, in addition to the recognition of benefits associated with wetland restoration, has led to initiation of numerous restoration projects globally. Although there is increasing interest in wetland restoration and opportunities are widespread, efforts to restore wetlands are still sporadic, and there is a lack of general planning at the national level. Individuals and organizations interested in restoration often work in isolation and without the benefit of experience gained on other projects.
2. Recognizing the importance of past experience in wetland restoration and the increasing interest in restoration among Contracting Parties, Recommendation 6.15 of the Ramsar Convention urged “the Scientific and Technical Review Panel [STRP], in collaboration with the Bureau and concerned Contracting Parties and partners, to define guidelines on principles for wetland restoration”. The STRP was tasked with further developing these tools and guidelines by Resolution VII.17 concerning *Restoration as an element of national planning for wetland conservation and wise use*.
3. Although Operational Objective 4 of the Strategic Plan 2003-2008 refers to both “restoration” and “rehabilitation”, the difference between these two terms is not clear. The Ramsar Convention has not attempted to provide precise definitions of these terms. While it might be said that “restoration” implies a return to pre-disturbance conditions and that “rehabilitation” implies an improvement of wetland functions without necessarily returning to pre-disturbance conditions, these words are often used interchangeably both within Ramsar documentation and within the conservation literature. These *Principles and guidelines for wetland restoration* use the term “restoration” in its broadest sense, which includes both projects that promote a return to original conditions and projects that improve wetland functions without necessarily promoting a return to pre-disturbance conditions.
4. Further guidance on tools and methods, including case studies, for wetland restoration, has been developed by the STRP and is available on the restoration pages of the Ramsar Web site at http://ramsar.org/strp_rest_index.htm.
5. General principles and guidelines based upon experience with many projects in many settings can offer a useful starting point for restoration projects. The principles presented here provide the underlying ideas that form the foundation of a successful restoration project, and as such they should be integrated into national wetland policy (see also Ramsar’s *Guidelines for developing and implementing National Wetland Policies* (Resolution VII.6)).
6. The guidelines presented here provide a step-by-step process guiding the identification, development and implementation of a restoration project, and as such they can be integrated into administrative guidelines.
7. However, every restoration project is unique, and whilst these principles and guidelines are designed to be useful in many situations, they are neither universally applicable nor definitive.

Principles

8. A national programme and priorities for wetland restoration should be established, based on a national inventory of wetlands with potential for restoration, as a component of the national wetland policy, plan or strategy, so as to maximise the benefit to the overall conservation status and wise use of wetlands of the efforts and resources applied to wetland restoration.
9. A clear understanding and statement of goals, objectives, and performance standards for wetland restoration projects is a critical part of restoration success (see the text box and Guidelines, below). In keeping with the Annex to Ramsar Resolution VII.17 on restoration as an element of national planning for wetland conservation and wise use, goals and objectives should recognize that wetlands perform multiple functions: “Multiple purposes such as conservation of biodiversity, provision of reliable food resources, fresh water supply, purification, flood control and recreation may often increase the sustainability and total benefits of a restoration project.” If a project hopes to promote a return to pre-disturbance conditions, this should be stated as part of the project goals, with more detailed information on exactly what this means incorporated into project objectives. However, it should be noted that not all restoration projects will hope to promote a return to pre-disturbance conditions and that a return to pre-disturbance conditions is not implied by the word “restoration” as used in these *Principles and guidelines for wetland restoration*.
10. Careful planning will limit the possibility of undesirable side effects. For example, careful planning can allow restoration projects to avoid problems such as increased numbers of mosquitoes, unwanted flooding, or saltwater intrusion into sources of drinking water. To assist in planning, an assessment should be made of the features of the site under consideration, and the factors that may affect its feasibility and success (see Box 2 for issues to consider).
11. Natural processes and existing conditions should be considered during project selection, design, and development. To the extent that is possible, ecological engineering principles should be applied in preference to methods requiring hard structures or extensive excavation.
12. Recommendation 4.1 of the Ramsar Convention rightly notes that “the maintenance and conservation of existing wetlands is always preferable and more economical than their subsequent restoration” and “restoration schemes must not weaken efforts to conserve existing natural systems”. Both quantitative data and subjective assessments clearly show that currently available restoration techniques almost never lead to conditions that match those of pristine natural ecosystems. As a corollary to this, trading high-quality habitat or ecosystems for promises of restoration should be avoided except in the case of overriding national interests. However, restoration of individual sites can contribute to ongoing management of existing high quality wetlands by, for example, improving overall catchment condition and contributing to improved water allocation management.
13. Whenever possible, the minimum acceptable scale for wetland restoration planning should be at the catchment level. Individual, relatively small restoration projects targeting a single wetland can be valuable provided that they are planned within the context of the

catchment. Wetland restoration planning should not ignore the value of upland habitats and linkages between upland and wetland habitats.

14. Wetland restoration planning should consider water allocation principles and the role that restoration can play in maintaining ecological functions of wetlands - see Ramsar *Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands*, as adopted by Resolution VIII.1.
15. Wetland restoration should be an open process that involves local community stakeholders as well as stakeholders who will be affected by a project even though they may be geographically distant from the project, for example, stakeholders living well downstream. All stakeholders, including local communities and indigenous people and sectoral interests both *in situ* and *ex situ*, should be fully involved in a wetland restoration project from its earliest stage of consideration through its implementation to its long-term stewardship.
16. Restoration requires long-term stewardship, including ongoing management and monitoring (see *A framework for designing an effective wetland monitoring programme*, annex to Resolution VI.1). Successful restoration should be designed, as far as possible, for self-maintenance, but it also generally requires a constituency that understands the need for long-term stewardship, the resources required to support this stewardship, and a commitment to delivering this stewardship. Development of incentive measures can make a valuable contribution to the long-term success of a restoration project (see Resolution VII.15, *Incentive measures to encourage the application of the wise use principle*).
17. Wetland restoration planning should incorporate, where practicable, knowledge of the traditional resource management that contributed to shaping the landscape. Incorporation of traditional environmental knowledge, management, and sustainable harvesting practices by local people should be an integral component of restoration.
18. The principles of adaptable management (see the *New Guidelines for management planning for Ramsar sites and other wetlands*, adopted by Resolution VIII.14) should be applied to restoration projects. As a project develops, modifications may be necessary to accommodate unforeseen developments and take advantage of newly acquired knowledge or resources. Any modifications should be designed in the light of evaluation of the project against its established goals, objectives, and performance standards.
19. Successful restoration projects can provide inspiration and stimulus for continuing stakeholder involvement and for the development of further projects and programmes. Information on proposals for, and the results and successes of, a restoration project should be widely disseminated both in scientific and technical fora and as popular information accessible to stakeholders.
20. Restoration interventions should be coupled with measures to raise awareness and influence the behaviours and practices that led to the degradation of the ecosystem, in order to ensure that the causes, as well as the effects, of degradation are addressed. These actions provide a further mechanism for landowners, resource users and surrounding communities to be drawn into restoration projects, and for applying the *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands* (Resolution VII.8).

Guidelines

21. The flowcharts accompanying this text lay out guidelines for wetland restoration projects. The following points explain the flowcharts.
22. The boxes below represent steps that can occur concurrently or iteratively. For example, in some cases stakeholders cannot be completely identified until after a site has been selected, and changes in stakeholders concerned may lead to changes in goals, objectives, and performance standards.
23. Identify stakeholders and involve stakeholders with all aspects of work (Box 1 in Flowchart 1): Stakeholders should be involved with all key planning decisions throughout the restoration process.
24. Project goals, objectives, and performance standards (Box 2 in Flowchart 1): Many wetland restoration projects suffer from poorly stated (or unstated) goals and objectives. Without clearly stated goals and objectives, projects lack direction. By attaching performance standards to each project objective, stakeholders are forced to consider closely their goals and objectives, and often the development of performance standards leads to revision of goals and objectives. An example of a goal for a project might be to increase the quality of wildlife habitat. An associated objective might be to improve habitat value for certain species, such as migratory waterfowl. Performance standards associated with this objective could specify the number of breeding pairs of several key species that are expected to use the site after restoration has been completed.
25. As a rule, a monitoring method that can be used to assess performance standards should be identified as part of the planning process, recognizing that different monitoring methods may not result in consistent measures. For example, a performance standard might require maintenance of 70% cover by a particular plant species, but different methods of estimating percentage of cover will yield different values for the same site. Project goals, objectives, performance standards, and monitoring methods should be written down, widely distributed, and frequently revisited to keep projects on track.

Box 1 - Goals, Objectives, and Performance Standards

Goals are general statements about desired project outcomes – stating goals allows all stakeholders to understand, in general terms, the desired direction of a project. Projects may have more than one goal, reflecting the multiple functions that individual wetlands perform.

Objectives are specific statements about desired project outcomes – projects typically have more than one objective, reflecting the multiple functions that individual wetlands perform.

Performance standards (sometimes called success criteria) are observable or measurable attributes that can be used to determine if a project meets its intended multiple objectives – each objective will have one or more associated performance standards.

26. Site selection (Box 3 in Flowchart 1): In many cases, restoration projects begin in response to conditions on a particular site, and thus the site is specified at the project's outset. However, some projects begin without a site. In these cases, several sites might be assessed before a final project site is identified. A proposed procedure for identification of potential restoration projects can be divided into three phases:
- i) Phase 1 aims to identify the spatial need for restoration of wetland functions and to set environmental constraints for restoration in each case.
 - ii) Phase 2 is more site specific, and evaluates the sustainability of the potential restoration projects through a synthesis of the environmental constraints derived from phase 1 and the socio-economic characteristics and other particularities of the catchment.
 - iii) Phase 3 is the final outcome, whereby the evaluation of the previous two phases permits identification and prioritization of potentially sustainable restoration projects. This final phase stems from the need to make sound decisions on wetland resource management and leads to successful, cost-effective projects with broad public acceptance.
27. Flowchart 2 and the following paragraphs elaborate on the process of site selection:
- i) Spatial analysis of catchments should help both to identify areas where there is a need for restoration of wetland functions and to rank the relative need for restoration in different catchments (Box {a} in Flowchart 2). For example, establishment of a wetland for the purpose of water quality improvement in a catchment with intense agricultural development would be far more critical than would be the case in a neighboring catchment with no apparent nutrient runoff problems.
 - ii) To contribute to spatial analysis of catchments, it is necessary to locate target areas for restoration through an inventory of lost and degraded wetlands and evaluation of functions (Box {b} in Flowchart 2).
 - iii) Spatial analysis of catchments requires assessment of wetland functions at the catchment level (Box {c} of Flowchart 2). This defines the status of wetland functions and sets priorities for actions required to sustain both existing ecosystems and uses. The functional evaluation should locate wetlands with the most severe degradation problems, identify those functions that should be restored at the catchment level, and set the general provisions for restoration.
 - iv) After locating wetlands where restoration projects should be implemented, site-specific constraints should be recorded and evaluated in order to identify potential wetland restoration projects and set priorities for restoration (Box {d} of Flowchart 2). These should be identified at the catchment level and include ecological, scientific, technical, social, and economic parameters.
 - v) Site-specific constraints include the availability of natural resources, such as availability of water, landscape morphology, substrate characteristics, and presence of flora and fauna (Box {e} of Flowchart 2). For restoration of a wetland, there are

several ecological constraints derived from climate, geomorphology, and various other characteristics of the catchment.

- vi) In terms of socioeconomic factors, higher priority should be given to implementation of restoration projects that have public acceptance and active stakeholder involvement, that contribute to sustainable development, and that have some assurance of availability of the resources needed for realization (Box {f} of Flowchart 2).
- vii) A final decision (Box {g} of Flowchart 2) should be based on assessment of issues listed in Box 2 and which include consideration of:
 - a) spatial needs for the establishment of specific wetland functions;
 - b) the impacts of local decisions within a regional context;
 - c) the preservation, or rehabilitation if needed, of the soil and water resources of the catchment;
 - d) a plan for long-term change and unexpected events;
 - e) preservation of rare landscape elements, habitats, and associated species;
 - f) avoidance of or compensation for the effects of development on wetland functions; and
 - g) the presence of land-use and management practices compatible with the natural potential of the wetland.

Box 2. Issues to address in the assessment of the usefulness and feasibility of wetland restoration projects

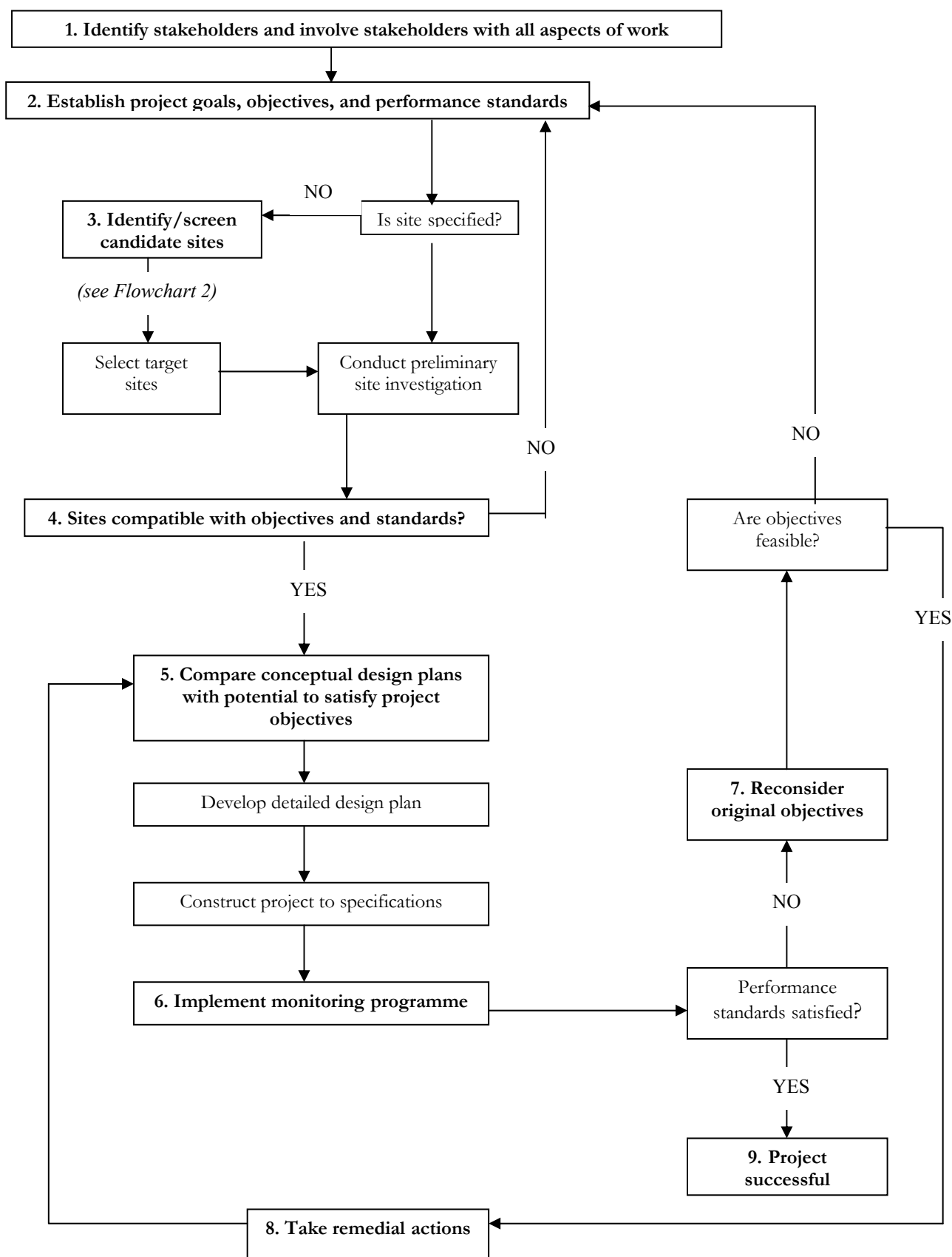
Assessments for the selection of appropriate wetland restoration projects should include the following questions (adapted from the Annex to Resolution VII.17):

- a. Will there be environmental benefits (for example, improved water quantity and quality, reduced eutrophication, preservation of freshwater resources, biodiversity conservation, improved management of “wet resources”, flood control)?
- b. What is the cost effectiveness of the proposed project? Investments and changes should in the longer term be sustainable, not yielding only temporary results. Aim for appropriate costs in the construction phase and appropriate running costs for future maintenance.
- c. What options, advantages or disadvantages will the restored area provide for local people and the region? These may include health conditions, essential food and water resources, increased possibilities for recreation and ecotourism, improved scenic values, educational opportunities, conservation of cultural heritage (historic or religious sites), etc.
- d. What is the ecological potential of the project? What is the present status of the area in terms of habitats and biological values, and in particular will any current features of wetland conservation or biodiversity importance be lost or damaged? How is the area expected to develop with respect to hydrology, geomorphology, water quality, plant and animal communities, etc.

- | |
|---|
| <p>e. What is the status of the area in terms of present land use. The situation will differ widely between developed countries, countries with economies in transition, and developing countries, and within such countries depending on local circumstances, with respect to the objectives of restoration and rehabilitation. In particular, marginal lands yielding few benefits in the present situation can often be improved.</p> <p>f. What are the main socio-economic constraints? Is there a positive regional and local interest in realising the project.</p> <p>g. What are the main technical constraints?</p> |
|---|
28. Site compatibility with goals, objectives, and performance standards: Once a site has been identified, project goals, objectives, and performance standards should be revisited to ascertain compatibility (Box 4 in Flowchart 1).
 29. Project design (Box 5 in Flowchart 1): Because there is almost always more than one way to work toward project objectives, it is useful to consider alternative plans in the early stages of project design. Comparisons should consider rough cost estimates, likelihood of each plan to achieve project objectives, and the viewpoints of all stakeholders. One of these plans should be selected and developed into a detailed design plan that can be used to guide construction activities. Restoration plans should include training programmes to ensure that construction activities are undertaken in an appropriate manner. Consideration should be given to first developing and implementing a pilot project to test and refine the restoration methods.
 30. Monitoring and meeting performance standards (Box 6 in Flowchart 1): Monitoring should focus on performance standards that are linked to project objectives. Effective monitoring programs should consider that all ecosystems undergo constant change and development and should account for both temporal and spatial variability.
 31. When performance standards are not met (Boxes 7 and 8 in Flowchart 1): If performance standards are not met, careful reconsideration of the project is necessary. It may be that original goals, objectives, and performance standards are not feasible, in which case they should be reconsidered. If original goals, objectives, and performance standards are still considered feasible, remedial action should be taken. Remedial action could range from a few simple modifications to existing plans to a complete redesign of the project.
 32. Often, restoration projects break new ground in the understanding of ecosystem processes, and in almost all cases restoration projects should be considered experimental in nature. Therefore, both revision of original goals, objectives, and performance standards and remedial action should be seen as a necessary part of the restoration process rather than as signs of failure.
 33. Successful projects (Box 9 in Flowchart 1): If performance standards are satisfied, the project can be considered successful. However, ongoing stewardship and monitoring will be necessary to maintain this success. Also, stakeholders should re-examine the project to determine if they are still satisfied with the performance standards used to assess success (i.e. to determine if meeting performance standards equates to their sense of successful restoration). If stakeholders are not satisfied with the project outcomes even after

performance standards have been met, it may be necessary to begin the entire process again.

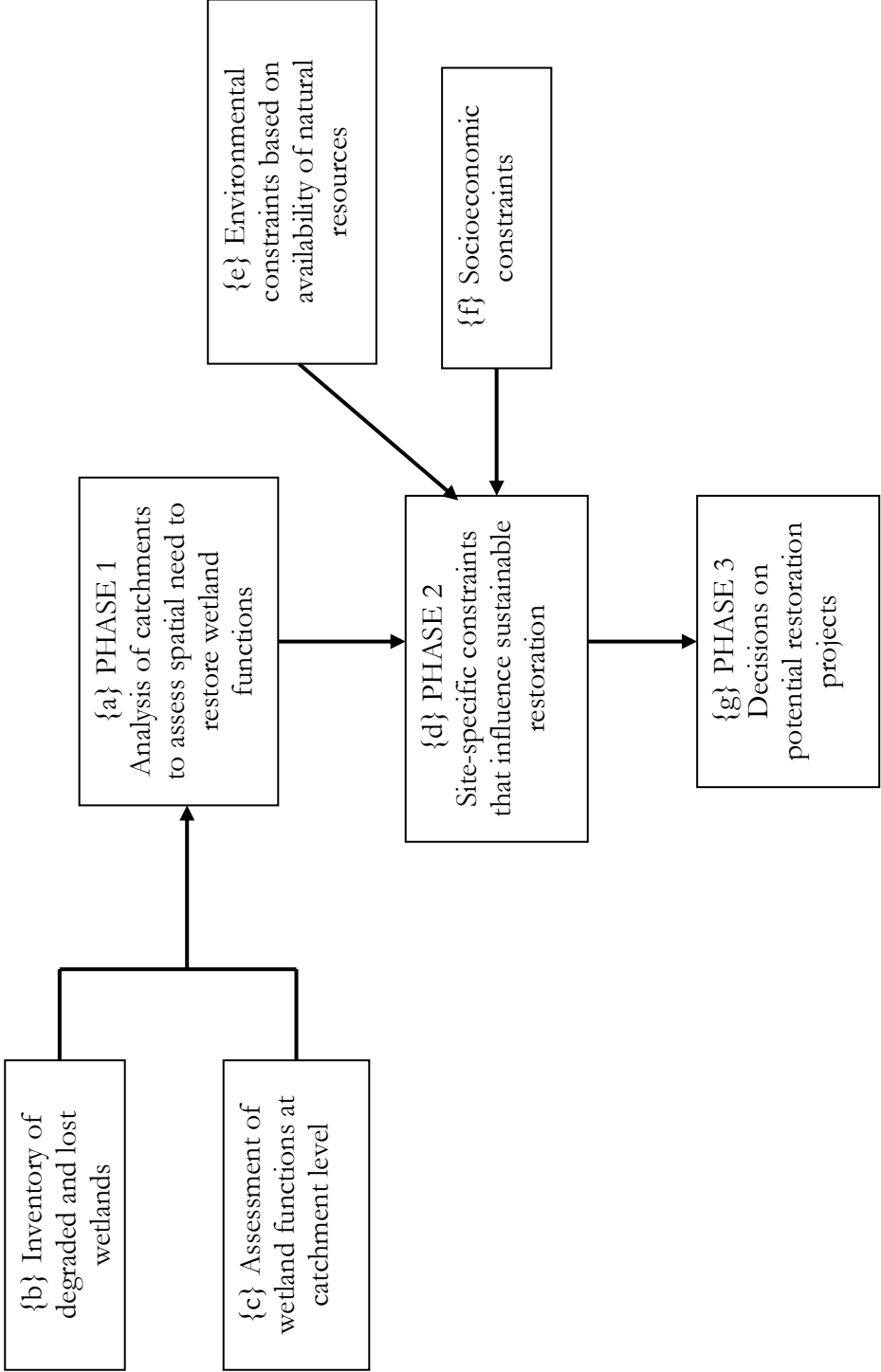
Flowchart 1. Guidelines for wetland restoration. Numbers correspond to numbers in parentheses in the text.



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Flowchart 2. Process for identification of potential wetland restoration projects.

Letters correspond to explanations in the text.



"Wetlands: water, life, and culture"
8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002

Resolution VIII.17

Guidelines for Global Action on Peatlands¹

1. RECALLING Recommendation 6.1, which encouraged further cooperation on wise use, sustainable development, and conservation of global peatlands, and FURTHER RECALLING Recommendation 7.1, which requested cooperation from Contracting Parties and other interested bodies to refine the "*Draft Global Action Plan for the Wise Use and Management of Peatlands*";
2. RECALLING ALSO that Recommendation 7.1 called upon partners in the Draft Global Action Plan for Peatlands (GAPP) to report on progress with its further development and to submit a revised Global Action Plan at COP8 for consideration and possible adoption;
3. RECOGNIZING that peatlands comprise a large proportion of the world's wetlands distributed across six continents and are a vital part of the world's wetland resources;
4. RECOGNIZING ALSO the importance of peatlands to the maintenance of global diversity and for the storage of water and carbon, which constitute a function vital to the world's climate system;
5. CONCERNED that peatlands are amongst the most vulnerable wetland types and that widespread loss and damage to peatlands is continuing in many parts of the world;
6. AWARE that further information on the role of peatlands in carbon sinks and sequestration is needed;
7. RECOGNIZING that peatlands are amongst the most important wetlands for archaeological and cultural heritage through their intact preservation of the palaeo-archaeological record and archaeological artefacts, and that the maintenance of intact peatlands is a common priority for managers responsible for both cultural and natural values;
8. AWARE that the Convention's Strategic Plan 1997-2002 identified peatlands as an under-represented wetland type in the List of Wetlands of International Importance, and that additional guidance to Contracting Parties on the identification and designation of peatlands for the List has been adopted by this meeting (Resolution VIII.11);

¹ It is understood in this document that the term "peatland" is inclusive of active peatland ("mire"). A peatland is an area of landscape with a naturally accumulated peat layer on its surface. An active peatland ("mire") is a peatland on which peat is currently forming and accumulating. All active peatlands ("mires") are peatlands but peatlands that are no longer accumulating peat would no longer be considered "mires".

9. AWARE ALSO that the Convention's Strategic Plan 2003-2008 adopted by this meeting places special emphasis on the conservation and wise use of peatlands for priority action by Contracting Parties and others; and
10. NOTING that Wetlands International, the Netherlands Committee for the World Conservation Union (IUCN), the International Mire Conservation Group (IMCG), the International Peat Society (IPS), Green World Research (ALTERRA), and the International Commission for Irrigation and Drainage (ICID) are collaborating to implement the Global Peatland Initiative (GPI), designed to support countries in implementing wise use of their peatlands, and also to undertake global actions concerning, *inter alia*, baseline inventory, further guidance, and awareness-raising;

THE CONFERENCE OF THE CONTRACTING PARTIES

11. ADOPTS the *Guidelines for Global Action on Peatlands* as annexed to this Resolution and ENCOURAGES Contracting Parties, within their capacities, to implement these guidelines;
12. URGES Contracting Parties, International Organization Partners and other interested bodies to take steps as soon as possible to improve awareness and understanding of the functions and values of the world's peatlands, and to support activities in progress;
13. ENCOURAGES Contracting Parties to give priority to the review of national laws, policies and incentives and to develop further national strategies for the wise use, conservation and management of peatlands;
14. CALLS ON Contracting Parties also to give priority to supporting the inventory and evaluation of peatlands of all types and, as appropriate, to designate further peatlands within their territories for inclusion in the List of Wetlands of International Importance;
15. REQUESTS Contracting Parties to include information on the status and trends of their peatland resources in their National Reports prepared for the meetings of the Conference of the Parties to this and other conventions, as appropriate;
16. ENCOURAGES Contracting Parties to include peatlands as a theme in their implementation of national action plans for education and public awareness through the Convention's Outreach Programme;
17. URGES Contracting Parties in their management planning for peatland Ramsar sites and other wetlands, in implementation of the *New Guidelines for management planning for Ramsar sites and other wetlands*, adopted by Resolution VIII.14, to include consideration, as appropriate, of the importance of the archaeological and cultural heritage features of peatlands;
18. REQUESTS the Ramsar Bureau, working with interested Contracting Parties, the Scientific and Technical Review Panel (STRP), the International Mire Conservation Group, the International Peat Society, the Convention's International Organization Partners, and other non-governmental organizations, the private sector and other bodies, to establish a Coordinating Committee for Global Action on Peatlands, and ALSO

REQUESTS this Coordinating Committee, once established, to prepare an implementation plan for global action on peatlands;

19. CONGRATULATES collaborating organizations for their development of the Global Peatland Initiative, which will support the implementation of actions called for in the *Guidelines for Global Action on Peatlands*; REQUESTS this partnership to participate in the Coordinating Committee for Global Action on Peatlands; and THANKS the Government of The Netherlands for its financial support for this Initiative;
20. ENCOURAGES Contracting Parties and others to identify and make available sources of funds in order that the activities identified in this implementation plan can be undertaken; and
21. REQUESTS that a report on the progress in implementing these Guidelines, including recommendations on future priorities, be submitted to Ramsar COP9.

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Annex

Guidelines for Global Action on Peatlands (GAP)

Peatlands and the Ramsar Convention

1. Peat is dead and partially decomposed plant remains that have accumulated *in situ* under waterlogged conditions. Peatlands are landscapes with a peat deposit that may currently support a vegetation that is peat-forming, may not, or may lack vegetation entirely. The presence of peat or vegetation capable of forming peat is the key characteristic of peatlands.
2. In recent years peatlands have become increasingly recognized as a vital part of the world's wetland resources. Approximately half of the world's wetlands, spread across six continents, are peatlands such as bogs, fens, swamp forests and converted peatlands. They are found in all biomes, particularly the boreal, temperate and tropical areas of the planet.
3. Peatlands are recognized throughout the world as a vital economic and ecological resource, though until recently they have received little attention from the international conservation community. Peatlands are ecosystems contributing to biological diversity, the global water cycle, global carbon storage relevant to climate change, and other wetland functions valuable to human communities.
4. Peatlands, especially active peatlands that are accumulating peat, are irreplaceable palaeo-environmental archives from which to reconstruct past landscape change and previous climates, and determine human impact upon the environment.
5. There is a wide range of threats to peatlands that require urgent national and/or international action. The opportunities for wise use, conservation and management (hereafter referred to as 'wise use') of the world's peatland assets are constrained not only by limited scientific and technical information but also by the effects of economic, socio-cultural, and environmental factors. Contracting Parties and partners need to evaluate the significance of these constraints at various scales and within appropriate national frameworks. For example, peatlands in the high Andes of South America are modified by overgrazing, drainage for agriculture, trade in dry peat, and changes in the natural water courses for human use.
6. Peatlands have a wide international significance and their wise use is relevant to the implementation of the Ramsar Convention, the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), and other international instruments and agreements.
7. Peatlands play a special role in conserving global biodiversity because they are the refugia of some of the rarest and most unusual species of wetland-dependent flora and fauna. The CBD-Ramsar Joint Work Plan provides the opportunity to highlight the global contribution of peatlands to biodiversity.

8. Peatlands globally have been identified as a major storehouse of the world's carbon, exceeding that of forests. Peatlands that are actively accumulating organic matter are carbon sinks. Both aspects are worthy of attention by the UNFCCC.
9. It is recognized that the ecosystem approach, underpinned by the Malawi Principles and adopted as a framework for implementation of the CBD, also provides a valuable approach for implementation of these *Guidelines for Global Action on Peatlands (GAP)*. This would be consistent with Decision IV/15 at COP4 of the CBD and Resolution VII.15 of Ramsar COP7 referring to the use of an ecosystem approach.
10. In addition to their significance for biodiversity, in many parts of the world peatlands are the predominant wetland type for cultural heritage, notably through their capacity to preserve archaeological remains and the palaeobiological record under waterlogged and deoxygenated conditions. This has been recognized by the European Archaeological Council's 2001 Strategy and Statement of Intent for the Heritage Management of Wetlands, which drew attention to the importance of the wise use of wetlands and the Ramsar Convention for the preservation of these cultural features, and argued that there is much common ground in the wetland biodiversity and cultural heritage management of peatlands.
11. Ramsar Contracting Parties have recognized the global significance of peatlands through Recommendation 6.1 which called for further cooperation on the conservation of global peatlands. These *Guidelines for Global Action on Peatlands* have been developed from the draft Global Action Plan for the Wise Use and Management of Peatlands endorsed by Ramsar Recommendation 7.1. In line with Recommendation 7.1, the guidelines have been further developed through the work of the Convention's International Organization Partners, international peatland conservation organizations, notably the International Peat Society (IPS) and the International Mire Conservation Group (IMCG), and interested Contracting Parties, assisted and evaluated by the Convention's Scientific and Technical Review Panel (STRP) and its expert Working Group on Peatlands.
12. These Guidelines recommend a series of priority approaches and activities for global action on the wise use and management of peatlands under seven themes:
 - A. Knowledge of global resources
 - B. Education and public awareness on peatlands
 - C. Policy and legislative instruments
 - D. Wise use of peatlands
 - E. Research networks, regional centres of expertise, and institutional capacity
 - F. International cooperation
 - G. Implementation and support
13. The guidelines form the basis for the development of a global action plan for peatlands by Ramsar Contracting Parties, the Convention's bodies, and International Organization Partners and other organizations working to address peatland issues, so as to implement Operational Objective 3.2 of the Ramsar Strategic Plan 2003-2008.
14. The overall aim of the guidelines and their implementation is to achieve recognition of the importance of peatlands to the maintenance of global biodiversity and the storage of the

water and carbon that is vital to the world's climate system, and to promote their wise use, conservation and management for the benefit of people and the environment.

15. Taken together the guidelines provide:
- a) a framework for national, regional and international initiatives to promote the development of strategies for peatland wise use, conservation, and management;
 - b) guidance on mechanisms to foster national, regional and international partnerships of government, the private sector, and non-government agencies to fund and implement actions in support of such strategies; and
 - c) approaches to facilitate adoption and support for implementation of global action on peatlands through the Ramsar Convention, the CBD, the UNFCCC, and other appropriate national, regional or international instruments.

A. Knowledge of global resources

Development and application of standardized terminology and classification systems

16. Many classification systems for peatlands have been developed in different parts of the world, and there is a range of different terminologies that have been developed to define peatlands and peatland processes. When seeking to describe the character, extent and status of peatland resources worldwide, an essential step is to seek to compare and harmonize terminologies and classifications as the basis for achieving a globally consistent view of these resources.

Guidelines for action

- A1. In order to review and standardize peatland terminology and classification systems, the Ramsar Convention is encouraged to establish a Working Group on Peatland Terminology, Classification and Biogeography, involving peatland conservation organizations, Contracting Parties, and other interested bodies.
- A2. Regional and international workshops and symposia should be convened by the Working Group to review and build consensus on terminologies, classifications, and biogeography.
- A3. To assist Contracting Parties and others in compiling information on peatland resources, the Working Group should develop and publish a *Glossary of Peatland Terms*.
- A4. The Convention should review the Ramsar Classification System for Wetland Types with regard to peatlands in the light of the Working Group's report on standardized terminology and classification systems.

Establishing a global database of peatlands

17. Inventory and assessment information on peatlands varies from country to country. It is generally patchy, inconsistent, and often difficult to access for those needing to use this vital baseline material for ensuring the wise use of their peatlands. This hinders the recognition of the importance of the peatland resource, its values and functions, and the application by Contracting Parties of measures to ensure the wise use of their peatlands, including the identification and designation of peatlands as Wetlands of International Importance.
18. Ramsar Resolution VII.20 on priorities for wetland inventory urged Contracting Parties to give highest priority to undertaking inventory activities for those wetland types identified as at greatest risk or with poorest information in the *Global Review of Wetland Resources and Priorities for Wetland Inventory* (GroWI) report. The GROWI report identified peatlands as a priority wetland type noting, in particular, that they are threatened by drainage for agriculture and afforestation in Europe, Asia and North America despite their importance as a global carbon sink and economic resource. Peatlands are poorly known in tropical regions such as Southeast Asia.

Guidelines for action

- A5. In order to emphasize the importance of the peatland resource, and to provide the baseline information necessary to assist Contracting Parties and others in their delivery of Global Action for Peatlands, a global database of peatlands should be established and made widely accessible to Contracting Parties and others. The database should be compiled in the first instance from sources of existing information, brought into line with the agreed standardized terminology and classification systems for peatlands, and should include baseline information on the distribution, size, quality, ecological characteristics and biological diversity of the resource.
- A6. Contracting Parties, based on national capacity, are urged to provide national information on carbon stored in their peatlands for incorporation in this database.
- A7. Contracting Parties, through their National Reports, should report to each Conference of the Parties on their progress in contributing information to the global peatlands database.
- A8. The data and information compiled in the global peatlands database should be made available to, and used by, Wetlands International in its role of advising the Convention on the application of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*. This advice should be designed to assist Contracting Parties in their identification and designation of peatlands as Ramsar sites, noting that peatlands have been identified by the Convention as under-represented in the Ramsar List and urged as a priority for future designations. To assist in such further designations, the database should include information on the biogeography of peatlands.

Detecting changes and trends in the quantity and quality of the peatland resource

19. Since peatlands have been recognized by the Convention as a particularly threatened wetland type, priority should be given to monitoring changes in their status and trends so

as to assist Contracting Parties in taking the necessary actions to safeguard their wise use. In addition to on-the-ground assessment and monitoring, modern earth observation remote sensing techniques offer considerable potential for such appraisals over large geographical scales, using a variety of techniques.

Guidelines for action

- A9. A standardized monitoring system should be established for use by Contracting Parties in determining the status of, and detecting change in, their peatland resource.
- A10. Reporting the status and trends in national peatland condition should form an element of the triennial National Reports prepared by Contracting Parties for each Ramsar COP. Such information should be also made available by Contracting Parties for inclusion in the global peatlands database.
- A11. Opportunities for developing remote sensing tools and analyses to assess large-scale status and trends in peatland quality and quantity should be explored with earth observation organizations and agencies, as well as others expert in this field.
- A12. Based on the information provided on the status and trends in the peatland resource in National Reports, and the information available in the global peatlands database, regular summary reports of the status and trends of the global peatlands resource should be prepared for consideration by Contracting Parties.

B. Education and public awareness on peatlands

- 20. In order to ensure that the importance of peatlands as a global wetland biodiversity resource is fully understood, it is important to develop and implement environmental education, training and public awareness programmes focusing on peatlands. The Ramsar Convention's Communication, Education, and Public Awareness Programme (Resolution VIII.31) provides a comprehensive framework for the development and enhancement of wetlands education and public awareness through which peatland education and public awareness can be delivered.

Guidelines for Action

- B1. National or sub-national agencies responsible for environmental education should incorporate peatlands as an environmental theme in education programmes targeted at formal, continuing and outreach education, business and industry, as an important element of their implementation of the Ramsar Convention's Communication, Education, and Public Awareness Programme.
- B2. Teaching, learning and training resources on peatlands should be developed and promoted, which should explore the associated values of peatlands as well. The materials developed should include a broad base of understanding, experience and skills, with contributions from local communities, women and indigenous people, particularly in areas where peatlands form a significant component of the landscape and culture.

- B3. Programmes focusing on peatlands should be developed and promoted for professional and in-service training of wetland planners and managers, at both practitioner and trainer levels, including through the development of training modules in the Ramsar Wetland Training Service, once established.
- B4. Citizens should be provided with information and educational materials that will enable them to make informed choices concerning lifestyle and consumer behavior compatible with the wise use of peatlands.

C. Policy and legislative instruments

- 21. Ramsar Resolution VII.7 provides guidelines for reviewing laws and institutions to promote the conservation and wise use of wetlands (Ramsar Handbook no. 3). These guidelines are designed to assist Contracting Parties in ensuring that they have in place the appropriate legal and institutional framework for effective delivery of their commitments under the Ramsar Convention for the wise use of wetlands (which include, *inter alia*, peatlands), and that other sectoral measures, for example water management mechanisms and legislation, are harmonized and consistent with their wise use objectives.
- 22. Contracting Parties have recognized that peatlands are an under-represented wetland type in the Ramsar List of Wetlands of International Importance and have afforded priority to the designation of peatlands as Ramsar sites. To assist Contracting Parties in the identification and designation of such sites, COP8 has adopted additional guidance on their designation (Resolution VIII.11).

Guidelines for Action

- C1. Contracting Parties should review their present frameworks of national policies, laws and incentive programmes relevant to peatlands utilizing the Ramsar *Guidelines for reviewing laws and institutions to promote the conservation and wise use of wetlands* (Ramsar Handbook no. 3) so as to identify the main barriers to, and opportunities for, making wise use of peatlands more effective. These measures should be strengthened where peatlands are at significant risk owing to resource development or other pressures.
- C2. Contracting Parties should endeavour to ensure that national legislation and policies relating to peatlands are compatible with other international commitments and obligations.
- C3. Contracting Parties should ensure that the particular importance and requirements of peatland wise use are fully incorporated into national wetland and biodiversity strategies and plans and land use planning instruments, and that national wetland policies developed in line with the guidelines adopted by Ramsar Resolution VII.6 (Ramsar Handbook no. 2) fully incorporate the implementation of the wise use of peatlands.
- C4. Reviews of national networks of peatland protected areas should be undertaken. Where there is a currently incomplete network of peatland sites within a national system of protected areas, as appropriate, the number of peatland reserves, parks or other types of protected peatlands should be increased.

- C5. The conservation of nationally, regionally and globally important and representative peatland types should be further secured through the expansion of the global network of Ramsar sites, applying the *Guidance for identifying and designating peatlands, wet grasslands, mangroves and coral reefs as Wetlands of International Importance* adopted by COP8 (Resolution VIII.11).
- C6. Contracting Parties should, in line with Resolution VII.17, establish policies to implement peatland restoration and rehabilitation, where appropriate seeking the assistance of countries, and the private sector, with knowledge in these fields, utilizing the *Principles and guidelines for wetland restoration* adopted by COP8 (Resolution VIII.16).

D. Wise use of peatlands

- 23. The wise use management of peatlands, including restoration and rehabilitation, should be treated as a priority by all Contracting Parties that have peatland resources within their territory. In order to assist Contracting Parties and all other bodies and organizations involved in peatland management and exploitation in ensuring that peatlands are used wisely, global guidelines for peatland wise use and management are being developed by a consortium of peatland organizations, including the International Peat Society (IPS) and the International Mire Conservation Group (IMCG). Such wise use and management guidelines are recommended as a source of further information and expertise for ensuring sustainable peatland management.
- 24. Given that the biogeography of peatlands is often regional in nature, Contracting Parties and others should consider the need for management guidelines and action plans that can be developed and implemented at appropriate regional as well as national scales and also, where appropriate, at the scale of whole catchment basins, in line with the *Guidelines for integrating wetland conservation and wise use into river basin management* (Ramsar Handbook no. 4). Such implementation may be facilitated by the establishment of regional centres of expertise (see Guideline E4 below).

Guidelines for Action

- D1. Peatland wise use principles should be applied through the acquisition of information on the effectiveness of various socio-economic incentive measures and by enabling instruments to facilitate the equitable sharing of the costs and benefits of different management options.
- D2. Best management practices and peatland restoration should be promoted by Contracting Parties as an important input to Ramsar principles and other international conventions such as CBD and UNFCCC.
- D3. In developing their strategies and policies for the wise use of peatlands, and in particular their management planning for Ramsar sites and other wetlands, Contracting Parties should ensure that the cultural heritage significance of peatlands is fully taken into account, and should work closely with their counterpart heritage management agencies and bodies to achieve this.

- D4. The development of local and community-based peatland wise use initiatives and actions should be fostered through land use planning programmes, with the support of the development assistance agencies, particularly those programmes affecting, and to be implemented by, women, indigenous people, and local communities, utilizing the Ramsar *Guidelines for establishing and strengthening local communities' and indigenous peoples' participation in the management of wetlands* (Ramsar Handbook no. 5).
- D5. Measures should be undertaken to restore peatland functions in those systems that have been degraded through human activity, drawing on experience and best management practices from different regions.

E. Research networks, regional centres of expertise, and institutional capacity

- 25. In order to improve implementation of the wise use of peatlands, it is necessary for countries to review and ensure that they have in place the necessary institutional capacity. It is also necessary to provide peatland managers and those responsible for policy related to the wise use and exploitation of peatlands with improved access to information and training facilities, in order to enhance their capacity.
- 26. The Ramsar Wetland Training Service being established by Wetlands International will provide a mechanism for developing training in peatland management and wise use, so as to support the priority afforded to peatlands under the Convention as a globally threatened wetland type that is under-represented in the Ramsar List of Wetlands of International Importance.

Guidelines for Action

- E1. Networks for research and programme cooperation should be established, involving research institutes and other peatland scientific organizations so as to share knowledge and information and improve understanding of the biodiversity, ecological character, values, and functions of the world's peatlands.
- E2. Research institutes and other peatland scientific organizations should seek opportunities for the development of cooperative scientific and management studies to fill the identified gaps in the knowledge required to implement peatland wise use. The GAP Coordinating Committee (see Guideline G1 below) should assist in this process by reviewing and identifying such gaps.
- E3. Opportunities should be sought for cooperative research to further elucidate the role of peatlands in mitigating the impacts of global climate change, in line with the gaps in knowledge identified by the comprehensive review of "Wetlands and climate change: impacts and mitigation" submitted to Ramsar COP8.
- E4. The creation of Regional Centres of Expertise in the wise use and management of peatlands should be promoted for training and the transfer of knowledge in order to assist developing countries and those with economies in transition to increase their capacity for implementation of wise use of peatlands.

- E5. Peatlands suitable for restoration and rehabilitation should be identified following the procedures outlined in the *Principles and guidelines on wetland restoration* adopted by Ramsar COP8 (Resolution VIII.16), and research and transfer of technologies for peatland management and the restoration and rehabilitation of appropriate peatlands should be facilitated, particularly for local community use in developing countries and countries with economies in transition.
- E6. Contracting Parties should encourage the establishment and activities of national and local organizations with expertise in peatland management.
- E7. Research into, and development of, appropriate sustainable alternatives to peat in, for example, horticultural use, should be encouraged.

F. International cooperation

- 27. Peatlands are a widely distributed wetland resource worldwide, with many extensive systems crossing geopolitical boundaries. There is much to be gained by Contracting Parties and others sharing their knowledge and expertise in the wise use and sustainable management of this key component of the world's wetlands through international cooperation, in line with the *Guidelines for international cooperation under the Ramsar Convention on Wetlands* (Ramsar Handbook no. 9).
- 28. Furthermore, efforts towards the wise use of peatlands can contribute to the delivery of not only the Ramsar Convention but other multilateral environmental agreements, including the CBD, in particular its programme of work on the biological diversity of inland waters, and the UNFCCC.

Guidelines for Action

- F1. Peatland wise use and management issues should be fully addressed in the discussions and resolutions prepared for the meetings of the Conference of the Parties and subsidiary bodies of the Ramsar Convention. These issues should also be taken into account, where appropriate, in other multilateral environmental agreements, notably CBD and UNFCCC, including consideration of joint action plans on peatlands.
- F2. International cooperation between Contracting Parties and others for global actions developed to address peatland issues should be coordinated in cooperation with peatland stakeholders and other interested parties (see also guideline G1 below).
- 29. Implementation of Guidelines for Action E1-E5 above concerning cooperative action on research and technology transfer for peatland wise use also contributes to the delivery of international cooperation on peatland wise use.

G. Implementation and support

- 30. In order to assist and coordinate between Contracting Parties, the bodies of the Convention, specialist peatland organizations and others in developing actions for the implementation of these *Guidelines for Global Action on Peatlands*, it will be necessary to establish communication and coordination mechanisms, and for these to review regularly

progress and future priorities for global action on peatlands under the Convention and report these to the meetings of the Conference of the Parties.

Guidelines for Action

- G1. A Coordinating Committee for Global Action on Peatlands should be established, as resources permit. The Coordinating Committee should be chaired by the Ramsar Bureau and comprise governments and invited partner organizations and be geographically balanced.
- G2. The GAP Coordinating Committee should develop a global implementation plan which specifies the actions needed for the implementation of these Guidelines, including initiatives and timetables to deliver the priority actions identified by the Guidelines, and track and review the progress of their implementation.
- G3. Contracting Parties and others should assist the GAP Coordinating Committee in identifying sources of funding in order to implement the actions identified in the implementation plan for global action on peatlands.
- G4. The Coordinating Committee should develop and implement a monitoring and reporting procedure to evaluate the effectiveness of implementation of these *Guidelines for Global Action on Peatlands* and their global implementation plan, and report to Ramsar COP9 on the progress, including the progress of the Working Group on Peatland Terminology, Classification, and Biogeography, once established (see Guideline A1 above), and improvements to knowledge of the global peatland resource (see Guidelines A7, A10 and A11).
- G5. The GAP Coordinating Committee should review and prepare for COP9 recommendations on future priorities and implementation of these Guidelines for the 2006-2008 triennium and for subsequent meetings of the Conference of the Parties as appropriate.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.18

Invasive species and wetlands

1. AWARE that alien species that become invasive continue to pose a major threat to the ecological character of wetlands worldwide, and to wetland species, and that such invasions can cause major social and economic damage and loss;
2. ALSO AWARE that it is predicted that the effects of global climate change will include invasion by alien species into new areas, and that species formerly regarded as benign may become invasive;
3. RECALLING Resolution 5.6 on *Additional guidance for the implementation of the wise use concept*, which includes reference to taking measures to address problems of invasive species, and Resolution VII.14 in which the Contracting Parties urged that steps be taken to identify, eradicate and control invasive species in their jurisdictions; to review and as necessary adopt legislation and programmes to prevent the introduction and movement or trade of new and environmentally dangerous alien species into or within their jurisdictions; to develop capacity to facilitate identification and awareness of alien and invasive species; and to share information and experience, including on best practice management;
4. CONCERNED that little information has been supplied by Contracting Parties in the Ramsar Information Sheets (RIS) prepared for the designation of Wetlands of International Importance concerning the presence, threats and management measures for invasive alien species on Ramsar sites and that in many cases this information is out of date, and RECALLING that Contracting Parties have resolved to provide an updated RIS for each designated Ramsar site at no longer than six-year intervals (Resolution VI.13);
5. NOTING that guidance adopted by this meeting of the Conference of the Parties, including *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14) and the Resolution on the guidelines adopted by the Convention on Biological Diversity (CBD) for incorporating biodiversity-related issues into environmental impact assessment legislation and/or processes and in strategic environmental assessment and their relevance to Ramsar (Resolution VIII.9), is relevant to the recognition, prevention, eradication and control of invasive alien species;
6. RECALLING that in Resolution VII.14 the Parties also directed the Scientific and Technical Review Panel (STRP) to prepare wetland-specific guidelines for identifying, establishing priorities for action, and managing alien species which potentially pose a threat to wetlands and wetland species, in cooperation with the Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA) of CBD, the Global Invasive Species Programme (GISP), and other programmes established under international conventions;

7. AWARE that the STRP has contributed its input to CBD's SBSTTA at its 6th meeting (March 2001) when guidance based on Article 8 (h) of the CBD and Decision V/8 of CBD COP5 on invasive species was extensively reviewed;
8. ALSO AWARE that the CBD-Ramsar 3rd Joint Work Plan 2002-2006 includes collaborative actions with the GISP, IUCN–The World Conservation Union and the World Conservation Monitoring Centre (UNEP-WCMC), to increase the availability of information and guidance on aquatic invasive species and the development of further work, including assessment of inland waters invasive alien species;
9. RECOGNISING that CBD, GISP and IUCN have prepared strategies, reviews of legislation, and toolkits, including case studies for addressing different aspects of invasive alien species, and that these also provide valuable guidance and assistance to Contracting Parties addressing wetland invasive species issues;
10. NOTING that the GISP is developing a further programme of work which will include a focus on assessment, assistance and tools for application at national and regional scales, and provision of further information focusing on aquatic invasive species, in collaboration with the Ramsar Bureau, CBD, IUCN, and other relevant organizations; and
11. WELCOMING the work of the Ramsar Bureau, in collaboration with IUCN, the World Heritage Centre, and others, for the initiation of a communications and awareness-raising project on African wetland invasive species which will disseminate information and advice on good practice and experience to wetland managers;

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12. URGES Contracting Parties to address the problems posed by invasive species in wetland ecosystems in a decisive and holistic manner, making use, as appropriate, of the tools and guidance developed by various institutions and processes, including any relevant guidelines or guiding principles adopted under other conventions;
13. ENCOURAGES Contracting Parties to participate in and contribute fully to the further development of appropriate tools and guidance for addressing these problems;
14. INSTRUCTS the Ramsar Bureau to continue cooperating as closely as possible with the institutions and processes that are dealing with invasive species issues, particularly those of direct relevance to wetland ecosystems;
15. URGES Contracting Parties to undertake risk assessments of alien species which may pose a threat to the ecological character of wetlands, taking into account the potential changes to ecosystems from the effects of global climate change, and applying the guidance available in Ramsar's *Risk Assessment Framework* (Resolution VII.10);
16. FURTHER URGES Contracting Parties to identify the presence of invasive alien species in Ramsar sites and other wetlands in their territory, the threats they pose to the ecological character of these wetlands, including the risk of invasions by such species not yet present within each site, the actions underway or planned for their prevention, eradication or control, and, for Ramsar sites, to report on this to the Ramsar Bureau without delay in line

with Article 3.2 of the Convention, so that this information may be included in the Ramsar Sites Database;

17. REQUESTS the Ramsar Bureau to make information provided by Contracting Parties available to the Convention on Biological Diversity and others in support of the implementation of the CBD-Ramsar Joint Work Plan 2002-2006;
18. RECOGNISES that many aquatic invasive species, both inland and coastal and marine species, can spread rapidly and repeatedly throughout entire wetland ecosystems, river basins and coastal and marine zones, such that eradication in one place may not prove effective at preventing further invasions, and URGES all Contracting Parties with shared wetlands, river systems, and coastal/marine zones to cooperate fully in the prevention, early warning in transboundary wetlands, eradication and control of invasive species, applying the *Guidelines for international cooperation under the Ramsar Convention* (Ramsar Handbook 9);
19. URGES Contracting Parties, in their development and implementation of national strategies and responses to invasive alien species, to recognise that terrestrial invasions by alien species can threaten and affect the ecological character of wetlands including through the lowering of water tables and alteration of water flow patterns, and to ensure that appropriate measures to prevent or control such invasions are in place;
20. URGES Contracting Parties, prior to moving water between river basins, to examine carefully the potential environmental impacts due to invasive species;
21. FURTHER URGES all Contracting Parties to work closely with their counterpart national focal points for the Convention on Biological Diversity, the UN Convention to Combat Desertification, the UNESCO Man and the Biosphere Programme (MAB), the International Maritime Organization (IMO), and others in the development and implementation of national policies, strategies and management responses to threats from invasive alien species, and to ensure that prevention, eradication and control of such species are fully incorporated in national legislation and national wetland and biodiversity policies, strategies and action plans, applying the Ramsar *Guidelines for reviewing laws and institutions to promote the conservation and wise use of wetlands* (Ramsar Handbook 3) and *Guidelines for developing and implementing National Wetland Policies* (Ramsar Handbook 2);
22. REQUESTS the Ramsar Bureau to explore with the secretariat of the CBD and the GISP ways and means for the Ramsar Convention to contribute to the review, for the CBD, on the assessment of the impact of invasive species on inland waters, including on islands, and to make available the results of this review to Contracting Parties and wetland managers;
23. ENCOURAGES the Ramsar Bureau, in collaboration with IUCN, the World Heritage Centre, and UNESCO's MAB, to further develop and implement communication and awareness-raising work on African wetland invasive species for wetland managers, to disseminate widely its information and awareness products, and to consider developing similar projects in other Ramsar regions; and ENCOURAGES Contracting Parties and donor organizations to consider providing resources for such projects; and
24. ALSO ENCOURAGES the GISP, IUCN, and others to further develop Web-based sources of information on identification, distribution and management of invasive species

and potential invasive species affecting wetlands, and to make these widely available to Contracting Parties and wetland managers so as to assist them in the early detection, eradication and control of invasive species.

"Wetlands: water, life, and culture"
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Resolution VIII.19

Guiding principles for taking into account the cultural values of wetlands for the effective management of sites

1. ACKNOWLEDGING that the ancient and intimate links of traditional societies to wetlands and water have given rise to important cultural values relevant to wetland conservation and wise use, which have been recognized in the diverse cosmologies of different civilizations and cultures throughout history;
2. FURTHER ACKNOWLEDGING that the specific physical features of wetlands have contributed to particular ways of managing traditional activities through structures, procedures, techniques and specially designed artefacts which are of great cultural significance;
3. RECOGNIZING that peoples' relations with wetlands have given rise to aspects of non-material culture, through folklore, music, mythology, oral traditions, customs, traditional knowledge and popular wisdom, and that their reflection can be found in social practices and the traditional forms of social organization for managing wetland resources, and especially water;
4. FURTHER RECOGNIZING that sustainable traditional uses of wetland resources have frequently created cultural landscapes of significant value to wetland conservation and wise use;
5. AWARE that the cultural values of wetlands have been and still are of great importance to societies living in wetlands and their surroundings, and constitute part of their identity; thus their loss may not only contribute to their alienation from wetlands, but also cause significant negative social and ecological impacts;
6. RECOGNIZING that cultural knowledge of wetlands constitutes a collective legacy for today's societies;
7. AWARE that most of the knowledge about practices, and practices themselves, of traditional wetland management in the diverse cultures have contributed to wetland conservation and wise use over millennia, and continue to contribute to it;
8. FURTHER AWARE that in addition to their spiritual dimension of this knowledge and other aspects of past wetland management, such values can be of considerable socio-economic importance, since they can be used as a resource for sustainable tourism and recreational activities and, through them, contribute to an increase of income and quality of life for the inhabitants;

9. CONSCIOUS of the fact that the adequate recognition of and support for cultural heritage, both material and non-material, is an indispensable component in any process for the sustainable use of wetland resources;
10. RECOGNIZING that there are important weaknesses and gaps in the procedures and methods for identifying, valuing and protecting the cultural heritage of wetlands, as well as in defining and implementing policies related to them;
11. NOTING that the profound and rapid social and economic transformations that have taken place during recent decades have increasingly threatened the adequate preservation of the cultural heritage that is typical of wetlands in many parts of the world;
12. RECOGNIZING that there are various multilateral agreements and organizations that work to recognize and protect cultural values and relationships with ecosystems including wetlands;
13. ACKNOWLEDGING that the Ramsar Convention needs to work in cooperation with multilateral and regional agreements and other bodies addressing the need for resolute action to preserve the cultural heritage, including among others:
 - the Convention Concerning the Protection of the World Cultural and Natural Heritage (Paris, 1972);
 - the Call of Granada (1975) of the Council of Europe on Rural architecture and its landscape;
 - Recommendation 881 (1979) of the Parliamentary Assembly of the Council of Europe on Rural architecture heritage;
 - UNESCO's activities in the promotion of the conservation of cultural heritage;
 - the general principles for conservation proposed by the Vernacular Built Heritage Charter (Jerusalem, 1996), ratified by the XI General Assembly of the International Council of Monuments and Historical Sites (ICOMOS);
 - the various recommendations of the World Intellectual Property Organization (WIPO) for the protection, conservation, legal status, economic exploitation, and international protection of folklore;
 - the Convention on Biological Diversity, in particular concerning its Decision VI/10 of the Conference of the Contracting Parties on the *Outline of the composite report on the status and trends regarding the knowledge, innovations and practices of indigenous and local communities relevant to the conservation and sustainable use of biodiversity*, and the plan and timetable for its preparation; and on *Recommendations for the conduct of cultural, environmental and social impact assessment regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities*;
 - the European Landscape Convention (Florence, 2000);
 - the Convention concerning Indigenous and Tribal Peoples in Independent Countries (International Labour Organisation No. 169, 5 September 1991); and
 - the Permanent Forum of Indigenous People.
14. RECALLING that *inter alia* the text of the Ramsar Convention already recognizes, in the third paragraph of its preamble, "that wetlands constitute a resource of great

economic, cultural, scientific, and recreational value, the loss of which would be irreparable” and FURTHER RECALLING that COP7 adopted *Guidelines for establishing and strengthening local communities’ and indigenous peoples’ participation in the management of wetlands* (Resolution VII.8); and

15. NOTING the background documentation and examples on the cultural aspects of wetlands from around the world presented during Technical Session 5 of this meeting of the Conference of the Parties;

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16. TAKES NOTE WITH INTEREST of the list of *Guiding Principles* included in the Annex to this Resolution;
17. REQUESTS that the Ramsar Bureau seek inputs from Contracting Parties, experts and practitioners, and local communities and indigenous peoples from around the world to enhance the information paper on cultural aspects of wetlands (COP8 DOC. 15) and the detailed guidance prepared for consideration by this meeting of the Conference of the Parties, with a view to publishing it as a background document, and to inform COP9 of the progress made;
18. ENCOURAGES Contracting Parties to consider using the list of *Guiding principles* included in the Annex to this Resolution, but only in relation the conservation and enhancement of the cultural values of wetlands;
19. FURTHER ENCOURAGES Contracting Parties, within their national and legal frameworks and available resources and capacity:
 - a) to consider the compilation and assessment of both material and non-material cultural elements related to wetlands and water, in particular when preparing the Ramsar Information Sheet (RIS) for the designation of new Wetlands of International Importance or when updating the RIS of existing Ramsar sites, taking into account, as appropriate, intellectual property rights, customary law, and the principle of prior informed consent, in accordance with CBD and WIPO rules;
 - b) to promote the appreciation and revitalization, of these cultural values among populations close to wetlands, and in general among the wider public;
 - c) to include relevant aspects of cultural heritage in both the design and implementation of wetland management plans;
 - d) to make efforts to integrate cultural and social impact criteria into environmental assessments, which could include, *inter alia*, issues of particular cultural concern, such as beliefs and religions, customary practices, forms of social organization, systems of natural resources use, including patterns of land use, places of cultural significance, sacred sites and ritual ceremonies, languages, customary lore/law systems, political structures, roles and customs;

- e) to carry out such efforts with the active participation of indigenous peoples, local communities and other stakeholders, and to consider using the cultural values of wetlands as a tool to strengthen this involvement, particularly in wetland planning and management;
20. ENCOURAGES Contracting Parties to recognize cultural and heritage values relating to wetlands in their existing heritage protection, legal framework and policies;
 21. INVITES Contracting Parties to consider conducting appropriate joint educational and training activities with regard to the cultural values of wetlands, as well as to consider developing pilot projects for testing on a local, regional and national scale with a view to further improving the application and/or integration of the *Guiding Principles* in wetland conservation and wise use;
 22. ENCOURAGES Contracting Parties to establish appropriate consultation mechanisms at regional or national levels, in order to consider how the *Guiding Principles* might be applied in developing and promoting the cultural values of wetlands; and
 23. URGES Contracting Parties and the Ramsar Bureau to develop synergies and to avoid duplication of efforts with the relevant multilateral agreements, such as those mentioned in paragraph 13 above.

Annex

Guiding principles for taking into account the cultural values of wetlands for the effective management of sites

General principles

1. This document proposes a number of general principles for identifying, preserving and reinforcing the cultural values of wetlands, which could be supplemented with additional ones at future meetings of the Conference of the Parties as more knowledge and experience are obtained. Some of them may overlap, but this is only natural as cultural values are often related and require an integrative approach.
2. There is a strong link between wetland conservation and benefits to people. In addition, a positive correlation between conservation and the sustainable use of wetlands has been repeatedly demonstrated. Therefore, conservation requires the involvement of indigenous peoples and local communities and cultural values offer excellent opportunities for this.

Guiding principle 1 – To identify the cultural values and relevant associated partners.

Guiding principle 2 - To link the cultural aspects of wetlands with those of water.

Guiding Principle 3 - To safeguard the wetland-related cultural landscapes.

Guiding principle 4 - To learn from traditional approaches.

Guiding principle 5 – To maintain traditional sustainable self-management practices.

Guiding principle 6 – To incorporate cultural aspects in educational and interpretive activities in wetlands.

Guiding principle 7 – To take into account culturally appropriate treatment of gender, age and social role issues.

Guiding principle 8 – To bridge the differences of approach between natural and social sciences.

Guiding principle 9- To mobilise international cooperation in matter of culture issues related to wetlands.

Guiding principle 10 – To encourage research on palaeoenvironmental, palaeontological, anthropological and archaeological aspects of wetlands.

Guiding principle 11 – To safeguard wetland-related traditional production systems.

Guiding principle 12 – To protect historical structures in wetlands or closely associated with them.

Guiding principle 13 – To protect and preserve wetland-related artefacts (mobile material heritage).

Guiding principle 14 – To preserve collective water and land use management systems associated with wetlands.

Guiding principle 15 – To maintain traditional sustainable practices used in and around wetlands, and value the products resulting from these practices.

Guiding principle 16 – To safeguard wetland-related oral traditions.

Guiding principle 17 – To keep traditional knowledge alive.

Guiding principle 18 – To respect wetland-related religious and spiritual beliefs and mythological aspects in the efforts to conserve wetlands.

Guiding principle 19 – To use the arts to promote wetland conservation and interpretation.

Guiding principle 20 – To incorporate cultural aspects, where available, in the Ramsar Information Sheet (RIS) for the description of Wetlands of International Importance, whilst ensuring the protection of traditional rights and interests.

Guiding principle 21 – To incorporate the cultural aspects of wetlands in management planning.

Guiding principle 22 – To include cultural values in wetland monitoring processes.

Guiding principle 23 – To consider the use of institutional and legal instruments for conservation and protection of cultural values in wetlands.

Guiding principle 24 – To integrate cultural and social criteria into environmental impact assessments.

Guiding principle 25 – To improve wetland-related communication, education and public awareness (CEPA) in the matter of the cultural aspects of wetlands.

Guiding principle 26 – To consider the possibility of using quality labeling of sustainable traditional wetland products in a voluntary and non-discriminatory manner.

Guiding principle 27 – To encourage cross-sectoral cooperation.

"Wetlands: water, life, and culture"
8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002

Resolution VIII.20

General guidance for interpreting “urgent national interests” under Article 2.5 of the Convention and considering compensation under Article 4.2

1. RECALLING that Article 2.5 of the Ramsar Convention states that “any Contracting Party shall have the right . . . because of its urgent national interests, to delete or restrict the boundaries of wetlands already included by it in the List”;
2. RECALLING that Article 4.2 of the Ramsar Convention states that “Where a Contracting Party in its urgent national interest, deletes or restricts the boundaries of a wetland included in the List, it should as far as possible compensate for any loss of wetland resources”;
3. RECOGNIZING that Articles 2.5 and 4.2 of the Ramsar Convention do not supply any guidance as to the interpretation of the term “urgent national interests” or to how compensation should be determined;
4. NOTING that Resolution VII.23 requested the Standing Committee, in cooperation with the Bureau and the Scientific and Technical Review Panel (STRP), to develop for consideration and possible adoption at COP8 guidance for the Contracting Parties in interpreting Articles 2.5 and 4.2; and
5. REAFFIRMING the provision of Article 2.3 of the Convention which states that “the inclusion of a wetland in the List does not prejudice the exclusive sovereign rights of the Contracting Party in whose territory the wetland is situated”;

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6. ADOPTS the Annex to this Resolution entitled *General guidance for interpreting “urgent national interests” under Article 2.5 of the Convention and considering compensation under Article 4.2 of the Convention*; and
7. ENCOURAGES Contracting Parties to take into account this general guidance when invoking their right under Article 2.5 and considering compensation in those cases where the boundaries of sites included in the Ramsar List are restricted or a Ramsar site is deleted from the List.

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Annex

General guidance for interpreting “urgent national interests” under Article 2.5 of the Convention and considering compensation under Article 4.2

Purpose

1. In keeping with Article 2.3 of the Convention that “the inclusion of a wetland in the List does not prejudice the exclusive sovereign rights of the Contracting Party in whose territory the wetland is situated,” the determination of “urgent national interests” lies solely with the Contracting Party. The following guidance may assist Contracting Parties in interpreting Article 2.5 and Article 4.2. This guidance may be used by Contracting Parties if they so wish.
2. This general guidance does not prevent a Contracting Party from maintaining or introducing more stringent regulations for the application of the “urgent national interests” clause of the Convention and the provisions for compensation when the clause has been invoked.

Urgent national interests

3. When invoking its right under Article 2.5 to delete from or restrict the boundaries of wetlands included in the List of Wetlands of International Importance (Ramsar sites) in the case of urgent national interests, a Contracting Party may take into account, *inter alia*:
 - 3.1 the national benefits of maintaining the integrity of the wetlands system and its related benefits;
 - 3.2 whether maintaining the status quo threatens a national interest;
 - 3.3 whether the proposed change is consistent with national policies;
 - 3.4 whether the immediate action is required to avert a significant threat;
 - 3.5 whether a national interest is being increasingly threatened;
 - 3.6 all reasonable alternatives to the proposed action, including the “without project” option, finding an alternative location, introducing buffer zones, etc.;
 - 3.7 the existing functions and economic, social and ecological values of the site in question. (The more important the site’s values and functions, the higher should be the social, economic, or ecological benefits of the proposed project.);
 - 3.8 the particular value of habitats harbouring endemic, threatened, rare, vulnerable or endangered species;
 - 3.9 whether the proposed action provides benefits to a large base of recipients;
 - 3.10 whether, over the long term, the proposed action offers greater benefits;
 - 3.11 the alternative that will best minimize harm to the site in question; and
 - 3.12 transboundary effects.

Compensation

4. When invoking its right under Article 2.5 of the Convention in cases of urgent national interests, a Contracting Party should as far as possible compensate for any loss of wetland

resources. When considering such compensation, a Contracting Party may take into account, *inter alia*, the following:

- 4.1 the maintenance of the overall value of the Contracting Party's wetland area included in the Ramsar List at the national and global level;
- 4.2 the availability of compensatory replacement;
- 4.3 the relevance of the compensatory measure to the ecological character, habitat, or value of the affected Ramsar site(s);
- 4.4 scientific and other uncertainties;
- 4.5 the timing of the compensatory measure relative to the proposed action; and
- 4.6 the adverse effect the compensatory measure itself may cause.

Procedural matters

5. A prior environmental assessment, taking into consideration the full range of functions, services, and benefits offered by the wetland, would normally be an appropriate first step when a Contracting Party is invoking the right under Article 2.5 to delete from the List or restrict the boundaries of listed wetlands, and proposing mitigation or compensatory measures under Article 4.2. Whenever possible, the assessment should be made in full consultation with all stakeholders.
6. In invoking the right under Article 2.5 to delete from the List or restrict the boundaries of listed wetlands, a Contracting Party should take into account that where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.
7. In invoking the right under Article 2.5 to delete from the List or restrict the boundaries of listed wetlands, a Contracting Party shall inform the Ramsar Bureau of such changes in boundaries at the earliest possible time, as required by Article 2.5. A Contracting Party, when notifying such changes to the Bureau, may request advice including from the Scientific and Technical Review Panel (STRP) and/or Standing Committee before any irreversible action is taken.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
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Valencia, Spain, 18-26 November 2002

Resolution VIII.21

**Defining Ramsar site boundaries more accurately in Ramsar
Information Sheets**

1. RECALLING that Article 2.5 of the Convention makes provision for site deletions or restrictions and states that “any Contracting Party shall have the right . . . because of its urgent national interests, to delete or restrict the boundaries of wetlands already included by it in the List”, and that Article 4.2 states that “where a Contracting Party in its urgent national interest, deletes or restricts the boundaries of a wetland included in the List, it should as far as possible compensate for any loss of wetland resources, and in particular it should create additional nature reserves for waterfowl and for the protection, either in the same area or elsewhere, of an adequate portion of the original habitat”;
2. RECALLING Resolution VIII.20 on *General guidance for interpreting “urgent national interests” under Article 2.5 of the Convention and considering compensation under Article 4.2* and AFFIRMING that the present Resolution only relates to those cases where urgent national interest under Article 2.5 of the Convention has not been invoked by the Contracting Party concerned;
3. RECALLING that Resolution VII.23 recognized that there are situations other than the urgent national interest provision of Article 2.5 of the Convention text in which Ramsar site boundaries may warrant further definition, for example, where boundaries were erroneously or inaccurately defined at the time of listing;
4. ALSO RECALLING that in Resolution VII.23 the Contracting Parties asked the Standing Committee to develop and propose to the 8th Meeting of the Conference of the Contracting Parties a procedure for the review of Ramsar site boundaries for reasons other than urgent national interest without prejudice to other international obligations;
5. AWARE that Article 2.1 of the Convention obliges Contracting Parties to describe precisely and delimit on a map the boundaries of the wetlands designated for inclusion in the List of Wetlands of International Importance, and RECALLING Resolution 5.3 which recognized that some wetlands were designated for the List before any criteria or information recording system had been developed under the Convention;
6. ALSO RECALLING that in Resolution VI.13 the Contracting Parties resolved to revise for monitoring purposes the Ramsar site data, consisting of maps and Information Sheet for each designated wetland at least every six years; and
7. NOTING that Resolution VIII.13 has adopted revised guidance on the completion of the Information Sheet on Ramsar Wetlands, including on the provision of maps;

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8. URGES Contracting Parties to make the necessary efforts so that the Ramsar Information Sheet (RIS) and map for each listed site provides, as far as possible, an accurate and up to date description of the site, utilizing the guidance on the completion of the RIS adopted by Resolution VIII.13, and RECOGNIZES that this may require an improved description of the boundary of a site in the RIS and in some cases refinement of the mapped site boundary itself;
9. RECOMMENDS to Contracting Parties that refinement of the mapped Ramsar site boundary should only occur where the change is so minor that it does not substantially affect the fundamental objectives for which the site was listed, and:
 - a) the site boundary has been drawn incorrectly and there has been a genuine error; and/or
 - b) the site boundary does not accurately match the description of the boundary as defined in the RIS; and/or
 - c) technology allows for a higher resolution and more accurate definition of the site boundary than was available at the time of Listing;
10. CALLS UPON any Contracting Party that submits to the Bureau an updated description of the boundary of a site in the Ramsar Information Sheet and/or the Ramsar site map, to:
 - a) make any such change clear in its revised RIS and/or on the site map; and
 - b) document reasons for such refinement by referring to the considerations in paragraph 9 of this resolution;
11. INSTRUCTS the Ramsar Bureau to bring the content of this Resolution to the attention of any Contracting Party that is proposing to refine the description of the site boundary in a Ramsar Information Sheet and on the Ramsar site map, and to report to the Standing Committee on any such revisions and accompanying documentation provided in response to paragraph 9 (b) of this Resolution; and
12. CALLS upon the Scientific and Technical Review Panel to investigate the inclusion of a core data field in the Ramsar Information Sheet to allow for the insertion of a precise site boundary description and the preparation of guidance about this field for inclusion in the accompanying RIS *Explanatory Notes and Guidelines*, as revised by Resolution VIII.13.

"Wetlands: water, life, and culture"
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Valencia, Spain, 18-26 November 2002

Resolution VIII.22

Issues concerning Ramsar sites that cease to fulfil or never fulfilled the Criteria for designation as Wetlands of International Importance

1. RECALLING that Article 2.5 of the Convention makes provision for site deletions or restrictions and states that “any Contracting Party shall have the right . . . because of its urgent national interests, to delete or restrict the boundaries of wetlands already included by it in the List”, and that Article 4.2 states that “where a Contracting Party in its urgent national interest, deletes or restricts the boundaries of a wetland included in the List, it should as far as possible compensate for any loss of wetland resources, and in particular it should create additional nature reserves for waterfowl and for the protection, either in the same area or elsewhere, of an adequate portion of the original habitat”;
2. NOTING that Resolution VIII.20 provides general guidance for interpreting “urgent national interests” under Article 2.5 of the Convention and for considering compensation under Article 4.2;
3. FURTHER RECALLING that Resolution VII.23 recognized that there are situations other than the urgent national interest provision of Article 2.5 of the Convention text in which Ramsar site boundaries may warrant further definition;
4. ALSO NOTING that Resolution VIII.21 provides guidance for defining Ramsar site boundaries more accurately in the Information Sheet on Ramsar Wetlands (RIS), in order to address situations where boundaries were erroneously or inaccurately defined at the time of listing, and that Resolution VIII.13 provides further guidance for the application and completion of the RIS, including the provision of maps;
5. FURTHER NOTING that at present there is no guidance provided by the Convention to assist Contracting Parties where a Ramsar site ceases to fulfil the Criteria for designation as a Wetland of International Importance, with the exception of Resolution 5.3 which includes as its annex a Review Procedure for sites which did not meet the Criteria at the time of listing; and that no guidance has been provided on situations where part of a site either unavoidably loses the values, functions and attributes for which it was included, or was included in error; and
6. RECOGNIZING that there may be situations where:
 - a) a Ramsar site never met the Criteria for designation as a Wetland of International Importance;

- b) part or all of a Ramsar site unavoidably loses the values, functions and attributes for which it was included, or was included in error; or
- c) a Ramsar site at the time of listing met the criteria but, whilst its values, functions and attributes remain unchanged, it later fails to meet the Criteria because of a change in those Criteria or in the population estimates or parameters which underpin them;

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7. PROPOSES that, with regard to such situations, a number of issues require further consideration, covering:
 - a) identification of scenarios in which a listed Ramsar site may cease to fulfil the Criteria for designation as a Wetland of International Importance;
 - b) obligations of Contracting Parties under the Convention and the possible application of compensation measures under Article 4.2; and
 - c) procedures that could be applied should the deletion or restriction of boundaries need to be contemplated in such situations; and
8. REQUESTS that the Standing Committee, taking account of the issues in paragraph 7 above, with support from the Ramsar Bureau and International Organization Partners, the Scientific and Technical Review Panel (STRP), appropriate legal and other experts, and interested Contracting Parties, develop for consideration and possible adoption at COP9 guidance for Contracting Parties about the issues covered in this Resolution and their relationship to the issues covered by Resolutions VIII.20 and VIII.21.

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Valencia, Spain, 18-26 November 2002

Resolution VIII.23

Incentive measures as tools for achieving the wise use of wetlands

1. RECALLING:

- a) Article 3.1 of the Convention, which states that Contracting Parties “shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List, and as far as possible the wise use of wetlands in their territory”;
- b) Resolution 5.6 on *Additional guidance for the implementation of the wise use concept*, which encouraged the removal of perverse incentives, including tax benefits and subsidies, which encourage the destruction of wetlands, and the introduction of positive incentives that are compatible with, and encourage, their wise use and conservation; and
- c) Resolution VII.15, in which the COP
 - i) called upon Contracting Parties to ensure that incentive measures are taken into consideration when applying Resolution VII.6 concerning the development and implementation of National Wetland Policies and Resolution VII.7 concerning the review of laws and institutions to promote the conservation and wise use of wetlands; and
 - ii) requested the Scientific and Technical Review Panel (STRP) to review existing guidelines and available information on incentive measures and make this available as an Internet-based resource kit and to explore the use of impact assessments as tools for identifying opportunities for implementing incentive measures; and directed the STRP to prepare a report on the design, implementation, monitoring and removal of perverse incentives;

2. ACKNOWLEDGING Decision V/15 of the Convention on Biological Diversity (CBD), which refers to collaboration with the Convention on Wetlands, the second CBD/Ramsar Joint Work Plan, which recognized the role of IUCN–The World Conservation Union in facilitating linkages between CBD and Ramsar work on incentive measures, and recommendation VII/9 of the CBD’s Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), which stressed the need to examine the policies and programmes under different multilateral environmental agreements to ensure that they provide mutually reinforcing incentives;

3. RESTATING the fundamental importance of assessing, revising, and developing incentive measures as tools for the conservation and wise use of wetlands, and the removal of perverse incentives that impede the delivery of such conservation and wise use;
4. AWARE that financing mechanisms, trade, impact assessment and economic valuation are intricately linked with the use and success of incentive measures in achieving the conservation and wise use of wetlands;
5. RECOGNIZING the preparation by IUCN of an Environmental Economics Web Site, which includes information, guidance and case studies on incentives, and the establishment by the STRP and the Center for International Earth Science Information Network, Columbia University, USA (CIESIN) of a Web-based data deposit for further information on incentive measures; and
6. NOTING the establishment of a Memorandum of Cooperation between the Ramsar Bureau and the International Association for Impact Assessment (IAIA) and the role of impact assessment as a tool for establishing opportunities for implementing incentive measures;

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7. URGES Contracting Parties to continue to review existing legislation and practices in order to identify and remove perverse incentives such as taxes and subsidies, and to carry out participatory consultative processes to define clear and target-oriented incentive measures which address the underlying causes of wetland loss;
8. FURTHER URGES Contracting Parties to develop supportive legal and policy frameworks for the design and implementation of incentive measures;
9. ENCOURAGES Contracting Parties to make use of the IUCN and CIESIN Internet-based resource kit (<http://www.biodiversityeconomics.org/assessment/ramsar-503-01.htm>) as a source of information and guidance to assist in their design and implementation of incentive measures for wetland conservation and wise use; and to advise the Ramsar Bureau on the relevance, quality, and accessibility of the information provided on this Web-based resource kit and indicate further needs regarding information on incentive measures;
10. REQUESTS Contracting Parties and others to provide appropriate materials, case studies indicating lessons learned, guidelines, and sources of advice on incentive measures relevant to wetlands to the Ramsar Bureau for incorporation on the Internet-based resource kit;
11. REQUESTS the STRP, in collaboration with IUCN, the subsidiary bodies of other environmental conventions, and other relevant organizations, to continue to identify wetland-related elements of existing guidelines on incentive measures, so as to recognize important gaps where such guidance is failing to meet fully the needs of the Parties, to

investigate possible ways of filling such gaps, and to prepare a report on these matters for COP9;

12. FURTHER REQUESTS the STRP, in collaboration with IUCN, IAIA, other relevant bodies and experts and the Bureau, to investigate the linkages between incentives and related topics including financial mechanisms, trade, impact assessment, and valuation and to report on its findings at COP9; and
13. URGES Contracting Parties and others to provide financial and expert support to the work of the STRP in this area.

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Valencia, Spain, 18-26 November 2002

Resolution VIII.24

UNEP's Guidelines for enhancing compliance with multilateral environmental agreements, and Guidelines for national enforcement, and international cooperation in combating violations, of laws implementing multilateral environmental agreements

1. NOTING the difficulties encountered by many Contracting Parties in implementing multilateral environmental agreements, including the Convention on Wetlands, due, *inter alia*, to limited institutional capacity and resources in the areas of reporting, monitoring, and verification; and
2. RECALLING that paragraph 49 of the Plan of Implementation of the World Summit on Sustainable Development calls for urgent action at all levels *inter alia* to actively promote corporate responsibility and accountability, based on the Rio Principles, including through the full development and effective implementation of intergovernmental agreements and measures; and
3. WELCOMING the adoption by the Governing Council of the United Nations Environment Programme (UNEP) at its Seventh Special Session of the Guidelines for enhancing compliance with multilateral environmental agreements and of the Guidelines for national enforcement, and international cooperation in combating violations, of laws implementing multilateral environmental agreements (Decision SSVII/4)¹;

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4. INVITES Contracting Parties to make use, as appropriate, of the assistance these guidelines provide in enhancing and supporting compliance with multilateral environmental agreements, including the Ramsar Convention; and
5. REQUESTS the Ramsar Bureau to continue to work with the Executive Director of UNEP in efforts to include Administrative Authorities of the Ramsar Convention in activities designed to strengthen the capacity of developing countries, particularly the least developed countries, and countries with economies in transition in the areas of compliance with and enforcement of multilateral environmental agreements.

¹ Available on: http://www.unep.org/governingbodies/gc/specialsessions/gcss_vii/.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
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Valencia, Spain, 18-26 November 2002

Resolution VIII.25

The Ramsar Strategic Plan 2003-2008

1. RECALLING that Resolution VI.14 adopted the Strategic Plan 1997-2002 as the basis for the implementation of the Convention;
2. RECOGNIZING that the implementation by Contracting Parties and others of the Strategic Plan 1997-2002 has permitted a more coherent and effective realization of the Convention, but AWARE that there remain many and increasing challenges to achieving globally consistent delivery of wetland conservation and wise use;
3. AWARE that to achieve wetland conservation and wise use, a broader approach to wetland conservation and sustainable development is needed, notably in relation to poverty eradication and food and water security, integrated approaches to water management, climate change and its predicted impacts, increasing globalization of trade and reducing of trade barriers, the increasing role of the private sector, and the increasing influence of development banks and international development agencies;
4. FURTHER AWARE of a number of challenges that still require urgent attention in order to achieve wetland wise use under the Convention, including *inter alia*: inventory; assessment and monitoring; institutional frameworks and laws; integration of wetland wise use into local, national and international planning and decision-making; the role of wetlands, their values and functions in supporting human well-being and alleviating poverty; restoration and rehabilitation of wetlands; invasive alien species; agricultural influence and impact; management by local communities and indigenous people; cultural issues; involvement of the private sector; incentive measures; communication, education and public awareness; strategic designation of Wetlands of International Importance; strengthening joint activities between multilateral environmental agreements; catalyzing funding for wetland work; collaboration with the Convention's partner organizations, scientific networks and other stakeholder groups; training and capacity-building; and universal membership of the Convention;
5. RECOGNIZING that each Contracting Party is free to choose the extent to which it will implement the Strategic Plan, the resources it will allocate to the implementation, and the timeframes to be used; and
6. AWARE ALSO that the Strategic Plan 2003-2008 has been prepared by the Standing Committee through a wide consultative process with Contracting Parties, the Convention's International Organization Partners and other partners, including intergovernmental and non-governmental organizations;

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7. APPROVES the Strategic Plan 2003-2008 as annexed to this Resolution as the basis for the implementation of the Convention, and INSTRUCTS the Ramsar Bureau to finalize the text of the Plan to take into account the Resolutions adopted by the 8th Meeting of the Conference of the Contracting Parties and to make available the finalized text of the Plan to Contracting Parties and all others concerned with its implementation;
8. URGES all Contracting Parties, the Standing Committee, the Scientific and Technical Review Panel, the Ramsar Bureau, and the Convention's International Organization Partners to take on the renewed challenge of implementing the Strategic Plan 2003-2008 through the targets established by the Convention's Work Plan 2003-2005 (Resolution VIII.26); and
9. INVITES other multilateral environmental agreements, non-governmental organizations, scientific academies and research institutions, professional scientific and technical bodies, the donor community, and the private sector to contribute to the implementation of the Strategic Plan 2003-2008.

Annex

The Ramsar Strategic Plan 2003-2008

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SECTION I

PROGRESS, FUTURE CHALLENGES AND GENERAL OBJECTIVES FOR WETLAND CONSERVATION AND WISE USE

Introduction

1. The 8th Meeting of the Conference of the Contracting Parties to the Convention on Wetlands, held in Spain on 18-26 November 2002, adopted this Strategic Plan for the application of the Convention during the period 2003-2008. It builds upon the first Ramsar Strategic Plan, which covered the period 1997-2002.
2. This second Strategic Plan recognizes the adoption by the Convention of a broader approach to wetland conservation and sustainable use in achieving full application of the wise use principle¹ and safeguarding wetland resources. It takes into consideration the results of the 2002 World Summit on Sustainable Development, as well as those of recent major events concerning water resources management.
3. The Plan provides a renewed challenge for all those with responsibilities for, or commitments to, the delivery of the Convention – Contracting Parties; the Convention's bodies, including the Standing Committee, the Scientific and Technical Review Panel, the Ramsar Bureau (the Convention's secretariat), and the Mediterranean Wetlands Committee (MedWet/Com); the International Organization Partners; and a range of other bodies and organizations with which the Convention works, including in particular the other multilateral environmental agreements (MEAs).
4. Full implementation of the Plan will need effective synergies with other MEAs and increased involvement of non-governmental, civil society, and community-based organizations, foundations and other conservation institutes, national science academies and research councils, research and educational institutions, and national professional scientific and technical societies, as well as significantly increased private sector involvement.

The Mission and Achievements of the Ramsar Convention

5. The Convention's mission is "the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world."
6. The Convention defines "wetland" in very broad terms² in recognition of the intrinsic importance of wetlands to the maintenance of healthy and productive inland and coastal ecosystems.

¹ The Convention defines wise use of wetlands as "their sustainable utilization for the benefit of human kind in a way compatible with the maintenance of the natural properties of the ecosystem" and sustainable utilization as "human use of a wetland so that it may yield the greatest continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations".

² "Wetlands are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres" (Article 1.1 of the Convention).

7. The Convention on Wetlands (Ramsar, Iran, 1971) is the oldest of the global MEAs. It owes its origins to the urgent need to combat widespread drainage and destruction of wetlands and the habitats they provide for migratory species, notably waterbirds.
8. Since its inception, the Convention has progressively developed its scope and approach to address the sustainable utilization of wetlands (considered to be synonymous with the Convention's concept of "wise use") in the context of integrated territorial and water resource planning and management. The Convention stresses that it is essential to integrate the conservation of wetlands and sustainable use as a contribution to the health and well-being of people through sustainable development everywhere.
9. Significant achievements of the Ramsar Convention during the period of implementation of the Strategic Plan 1997-2002 include:
 - a) 134 States as Contracting Parties to the Convention (as of 26 November 2002);
 - b) a major contribution to increasing the recognition and understanding of the crucial role of wetland functions and services in the daily lives of people;
 - c) the production of an increasingly comprehensive range of policy and technical guidelines to assist Contracting Parties with implementing the Convention;
 - d) the adoption by over 55 Contracting Parties of National Wetland Policies or similar instruments and the establishment by 82 Contracting Parties of national Ramsar or wetland committees to ensure that cross-sectoral approaches are taken;
 - e) by the close of COP8, the designation by Contracting Parties of 1230 wetlands covering 105.9 million hectares for inclusion in the List of Wetlands of International Importance (the Ramsar List), and the establishment of management plans for 35% of these sites;
 - f) the lead taken by the Convention in establishing synergies with the conventions that emerged from the Rio 92 process and with other conventions and institutions, so that experiences and achievements may be shared for the benefit of wetland wise use;
 - g) the help through the Convention to generate more financial resources and technical assistance for wetland projects in developing countries and countries in transition, and since 1990 the operation of the Ramsar Small Grants Fund for Wetland Conservation and Wise Use. The Fund, although as yet modest in scale, has funded 156 projects in 86 countries;
 - h) the management by the Ramsar Bureau for the past eight years, with funding from the U.S. Government, of the Wetlands for the Future Initiative, providing support to training and education projects in Latin America and the Caribbean; and
 - i) the establishment of the Mediterranean Wetlands Initiative (MedWet), under the guidance of the Mediterranean Wetlands Committee, as a firm regional expression of the Convention, involving all countries in the Mediterranean basin and the Palestinian Authority, relevant international institutions, and non-governmental organizations.

The challenges for future wetland conservation and wise use

10. There is increasingly wide appreciation that wetlands, in all their forms, provide unique services to human societies and human well-being. Wetlands play a key role in the global hydrological cycle; supply water for the survival of biological diversity, human consumption, agricultural production and recreation; supply food (especially fish and rice and other natural products) and fibre (e.g. wood, peat and reeds); are centres of economic development focused around industry, transport, food production and tourism; and are places rich in unique plant and animal species as well.
11. However, in all regions of the world, human populations are suffering social, economic and environmental hardships resulting from the destruction and mismanagement of their natural resources, notably including their wetlands and water resources. The causes are multiple – from local actions and national policies to global issues.
12. Major global issues influencing the conservation and wise use of wetlands include:
 - a) increasing demands for water services to be allocated to agriculture, industry and human consumption in relation to the role of wetlands as both users and providers of water, and the need for water allocation and management to maintain their ecological functions;
 - b) climate change and its predicted impacts, including changing and more extreme patterns of drought, storms and flooding; rises in sea temperature and sea level; thawing of permafrost and glaciers; and changes in ecosystem distribution and quality; and the implications of these for species' survival;
 - c) increasing globalization of economic development, affecting agricultural, fisheries and other natural resource products;
 - d) the changing role of national governments through increasing privatization of services (including water supplies), devolution of decision-making responsibilities, and greater empowerment of local communities;
 - e) increasing land-use pressures leading to continuing loss and damage to the ecological character of wetlands and their values and functions;
 - f) increasing population pressure and economic challenges placing some local communities in the developing world on the edge of survival;
 - g) the increasing influence in the developing world of development banks and international development agencies and the need to ensure that such agencies are fully engaged in the major issues affecting wetlands; and
 - h) the need to ensure continuing political support and public interest in biodiversity issues and sustainable development ten years after the establishment of Agenda 21 through the Rio 92 process.
13. Many of the priority actions resulting from the World Summit on Sustainable Development (Johannesburg 2002) coincide with the current objectives of the Ramsar

Convention. Proper strategic planning should provide considerable opportunities for Ramsar Parties to maximize the effectiveness of their programmes by participating in WSSD-inspired efforts. Five key WSSD areas were identified by the UN Secretary General for the future of the planet: Water and sanitation, Energy, Health, Agricultural productivity, and Biodiversity and ecosystem management. Water and sanitation and Biodiversity and ecosystem management are of direct significance to Ramsar.

14. Specific WSSD objectives on which Ramsar could contribute are:
 - i) Halving, by the year 2015, the proportion of people without drinking water;
 - ii) Developing integrated water resources management and water efficiency plans by 2005;
 - iii) Developing and implementing national/regional strategies, plans and programs with regard to integrated river basin, watershed, and groundwater management;
 - iv) Improving the efficient use of water resources and promotion of their allocation among competing uses, giving priority to basic human needs while attending to the preservation or restoration of ecosystems;
 - v) Supporting actions to monitor and assess the scientific understanding of the water cycle;
 - vi) Improving water resource management;
 - vii) Increasing the understanding of the sustainable use, protection and management of water resources to advance long-term sustainability of freshwater, coastal, and marine environments;
 - viii) Maintaining and restoring depleted fish stocks, where possible by 2015;
 - ix) Achieving by 2010 a significant reduction in the current rate of loss of biological diversity;
 - x) Providing particular support to Africa's efforts to implement the New Partnership for Africa's Development (NEPAD), which includes a specific wetland component;
 - xi) Continuing support for the implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States; and
 - xii) Forming "Type 2 Outcomes" partnerships (multi-stakeholder partnerships) to accomplish sustainable use objectives.

15. The continuing challenge for Ramsar Contracting Parties is to ensure conservation and sustainable use of their wetlands and water resources within the context of these global pressures and changes. Despite the many tangible achievements on the ground, and with increasing awareness of the importance of wetland conservation and wise use for human well-being, the challenge remains strong.

16. To respond to this challenge, Contracting Parties to the Ramsar Convention seek to deliver their commitments to wetland conservation and wise use through three 'pillars' of action. These are:
 - a) working towards the wise use of their wetlands through a wide range of actions and processes contributing to human well-being (including poverty alleviation and water and food security) through sustainable wetlands, water allocation, and river basin management, including establishing national wetland policies and plans; reviewing and harmonizing the framework of laws and financial instruments affecting wetlands; undertaking inventory and assessment; integrating wetlands into the sustainable development process; ensuring public participation in wetland

management and the maintenance of cultural values by local communities and indigenous people; promoting communication, education and public awareness; increasing private sector involvement; and harmonizing implementation of the Ramsar Convention with other multilateral environmental agreements;

- b) devoting particular attention to the further identification, designation and management of a coherent and comprehensive suite of sites to complete the List of Wetlands of International Importance (the Ramsar List) as a contribution to the establishment of a global ecological network, and to ensure the effective monitoring and management of those sites included in the List; and
 - c) cooperating internationally in their delivery of wetland conservation and wise use, through the management of transboundary water resources and wetlands, and shared wetland species, collaboration with other conventions and international organizations, sharing of information and expertise, and increasing the flow of financial resources and relevant technologies to developing countries and countries in transition.
17. Each of these ‘pillars’ is addressed by a General Objective of this Strategic Plan (General Objectives 1 to 3). Two further General Objectives (General Objectives 4 and 5) provide the means to undertake effective implementation of the objectives related to the three pillars of the Convention. The General Objectives are given in Box 1.
18. Implementation of the General Objectives is delivered by the Operational Objectives and Actions in Section II of this Strategic Plan.

Box 1 - General Objectives of the Strategic Plan

The General Objectives of this Strategic Plan, and the Articles of the Convention to which they refer, are:

General Objective 1. The wise use of wetlands: To stimulate and assist all Contracting Parties to develop, adopt and use the necessary and appropriate instruments and measures to ensure the wise use of all wetlands within their territories.

Delivers Articles 3.1, 4.3, 4.4, and 4.5 of the Convention.

General Objective 2. Wetlands of International Importance: To stimulate and support all Contracting Parties in the appropriate implementation of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*¹, including the appropriate monitoring and management of listed sites as a contribution to sustainable development.

Delivers Articles 2.1, 2.2, 2.5, 2.6, 3.1, 3.2 and 4.2 of the Convention.

General Objective 3. International cooperation: To promote international cooperation through the active application of the *Guidelines for international cooperation under the Ramsar Convention*² and in particular to mobilize additional financial and technical assistance for wetland conservation and wise use.

Delivers Article 5 of the Convention.

General Objective 4. Implementation capacity: To ensure that the Convention has the required implementation mechanisms, resources and capacity to achieve its mission.

Delivers Articles 6, 7, and 8 of the Convention.

General Objective 5. Membership: To progress towards the accession of all countries to the Convention.

Delivers Articles 2.4 and 9 of the Convention.

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¹ Ramsar COP7 Resolution VII.11.

² Ramsar COP7 Resolution VII.19.

Rationale for the General Objectives

19. GENERAL OBJECTIVE 1: The wise use of wetlands

To stimulate and assist all Contracting Parties to develop, adopt and use the necessary and appropriate instruments and measures to ensure the wise use of all wetlands within their territories.

20. Under Article 3.1 of the Convention, Contracting Parties agree to “formulate and implement their planning so as to promote as far as possible the wise use of wetlands in their territory”. Through this concept of “wise use”, the Convention continues to emphasize that human use on a sustainable basis is entirely compatible with Ramsar principles and wetland conservation in general. The Ramsar wise use concept applies to all wetlands and water resources in a Contracting Party’s territory, not only to those sites designated as Wetlands of International Importance. Its application is crucial to ensuring that wetlands can continue fully to deliver their vital role in supporting maintenance of biological diversity and human well-being.
21. The Conference of the Contracting Parties has determined that the concept of wise use applies to broad planning affecting wetlands, and has therefore adopted *Guidelines for the implementation of the wise use concept* (Recommendation 4.10) and *Additional guidance for the implementation of the wise use concept* (Resolution 5.6). The “wise use” of wetlands has become one very important concept and *modus operandi* of the Convention, of particular relevance to developing countries where fighting poverty and social exclusion continues to be the highest priority. The Ramsar COP-approved guidance on the application of the wise concept has been published in the Ramsar Handbooks 1 to 6.
22. In the coming triennia, major emphasis in Ramsar implementation will be placed upon wetlands in the context of territorial spatial planning, water resource, river basin and coastal zone management, agricultural management, and sustainable management of economic activities and other decisions affecting wetlands. Where Contracting Parties are developing National Wetland Policies (or other policies encompassing conservation and wise use of wetlands), such policies should be cross-referenced to other national environmental and development planning measures. National Wetlands Policies should aim to integrate and adapt existing environmental and development planning measures to promote more effectively the wise use of wetlands.
23. This General Objective of the Strategic Plan also addresses the interaction between wise use and public awareness and education, public participation, legislation, institutions, training, policy development, planning, and general decision-making.
24. For the effective delivery of wise use, it is essential to recognize fully the values and functions of wetlands, including the wide range of social benefits and cultural significance embodied in them, particularly for people directly dependent upon wetlands. In recognition of this, the Conference of the Contracting Parties has adopted *Guidelines for establishing and strengthening local communities’ and indigenous people’s participation in the management of wetlands* (Resolution VII.8), and has placed further emphasis upon this issue through the adoption of *Guiding principles for taking into account the cultural values of wetlands for the effective management of sites* (annexed to Resolution VIII.19).

25. Public support is essential to generate political and legislative action, to allocate the required financial resources, and to ensure the successful implementation of wetland legislation and management. In turn, public support can only be achieved through information about, and understanding of, the issues and their resolution, including the benefits that individuals and societies can derive from wetlands.
26. In order to achieve the Convention's mission, it is essential that wetland values and functions, the Convention itself, and its activities become better known, appreciated and supported, as the Contracting Parties have recognized in Recommendations 5.8 and 5.10 and Resolutions VII.8, VII.9 and VIII.31.
27. Through the Operational Objectives and Actions designed to deliver this General Objective, the Convention will also focus on:
 - a) undertaking wetland inventory, assessments and monitoring;
 - b) managing wetlands adaptively in response to the impacts of global climate change and sea-level rise;
 - c) developing more sustainable agricultural practices;
 - d) restoring and rehabilitating the many degraded or lost wetlands and their values and functions, whilst recognizing that it is ecologically, economically and culturally more appropriate to maintain existing wetlands than to permit their damage and then seek to restore them;
 - e) addressing the major threats posed by invasive alien species to the future of wetlands;
 - f) promoting and improving existing incentives for the conservation and wise use of wetlands and making every effort to eliminate those incentives which are incompatible with sustainable use; and
 - g) involving the private sector in the conservation and wise use of wetlands.
28. In the coming triennia, special emphasis will be placed also on the conservation and wise use of peatlands, through the implementation of the *Guidelines for global action on peatlands* (Resolution VIII.17), in recognition of the severe pressures on this wetland type worldwide and their role in mitigating impacts of climate change and as depositories of cultural heritage, and as a demonstration of the ecosystem-based conservation approach under the Convention.
29. **GENERAL OBJECTIVE 2: Wetlands of International Importance**

To stimulate and support all Contracting Parties in the appropriate implementation of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*, including the appropriate monitoring and management of listed sites as a contribution to sustainable development.

30. The List of Wetlands of International Importance (the Ramsar List) constitutes the flagship of the Convention. As such, it deserves special attention by all those responsible for, or interested in, the implementation of the treaty.
31. The inclusion of wetlands in the List has proved to be an effective means of conserving wetlands, especially in cases where they have not otherwise been formally designated as protected areas. The number of sites on the List has grown at a steady pace over the years as new Contracting Parties have joined the Convention and existing Parties have designated additional sites, as indicated in paragraph 9 e) above.
32. While this is a welcome development, over 500 (40% of the total) of these sites are in only 24 Contracting Parties. Much greater effort is required to promote the listing of sites by many countries.
33. At COP7 the Parties made significant progress by adopting a *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11). Its purpose is “to provide a clearer view, or vision, of the long-term targets or outcomes which the Convention is seeking to achieve through the Ramsar List.” This General Objective aims at fully implementing the Strategic Framework, as complemented by COP8 Resolutions VIII.10, 11, 13, 21, 22 and 33, and to achieve the vision for the List:

“To develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the ecological and hydrological functions they perform.”

34. The listing of wetland types recognized as under-represented in the List and transboundary sites also requires priority attention.
35. Criteria for identifying Wetlands of International Importance have been adopted by the Conference of the Parties and reviewed over the years, and will continue to be kept under review as circumstances evolve and the Convention is able to adopt further guidance on this matter.
36. Designation of a wetland for the Ramsar List is only the starting point, since Contracting Parties accept an undertaking to conserve listed sites. The Conference of the Parties has placed increasing emphasis upon defining and maintaining the ecological character of Ramsar sites as a key to their conservation. This does not preclude human use but is intended to avoid fundamental adverse changes to wetland functions, values or attributes. The aim is to maintain at least the ecological character recorded at the time of designation. In many cases, additional measures will be required to restore functions, values or attributes lost prior to designation.
37. Working definitions of “ecological character” and “change in ecological character” and *Guidelines for describing and maintaining the ecological character of listed sites* were adopted at COP6 in 1996 and further refined at COP7 in 1999. The COP has also adopted mechanisms to assist the Contracting Parties with listed site issues:
 - a) the Montreux Record (Recommendation 4.8, Resolutions 5.4, VI.1, VII.12 and VIII.8) identifies Ramsar sites in need of priority action;

- b) the San José Record contributes to the promotion of wetland management (Resolution VIII.15); and
 - c) the Ramsar Advisory Missions (Recommendation 4.7, Resolutions VI.14 and VII.12) enable the Ramsar Bureau to provide Parties with expert advice.
38. In the coming triennia, particular attention will be given to the requirements of Article 3.2 of the Convention for each Contracting Party to “arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change as the result of technological developments, pollution or other human interference”, and to report this without delay to the Ramsar Bureau.
39. To achieve the maintenance of the ecological character of Ramsar sites, particular emphasis will be placed on more systematic implementation of management planning, through the application of the *New Guidelines on management planning for Ramsar Sites and other wetlands* (Resolution VIII.14) in order to identify, monitor and address changes in ecological character of sites.
40. The enhanced functionality of the Ramsar Sites Database will provide a key tool for assisting and reporting to Contracting Parties on their delivery of the designation and status of Ramsar sites; the management and monitoring processes that they require for the maintenance of their ecological character; and reporting and addressing change, and likely change, in ecological character under Article 3.2 of the Convention.
41. **GENERAL OBJECTIVE 3: International cooperation**
- To promote international cooperation through the active application of the *Guidelines for international cooperation under the Ramsar Convention* and in particular to mobilize additional financial and technical assistance for wetland conservation and wise use.**
42. Under Article 5 of the Convention, Contracting Parties have committed themselves to consult one another “about implementing obligations arising from the Convention especially in the case of wetlands extending over the territories of more than one Contracting Party or where a water system is shared by Contracting Parties”. This Article also refers to Parties coordinating their present and future policies and regulations concerning the conservation of wetlands and their flora and fauna.
43. At COP7 the Parties adopted the *Guidelines for international cooperation under the Ramsar Convention* (Resolution VII.19), upon which this General Objective (and Operational Objectives 12-15) of the Strategic Plan is largely based.
44. Through the Operational Objectives and Actions designed to deliver this General Objective, the Convention will focus on:
- a) intensifying its international cooperation activities, *inter alia* those related to transboundary freshwater and coastal wetlands and river basins, as well as transboundary water resources and shared wetland-dependent migratory species;

- b) developing further the coordination of activities with other relevant global and regional conventions and organizations;
 - c) promoting the further development of regional wetland sustainable use initiatives;
 - d) promoting the sharing of expertise and information, particularly through enhanced training opportunities, twinning and site networks, and Internet-based resource kits and knowledge and information sharing;
 - e) encouraging growth in the flow of international financial resources to eligible Parties;
 - f) promoting the application of sustainable agriculture and sustainable harvesting practices where wetland-dependent plants and animals are being traded both nationally and internationally; and
 - g) making efforts to ensure that wetland-related investment is consistent with the principles of conservation and wise use.
45. Actions delivering this General Objective provide mechanisms to allow Contracting Parties to assist each other in their development of capacity for, and consistent application of, the wise use of all wetlands, and the designation and management of Wetlands of International Importance, through General Objectives 1 and 2.
46. Actions under this General Objective also address the further harmonisation of working frameworks between multilateral environmental conventions (MEAs), national biodiversity status reporting, and incorporate the outcomes of the World Summit on Sustainable Development (WSSD).
47. **GENERAL OBJECTIVE 4: Implementation capacity**
- To ensure that the Convention has the required implementation mechanisms, resources, and capacity to achieve its mission.**
48. This General Objective relates to the operation of the Conference of the Contracting Parties and of Ramsar subsidiary bodies and mechanisms, including the Standing Committee, Scientific and Technical Review Panel (STRP), Mediterranean Wetlands Committee (MedWet/Com), Ramsar Bureau and its MedWet Coordination Unit, Small Grants Fund and its Endowment Fund, Voluntary Fund for the Convention's Communication, Education, and Public Awareness Programme, Montreux Record, San José Record, Ramsar Advisory Missions, and partnerships with national, regional and international bodies. It also relates to the resources and capacity required for the effective functioning of the Convention.
49. The Operational Objectives and Actions designed to deliver this General Objective aim to:
- a) ensure that the Conference of the Contracting Parties, subsidiary bodies and other Convention mechanisms are able to support efficiently the implementation of this Strategic Plan;

- b) ensure that Contracting Parties establish effective and efficient institutional mechanisms for implementing the Convention;
 - c) provide the necessary financial resources to enable the Convention's mechanisms and programmes to achieve the expanding expectations of the Contracting Parties;
 - d) maximize the mutual benefits of working with the Convention's International Organization Partners and their membership and expert networks, and other collaborating organizations; and
 - e) provide effective mechanisms for training and capacity-building to equip Contracting Parties to implement the Convention.
50. The Wise Use Guidelines emphasize that the conservation and wise use of wetlands require appropriately structured institutions in each Contracting Party. There is an urgent need in all regions and at all levels, particularly in developing countries and countries in transition, to strengthen the capacity of the institutions responsible for achieving the Convention's mission and objectives.
51. In order to strengthen existing institutions, an extensive programme of training and exchange of experiences is required. A strategic approach to identifying the precise training needs and target audiences will take account of the differences among regions, countries and sites. Furthermore, existing training opportunities need to be developed and supported and new initiatives begun in regions and subjects where such opportunities are lacking. A high level of international cooperation, including the transfer of environmentally sound technology and the exchange of information, will be a significant feature of this approach.
52. **GENERAL OBJECTIVE 5: Membership**
- To progress towards the accession of all countries to the Convention.**
53. In order for the Convention to achieve its Mission, all States should become Contracting Parties. While membership has grown steadily to encompass all regions of the world, there remain notable gaps, namely in parts of Africa, the Middle East, and amongst the Small Island Developing States.
54. Decisive efforts will continue to encourage non-Contracting Parties to join the Convention to benefit from the available tools and resources, and to ensure that the future work of the Convention is based on a comprehensive global dialogue of priorities and needs.

SECTION II

IMPLEMENTATION OF THE STRATEGIC PLAN 2003-2008

Operational Objectives and Actions

55. This section lists the Operational Objectives that address 21 areas of activity, and the specific Actions to deliver them that together should achieve the General Objectives of this Strategic Plan presented in Section I.
56. The Operational Objectives cover the following areas of activity:
 1. Inventory and assessment
 2. Policies and legislation, including impact assessment and valuation
 3. Integration of wetland wise use into sustainable development
 4. Restoration and rehabilitation
 5. Invasive alien species
 6. Local communities, indigenous people, and cultural values
 7. Private sector involvement
 8. Incentives
 9. Communication, education, and public awareness
 10. Designation of Ramsar sites
 11. Management planning and monitoring of Ramsar sites
 12. Management of shared water resources, wetlands and wetland species
 13. Collaboration with other institutions
 14. Sharing of expertise and information
 15. Financing the conservation and wise use of wetlands
 16. Financing of the Convention
 17. Institutional mechanisms of the Convention
 18. Institutional capacity of Contracting Parties
 19. International Organization Partners and others
 20. Training
 21. Membership of the Convention
57. Each Action under an Operational Objective contributes to the delivery of one or more of the General Objectives of this Strategic Plan. The General Objectives to be delivered by each action are indicated in bold at the end of each Action (e.g. **GO1, 3**).
58. The Actions in this Implementation section of the Strategic Plan 2003-2008 are addressed to the following responsible bodies of the Convention:

CPs:	The Contracting Parties to the Convention, in particular the Administrative Authority in each country and the Ramsar/Wetlands National Committees (or equivalent bodies) that should be in place in each Party
CEPA:	The Convention's Communications, Education and Public Awareness National Focal Points
SC:	The Standing Committee of the Convention

STRP:	The Scientific and Technical Review Panel and its network of National Focal Points
Bureau:	The Ramsar Bureau (the Convention's secretariat)
MedWet:	The Mediterranean Wetlands Committee and/or the Coordination Unit of the Mediterranean Wetlands Initiative, and organizations working as part of this regional network

59. The Plan also identifies actions involving collaborating partners of the Convention:

IOPs:	International Organization Partners: at present BirdLife International, IUCN – The World Conservation Union, Wetlands International, and the World Wide Fund for Nature (WWF)
MEAs:	Multilateral Environmental Agreements, in particular CBD, CCD, UNFCCC, CMS, World Heritage, and regional conventions with which Ramsar has agreements in place
OCs:	Other collaborators, including those with which Ramsar has agreements in place, in particular UNESCO's Man and the Biosphere Programme (MAB); Eurosite (the network of European natural heritage management bodies); The Nature Conservancy (TNC), Society of Wetland Scientists (SWS), Center for International Earth Science Information Network, Columbia University, USA (CIESIN), The International Association for Impact Assessment (IAIA), Ducks Unlimited (Canada, Mexico and USA), South Pacific Regional Environment Program (SPREP), Institute for Inland Water Management and Waste Water Treatment (RIZA, The Netherlands), Niger Basin Authority, and Lake Chad Basin Commission.

60. Those responsible for implementing, or who are urged to assist in implementing, each Action in the Implementation Plan are indicated in brackets {...}; for example: {CPs, STRP, Bureau}.

OPERATIONAL OBJECTIVE 1. INVENTORY AND ASSESSMENT

Operational Objective 1.1:

Describe the extent of wetland resources, especially at global and national (or, where appropriate, provincial) scales, in order to inform and underpin implementation of the Convention and in particular the application of the wise use principle.

Actions

1.1.1 Promote and encourage the use of standard wetland inventory methodologies following the Ramsar *Framework for Wetland Inventory* (Resolution VIII.6), to undertake, update and disseminate national (or, where appropriate, provincial) scientific inventories of wetlands.

GO1, 2 {CPs, IOPs, Bureau, MedWet}

2003-2005 global implementation target: By COP9, all Parties without completed inventories to have initiated action in line with the Ramsar Framework for Wetland Inventory, and as far as possible to have completed and disseminated comprehensive national wetland inventories.

1.1.2 Include in national wetland inventories information which identifies: a) potential Ramsar sites; b) wetlands of national, provincial or local importance in the territory of each

Contracting Party; and c) wetlands that need restoration and rehabilitation, with a list of priorities, giving particular priority to inventories of karst and caves, intertidal wetlands, coral reefs, peatlands, sites supporting globally threatened species, and other wetland types and features under-represented in the Ramsar List. **GO1, 2** {CPs, IOPs} (Refer also to Action 4.1.3)

2003-2005 global implementation target: All national wetland inventories initiated after COP8 to include information on wetland importance; potential Ramsar sites; wetlands for restoration; location of under-represented wetland types; and values and functions, in particular in relation to poverty eradication strategies.

- 1.1.3 Ensure that national arrangements for the custodianship, storage and maintenance of wetland inventory data and information, including metadata, are in place and introduce the necessary measures to ensure that this resource is both as comprehensive as possible and readily accessible to the full range of stakeholders. **GO1** {CPs}

2003-2005 global implementation target: All wetland inventories to have full data management, custodianship, and metadata records in place.

- 1.1.4 Make available a Web-based wetland inventory meta-database and encourage the inclusion of a metadata record for all national (including provincial) wetland inventories. **GO1** {STRP, Wetlands International, CPs}

2003-2005 global implementation target: By COP9, a Web-based metadatabase in place and populated with information on all national wetland inventories.

- 1.1.5 Undertake an update of the *Global Review of Wetland Resources and Priorities for Wetland Inventory (GRoWI)* to include updated information on the distribution and size of the wetland resource and progress in national (including provincial) wetland inventory since COP7 (Resolution VII.20), and report on this to COP9. **GO1** {STRP, Wetlands International, Bureau}

2003-2005 global implementation target: An update to be completed of the *Global review of wetland resources and priorities for wetland inventory (GroWI)* with a report to COP9.

- 1.1.6 Encourage the use of relevant information from wetland inventories by decision-makers, wetland managers and wetland users in the development and implementation of national wetland policies and national and local wetland programmes. **GO1** {CPs}

2003-2005 global implementation target: By COP9, all Parties with wetland inventories to have made these available to all stakeholders.

- 1.1.7 Give high priority to developing projects for inventory activities for the Small Grants Fund. **GO1** {CPs, SC, Bureau, MedWet}

See also COP8 Resolution VIII.6 for additional action related to this Operational Objective.

Operational Objective 1.2:

Assess and monitor the condition of wetland resources, both globally and nationally (or, where appropriate, provincially), in order to inform and underpin implementation of the Convention and in particular the application of the wise use principle.

Actions

- 1.2.1 Actively contribute to the work of the Millennium Ecosystem Assessment (MA) project (<http://www.millenniumassessment.org>) by serving on its Board and Executive Committee and on its various working groups; analyze the MA's methodologies, results and findings at Ramsar COP9, and review the necessary actions, if any, to update and make comprehensive the global assessment of wetland resources and their condition. **GO1** {CPs, Bureau, MedWet, STRP, IOPs} (Refer also to Action 1.1.5)
- 1.2.2 Establish a repository for the contribution by Contracting Parties of summarized national (or, where appropriate, provincial) assessments of changes in the status of wetland resources, as the basis for regular analysis and improved reporting on the status of wetland resources. **GO1** {STRP, Bureau, IOPs, CPs, OCs}
- 1.2.3 Develop guidelines for rapid assessment of wetland biodiversity and functions and for monitoring change in ecological character, including the use of indicators, for both inland and coastal and marine ecosystems, for consideration by COP9. **GO1, 2** {STRP, Bureau, CBD} (Refer also to Action 11.2.1)
- 1.2.4 Develop methodologies for the assessment of the vulnerability of wetlands to change in ecological character, including their vulnerability to the impacts of climate change, sea-level rise, invasion by alien species, and agricultural practices. Apply for this purpose the Convention's *Risk Assessment Framework* (Resolution VII.10), and its guidance on impact assessment (Resolutions VII.16 and VIII.9). **GO1, 2** {Bureau, STRP, MedWet, IOPs, MEAs}
2003-2005 global implementation target: Wetland ecosystem vulnerability assessment methods available to COP9.
- 1.2.5 Undertake assessments of the vulnerability of wetlands to change in ecological character, including their vulnerability to the impacts of climate change and sea-level rise. **GO1, 2** {CPs, MedWet, IOPs}
2003-2005 global implementation target: SC/Bureau to identify at least 20 Parties willing to undertake vulnerability assessments and report to COP9.
- 1.2.6 Assess the contribution of Ramsar sites and other wetlands to the maintenance of fisheries, including utilizing information available from the Millennium Ecosystem Assessment (MA) and other assessment programmes, and recommend sustainable management practices which can contribute to the WSSD target of, where possible by 2015, maintaining or restoring depleted fish stocks to levels that can produce the maximum sustainable yield. **GO1, 2, 3** {CPs, STRP, IOPs, MEAs, OCs}
- 1.2.7 Undertake assessments of water quality and quantity available to, and required by, wetlands, to support the implementation of the *Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands* (Resolution VIII.1), as a contribution to the WSSD Plan of Implementation. **GO1, 2** {CPs, MedWet, IOPs}
2003-2005 global implementation target: At least 50 CPs to have undertaken water quality and quantity assessments.

See also COP8 Resolutions VIII.2, 4, 7, 32 and 35 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 2. POLICIES AND LEGISLATION, INCLUDING IMPACT ASSESSMENT AND VALUATION

Operational Objective 2.1:

Specify the most appropriate policy instrument(s) to be used in each country to ensure the wise use of wetlands.

Actions

- 2.1.1 If not yet done, develop and implement a National Wetland Policy using the guidelines adopted by COP7 for this purpose (Ramsar Wise Use Handbook 2), and ensure that policy goals are explicit, comprehensive and accessible. **GO1** {CPs}
2003-2005 global implementation target: National Wetland Policy or equivalent instrument initiated by all Parties not having it, incorporating WSSD targets and actions, as appropriate.
- 2.1.2 Ensure that wetland policies are fully integrated into and harmonized with other strategic or planning processes and documents, in particular those related to biodiversity, desertification, climate change, agriculture, trade in endangered species, water resource management, integrated coastal zone management and environmental planning in general, including national strategies for sustainable development called for by the WSSD. When these other documents include chapters or sections on different ecosystems, ensure that one of them is devoted to wetlands. **GO1** {CPs, MEAs}
2003-2005 global implementation target: National Wetland Policy or equivalent instrument fully integrated into other strategic and planning processes by all Parties, including poverty eradication strategies and water resources management and water efficiency plans and national strategies for sustainable development in line with WSSD targets.
- 2.1.3 Ensure that best practice examples of integration and harmonization of policies and legislation are made available to the Ramsar Bureau and the Scientific and Technical Review Panel, so as to contribute to the development of good practice guidance to assist Contracting Parties. **GO1.** {CPs, Bureau, STRP}

See also COP8 Resolutions VIII.34 and 39 for additional actions related to this Operational Objective.

Operational Objective 2.2:

Develop, review, amend when necessary, and implement national or supra-national policies, legislation, institutions and practices, including impact assessment and valuation, in all Contracting Parties, to ensure that the Convention, and especially the wise use principle, is being fully applied.

Actions

- 2.2.1 Apply the guidelines for *Reviewing laws and institutions to promote the conservation and wise use of wetlands* (Ramsar Wise Use Handbook 3) to carry out a review of legislation and institutions and, as necessary, amend or modify legislation and institutional procedures to preclude unwise use of wetlands. **GO1** {CPs}

2003-2005 global implementation target: SC/Bureau to identify at least 100 Parties to initiate and if possible complete by COP9 comprehensive reviews of their laws and institutions.

- 2.2.2 Apply Strategic Environmental Assessment practices when reviewing national and provincial policies, programmes, and plans that may impact upon wetlands. **GO1** {CPs}
2003-2005 global implementation target: SC/Bureau to identify at least 50 Parties to have in place Strategic Environmental Assessment for policies, programmes and plans impacting on wetlands.
- 2.2.3 If not yet in place, develop and implement Environmental Impact Assessment (EIA) legislation so as to ensure that an EIA is carried out, as appropriate, in wetlands, including Ramsar sites, where adverse impacts may occur due to a proposed development, change in land/water use, invasive species, etc., in line with additional guidance adopted by Resolution VIII.9 and enlisting the collaboration, if required, of the International Association of Impact Assessment (IAIA). Ensure that these impact assessments include full and appropriate consideration of the environmental, social, economic, and cultural impacts. (Refer also to Action 1.2.6) **GO1, 2** {CPs, OCs}
2003-2005 global implementation target: All CPs to have required EIA, as appropriate, for proposed projects, developments or changes which may impact on wetlands.
- 2.2.4 Promote the continuing development, wide dissemination – primarily through the Internet-based resource kit (<http://www.biodiversityeconomics.org/assessment/ramsar-503-01.htm>) – and application of methodologies to undertake valuations of the economic, social and environmental benefits and functions of wetlands, in collaboration with the International Association of Impact Assessment (IAIA), Ramsar's International Organization Partners, and interested Parties and organizations. **GO1** {CPs, STRP, Bureau, MedWet, IOPs, OCs}
2003-2005 global implementation target: STRP to have made progress on methodologies for economic, social and environmental valuation, and all CPs with experience in this area to have engaged in the STRP work.

See also COP8 Resolutions VIII.9, 12, 19 and 34 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 3. INTEGRATION OF WETLAND WISE USE INTO SUSTAINABLE DEVELOPMENT

Operational objective 3.1:

Develop and disseminate methodologies to achieve the conservation and wise use of wetlands.

Actions

- 3.1.1 Review the Wise Use concept, its applicability, and its consistency with the objectives of sustainable development. **GO1** {STRP, CPs}
2003-2005 global implementation target: STRP to spearhead process of reviewing and updating guidance on the Wise Use concept, including the ecosystem approach, in particular in line with the outcomes of WSSD.

- 3.1.2 Compile advice, methods and best practice studies for the wise use of wetlands, including the application of the ecosystem approach, and disseminate these to wetland managers. **GO1** {STRP, CPs, Bureau}
- 3.1.3 Ensure that the principles embodied in the Convention's new management planning guidelines adopted by Resolution VIII.14 are applied to decision-making about, and the wise use of, all wetlands. **GO1** {CPs}
2003-2005 global implementation target: All CPs to consider how to adapt and to incorporate, as necessary, into national practice the new management planning guidelines to the wise use of all wetlands.
- 3.1.4 Disseminate and encourage the use of the Convention's guidance on the wise use concept to governments, responsible agencies, and bilateral and multilateral donor organizations, in order to assist their development and implementation of sustainable development funding policies that fully address the conservation and wise use of wetlands. **GO1, 3** {Bureau, CPs, IOPs, OCs}

See also COP8 Resolutions VIII.12, 32 and 39 for additional actions related to this Operational Objective.

Operational Objective 3.2:

Ensure the conservation and wise use of peatlands as a demonstration of the ecosystem-based approach under the Convention.

Actions

- 3.2.1 Implement the *Guidelines for global action on peatlands* as adopted by Resolution VIII.17, noting the priority sought therein for inventories of peatlands, the protection and possible designation of peatlands as Ramsar sites, the transfer of peatland restoration technology, and the maintenance of the cultural significance of peatlands, and implement those actions identified as national priorities. **GO1, 2** {CPs} (Refer also to Operational Objectives 1.1, 4.1 and 10.1)
- 3.2.2 Report to COP9 on the progress in implementing the *Guidelines for global action on peatlands* (Resolution VIII.17). **GO1, 2** {CPs, Bureau, IOPs, OCs}

Operational Objective 3.3:

Increase recognition of the significance of wetlands for reasons of water supply, coastal protection, flood defense, food security, poverty alleviation, cultural heritage, and scientific research.

Actions

- 3.3.1 As part of national (or, as appropriate, provincial) wetland inventories, assess and document wetlands which are of special significance for reasons of water supply, coastal protection, flood defense, food security, poverty alleviation, cultural heritage, and/or scientific research, and, where appropriate, seek to have these sites protected in recognition of these values. **GO1** {CPs} (Refer also to Operational Objectives 1.1 and 10.1)

- 3.3.2 Prepare, based upon the available information contained in the Ramsar Sites Database, an analysis and promotional summary of the values and functions of Ramsar sites, giving particular attention to those that have importance for reasons of water supply, coastal protection, flood defense, food security, poverty alleviation, climate change mitigation, cultural heritage and/or scientific research. **GO1, 2** {Bureau, MedWet, Wetlands International} (Refer also to Operational Objective 10.2)
2003-2005 global implementation target: Analysis of values and functions of Ramsar sites prepared by Bureau/Wetlands International and circulated.
- 3.3.3 Consider using the guiding principles in Annex I of Resolution VIII.19 to promote full recognition of the social and cultural heritage of wetlands, and ensure that this is fully appreciated and taken into account in their wise use and management. **GO1, 2** {CPs}
- 3.3.4 Develop and implement wise use wetland programmes and projects that contribute to poverty alleviation objectives and food and water security plans at local, national and regional levels. **GO1** {CPs, IOPs, OCs, Bureau}
- 3.3.5 Promote research, including through the establishment of national and regional research and training centres, into the role of wetlands in water supply, coastal protection, flood defense, food security, poverty alleviation, and cultural heritage. **GO1, 2** {CPs, MedWet, IOPs, OCs}

See also COP8 Resolutions VIII.12, 19, 33, 34 and 40 for additional actions related to this Operational Objective.

Operational Objective 3.4:

Integrate policies on the conservation and wise use of wetlands in the planning activities in all Contracting Parties, and in decision-making processes at national, regional, provincial and local levels, particularly concerning territorial management, groundwater management, catchment/river basin management, coastal and marine zone planning, and responses to climate change.

Actions

- 3.4.1 Ensure the inclusion of wetland conservation, wise use, and restoration/rehabilitation in general sectoral planning at national, regional, provincial and local levels, including, as far as possible, the necessary budgetary provisions to enable their implementation. **GO1** {CPs}
- 3.4.2 Apply the guidelines in *Integrating wetland conservation and wise use into river basin management* (Ramsar Wise Use Handbook 4) and, where appropriate and feasible, participate in the related CBD/Ramsar project entitled the “River Basin Initiative” so as to support the WSSD agreement to increase understanding of the sustainable use, protection and management of water resources. **GO1, 3** {CPs, Bureau, MedWet, IOPs, OCs}
- 3.4.3 Review, from case studies and other materials compiled through the CBD/Ramsar River Basin Initiative, lessons learnt and good practice experience, and report this to COP9, including the preparation of additional guidance, as appropriate, on integrating wetlands, biodiversity and river basin management. **GO1, 3** {Bureau, STRP, MEAs, OCs} (Refer also to Operation Objective 12.1)

- 3.4.4 Develop guidelines to assist Parties in considering the full environmental, social and economic impacts on wetland and river systems of constructing large dams, for consideration at COP9. **GO1, 3** {STRP, Bureau, MedWet, IOPs}
2003-2005 global implementation target: Guidance prepared on assessment of impact of large dams on wetlands and river systems.
- 3.4.5 Apply the *Guidelines for integrating wetlands into integrated coastal zone management* as adopted by Resolution VIII.4. **GO1** {CPs}
- 3.4.6 In decision-making processes related to freshwater resources, apply the *Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands*, as adopted by Resolution VIII.1. **GO1** {CPs}
2003-2005 global implementation target: All CPs to have made available the guidance on water allocation and management for ecosystems to support decision-making on water resource management in all CPs, as a contribution to achieve the WDDs target on water resources management and water efficiency plans.
- 3.4.7 Develop, for consideration at COP9, guidelines on the sustainable use of groundwater resources to maintain wetland ecosystem functions and the maintenance of the groundwater component of the hydrological cycle. **GO1** {Bureau, MedWet, STRP, IOPs}
2003-2005 global implementation target: Guidelines on groundwater resources prepared.
- 3.4.8 In collaboration with the Intergovernmental Panel on Climate Change and the UN Framework Convention on Climate Change (refer also to Action 13.1.1), promote the management of wetlands in relation to adaptive management and mitigation of the impacts of climate change, particularly in the context of land use, land use change and rising sea levels, forestry, peatlands and agriculture. **GO1, 2** {STRP, Bureau, MedWet, OCs}
2003-2005 global implementation target: COP8 information on wetlands and mitigation and adaptive management for climate change made available.
- 3.4.9 Ensure that national policy responses to the implementation of the Kyoto Protocol, including revegetation and management, afforestation and reforestation do not lead to damage to the ecological character of wetlands. **GO1, 2** {CPs, OCs}
2003-2005 global implementation target: All relevant CPs to have assessed implications of Kyoto Protocol implementation on wetlands (including applying COP8 restoration guidelines).

(Refer also to Operational Objective 12.1 in relation to transboundary wetlands and river basins.)

See also COP8 Resolutions VIII.2, 3, 4, 12, 25, 32, 34, 39 and 40 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 4. RESTORATION AND REHABILITATION

Operational Objective 4.1:

Identify priority wetlands where restoration or rehabilitation would be beneficial and yield long-term environmental, social or economic benefits, and implement the necessary measures to recover these sites.

Actions

- 4.1.1 Use national scientific inventories of wetlands to identify those where restoration or rehabilitation would be appropriate because of their present and/or former values and functions, using the guidelines on this matter adopted by Resolution VIII.16. **GO1** {CPs, IOPs} (Refer also to Action 1.1.1)
- 4.1.2 Establish wetland restoration/rehabilitation programmes, where feasible, at destroyed or degraded wetlands, especially in those associated with major river systems or areas of high nature conservation value, in line with Recommendation 4.1 and Resolutions VII.17 and VII.20. **GO1** {CPs, MedWet, IOPs}
2003-2005 global implementation target: All CPs with lost or degraded wetlands to have identified priority sites for restoration; restoration projects underway or completed in at least 100 CPs.
- 4.1.3 Compile information on new research and methodologies for the restoration and rehabilitation of lost or degraded wetlands and disseminate this information. **GO1** {CPs, STRP, Bureau, MedWet, IOPs}
2003-2005 global implementation target: Continue to add new case studies and methods to Ramsar wetland restoration Web site.
- 4.1.4 Apply the guidelines on wetland restoration adopted by Resolution VIII.16 to ensure that national policy responses to the implementation of the Kyoto Protocol, including revegetation and management, afforestation and reforestation, do not lead to damage to the ecological character of wetlands. **GO1, 2** {CPs, OCs} (Refer also to Action 3.4.9)

See also COP8 Resolutions VIII.1, 18 and 19 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 5. INVASIVE ALIEN SPECIES

Operational Objective 5.1:

Develop guidance and promote protocols and actions to prevent, control or eradicate invasive alien species in wetland systems.

Actions

- 5.1.1 Implement available guidance relating to the prevention, control and eradication of invasive species. **GO1** {CPs}]
2003-2005 global implementation target: Address the problems posed by invasive species in wetland ecosystems in a decisive and holistic manner, making use, as appropriate, of the tools and guidance developed by various institutions and processes.
- 5.1.2 In collaboration with the Global Invasive Species Programme (GISP), the Convention on Biological Diversity, Ramsar's International Organization Partners, and interested Parties, continue to develop and disseminate practical guidance for the prevention, control and eradication of invasive species, based on case studies and documented experiences from around the world. **GO1** {CPs, STRP, Bureau, MedWet, GISP, IOPs, OCs}

2003-2005 global implementation target: Guidance for invasives' management prepared.

- 5.1.3 Ensure that national and, where necessary, international action plans for the prevention, control and eradication of invasive species fully incorporate wetland issues. **GO1** {CPs, Bureau, IOPs, OCs}

See also COP8 Resolution VIII.18 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 6. LOCAL COMMUNITIES, INDIGENOUS PEOPLE, AND CULTURAL VALUES

Operational Objective 6.1:

Encourage active and informed participation of local communities and indigenous people, in particular women and youth, in the conservation and wise use of wetlands.

Actions

- 6.1.1 Apply the *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands* (Ramsar Wise Use Handbook 5), giving particular attention to the importance of incentive measures (refer to Operational Objective 8.1), the building of trust, the need for flexible approaches, the exchange of knowledge, capacity building, and the continuity of resources and efforts. **GO1** {CPs, Bureau, MedWet, IOPs, OCs}
 - 6.1.2 In consultation with and with the full support of indigenous people, document and encourage the application of appropriate traditional knowledge and management practices of indigenous people and local communities in the conservation and wise use of wetlands, particularly where wetlands are under the traditional ownership of local communities and indigenous people. **GO 1, 2** {CPs, MedWet, OCs}
 - 6.1.3 Continue to support the Participatory Management Clearinghouse (PMC), a joint service of IUCN–The World Conservation Union, the Ramsar Bureau, and WWF International (www.iucn.org/themes/pmns). **GO 1** {CPs, Bureau, MedWet, IUCN, WWF}
 - 6.1.4 Promote public participation in decision-making processes with respect to wetlands and their conservation and ensure that there is full sharing with the stakeholders of technical and other information related to the selection of Ramsar sites and management of all wetlands. **GO 1, 2** {CPs, IOPs, OCs}
 - 6.1.5 Elaborate for consideration by COP9 further guidance on the application of the *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands* (Ramsar Wise Use Handbook 5), based on experiences gained at the field level, and in particular the experience of Pacific Island States and other Small Island Developing States, **and** working with the CBD and others in line with the CBD-Ramsar 3rd Joint Work Plan. **GO1** {CPs, CEPA, Bureau, MedWet, IOPs, OCs}
- 2003-2005 global implementation target:** Elaborated guidelines, developed jointly with CBD, available to COP9.

- 6.1.6 Consider using the *Guiding principles for taking into account the cultural values of wetlands for the effective management of sites* (Resolution VIII.19), and continue to document case studies on social and cultural values of wetlands and how they can be incorporated into the effort to conserve and sustainably use wetland resources. **GO 1, 2** {CPs, CEPA, MedWet, Bureau, IOPs, OCs}
- 6.1.7. Apply the *New guidelines on management planning for Ramsar sites and other wetlands* (Resolution VIII.14) in such a way as to ensure the full incorporation of the cultural features of wetlands in their sustainable use. **GO1, 2** {CPs, MedWet, IOPs, OCs}

See also COP8 Resolutions VIII.16, 19 and 39 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 7. PRIVATE SECTOR INVOLVEMENT

Operational Objective 7.1:

Promote the involvement of the private sector in the conservation and wise use of wetlands.

Actions

- 7.1.1 Encourage the private sector to apply the wise use principle (Ramsar Handbooks 1 to 6) in their activities and investments affecting wetlands. **GO1** {CPs, Bureau, MedWet, IOPs}
- 7.1.2 Seek opportunities to involve the private sector, national science academies, universities and other professional, scientific, and technical societies of recognized merit in wetland-related decision-making, through vehicles such as National Ramsar/Wetlands Committees, site or river basin management authorities/committees, and outreach activities. **GO1** {CPs, CEPA, Bureau, MedWet, IOPs}
- 7.1.3 Establish an international private-sector “Friends of Wetlands” forum where international and national companies can seek advice on applying wise use practices in their business activities, and can also identify opportunities for supporting the activities of the Convention, either at the national, regional or international levels. **GO1** {SC, Bureau, IOPs, OCs}
- 7.1.4 Establish, where appropriate, national and local private-sector “Friends of Wetlands” forums where companies can seek advice on applying wise use practices in their businesses, and can also identify opportunities for supporting the activities of the Convention. **GO1** {CPs, Bureau, IOPs, OCs}
- 7.1.5 Review, in cooperation with the private sector, domestic and international trade in wetland-derived plant and animal products, both exports and imports, and as appropriate implement the necessary legal, institutional and administrative measures to ensure that harvesting is sustainable and in accordance with the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES). **GO1** {CPs, CITES} (Refer also to Operational Objective 2.1 and Actions 13.1.9 and 15.1.13)

OPERATIONAL OBJECTIVE 8. INCENTIVES

Operational Objective 8.1:

Promote incentive measures that encourage the application of the wise use principle and the removal of perverse incentives.

Actions

- 8.1.1 Continue to review existing, or evolving, policy, legal and institutional frameworks to identify and promote those measures which encourage conservation and wise use of wetlands and to identify and remove measures which discourage conservation and wise use. **GO1** {CPs}
2003-2005 global implementation target: SC/Bureau to have identified at least 50 CPs to have reviewed policy and legal and institutional frameworks and sought to remove measures adversely affecting wetland conservation and wise use.
- 8.1.2 Make use of and continue to develop and improve upon the Internet-based resource kit (<http://www.biodiversityeconomics.org/incentives/policies-07-00.htm>) on positive incentives prepared and maintained by IUCN—the World Conservation Union. **GO1** {CPs, STRP, IUCN, Bureau}
- 8.1.3 Report to COP9 on progress in the design, implementation, monitoring and assessment of positive incentive measures and the identification and removal of perverse incentives, including those relating to agriculture. **GO1** {STRP, Bureau}

See also COP8 Resolutions VIII.23, 34 and 40 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 9. COMMUNICATION, EDUCATION, AND PUBLIC AWARENESS (CEPA)

Operational Objective 9.1:

Support, and assist in implementing at all levels, the Convention's Communication, Education, and Public Awareness Programme (Resolution VIII.31) for promoting the conservation and wise use of wetlands through public participation and communication, education, and public awareness (CEPA).

Actions

- 9.1.1 Ensure that a suitable national government and non-government focal point for wetland communication, education and public awareness (CEPA) has been designated and, as much as possible, given the required resources for action (Resolution VII.9). **GO 1** {CPs}
- 9.1.2 Ensure that, based on a review of relevant activities, target groups, and threats, a national action plan for wetlands CEPA has been formulated, has been made widely available, and is being implemented (Resolution VII.9). **GO 1** {CPs, CEPA}
2003-2005 global implementation target: At least 50 CPs to have established national CEPA action plans.
- 9.1.3 Ensure that the *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands* (Resolution VII.8) are fully taken into

account in the development of implementation of the Convention's Communication, Education, and Public Awareness Programme. **GO 1** {CPs}

- 9.1.4 Ensure that national wetland CEPA action plans do not overlook communication within the government (i.e., between ministries and among the focal points of all environmental conventions) and among the government and the major private sector stakeholders and local communities. **GO 1** {CPs, CEPA}
- 9.1.5 Develop at the national level appropriate mechanisms for ongoing communication, exchange of ideas, and sharing of knowledge among the actors in wetland management, in particular of Ramsar sites, and between these actors and communication and education professionals, and endeavour to link this national network with similar networks in other countries and globally through electronic means. **GO 1, 3** {CPs, CEPA, MedWet, Bureau, OCs}
- 9.1.6 Undertake campaigns, ideally linked to World Wetlands Day (2 February), to raise awareness of wetland conservation and wise use issues, and seek further national and international recognition of World Wetlands Day, e.g. through the UN General Assembly. **GO 1** {CPs, CEPA, Bureau, MedWet, IOPs}
- 9.1.7 Provide the Bureau with advice on, and samples of, the effective wetlands CEPA materials available in each Party, so that the Bureau can enhance its clearinghouse function and facilitate the sharing of this information. **GO 1** {CPs, CEPA, Bureau}
- 9.1.8 Continue to produce CEPA materials of relevance to all CPs, including through private sector sponsorship, and make use of them in national wetlands CEPA activities. **GO 1** {Bureau, MedWet, CPs, CEPA,}
- 9.1.9 Review the extent to which formal education curricula include the Ramsar principles of wetland conservation and wise use and, where necessary, seek to have such information added. **GO 1** {CPs, CEPA, IOPs, OCs}
- 9.1.10 Seek to establish, or develop further, wetland education centres based at Ramsar sites and other wetlands, and where appropriate, also use these as centres for training in wetland research and management and wetland education and public awareness techniques. **GO 1** {CPs, CEPA, IOPs, OCs}
2003-2005 global implementation target: At least 75 CPs to have established at least one wetland education centre at a Ramsar site.
- 9.1.11 Enlist a range of centres of learning (universities, museums, aquaria, botanic gardens, etc.) in promoting enhanced awareness and understanding of the importance of wetlands. **GO 1** {CPs, CEPA}
- 9.1.12 Encourage the facilities referred to in 9.1.10 and 9.1.11 to participate in the Wetland Link International network of centres as a way to increase the flow of information and the sharing of resource materials among such centres, and to encourage twinning and exchange of expertise between wetland education centres (Resolution VII.9). **GO 1, 3** {CPs, CEPA, Bureau, IOPs, OCs}

- 9.1.13 Undertake efforts to encourage resourcing of the Voluntary Fund for the Ramsar Communication, Education, and Public Awareness Programme, with the aim of generating a minimum of half million US dollars annually for this purpose. **GO 1, 4** {Bureau, CPs, CEPA, IOPs, OCs} (Refer also to Action 15.1.5)
- 9.1.14 Strengthen collaboration, through the CBD-Ramsar 3rd Joint Work Plan, for harmonizing the respective CEPA programmes of the two Conventions, and further investigate and pursue, as appropriate, opportunities to do likewise with other conventions and programmes. **GO1, 3** {Bureau, STRP, CBD, other MEAs}
- 9.1.15 Contribute, through the Ramsar CEPA programme, to the proposed decade for education for sustainable development, if and when established by the United Nations General Assembly in line with WSSD targets. **GO1, 3** {CPs, Bureau, CEPA, IOPs, OCs}

See also COP8 Resolution VIII.31 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 10. DESIGNATION OF RAMSAR SITES

Operational Objective 10.1:

Apply the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Handbook 7).

Actions

- 10.1.1 Renew efforts to apply the *Strategic Framework and guidelines for the future development of the Ramsar List* (Resolution VII.11), including, as a matter of priority the establishment of a strategy and priorities for the further designation of Ramsar sites so as to achieve, as soon as possible, the coherent national networks called for in the Vision for the List. (Resolution VIII.10) **GO2** {CPs, IOPs}
2003-2005 global implementation target: Report on implementation progress to the Ramsar Bureau by 31 December 2003, with consolidated Bureau report circulated to all Parties by 31 March 2004. Each CP which has not designated a Ramsar site since accession to the Convention to have designated at least one new site. Designation of a further 55 million ha and 250 Ramsar sites, as progress towards global targets of 2500 sites and 250 million ha by 2010.
- 10.1.2 In undertaking Action 10.1.1, give priority attention to the designation of sites for each representative, rare or unique wetland type present in the territory of a Contracting Party, as well as to wetland types currently under-represented in the Ramsar List, including, *inter alia*, karst and other subterranean hydrological systems, coral reefs, mangroves, seagrass beds, salt marshes, tidal flats, peatlands, wet grasslands, temporary pools, arid-zone wetlands, and mountain wetlands (Resolution VIII.12), and in so doing apply the guidelines so far approved by the COP to assist in the designation of some of these wetland types (Resolutions VIII.11 and VIII.33), and report on progress to COP9. **GO2** {CPs, IOPs, OCs}

- 10.1.3 Give priority to the designation of coastal and marine Ramsar sites³, as a contribution to the WSSD target of establishing representative networks of marine protected areas by 2012. **GO2, 3** {CPs}
- 10.1.4 In addition to the priority established in 10.1.2, also assign priority to the designation as Ramsar sites of wetlands hosting globally threatened species and species that are unique or endemic to the territory of a Contracting Party or for which the territory supports a significant proportion of the global extent of the species. **GO2** {CPs, IOPs, OCs}
- 10.1.5 Designate, as a priority, those eligible sites that are not under any form of protective or sustainable use management regime, including those utilised for agriculture, as the basis for accelerating the establishment of such regimes, and ensure that this is done soon after designation. **GO2** {CPs}
- 10.1.6 Consistent with the *Guidelines for international cooperation under the Ramsar Convention on Wetlands* (Ramsar Handbook 9), designate the national area of transboundary wetlands as a Ramsar site and invite the concerned neighboring country(ies) to do likewise, with a view to establishing a harmonized management regime for the entire wetland. **GO2, 3** {CPs, IOPs} (Refer also to Operational Objective 12.1)
- 10.1.7 Continue to support the work of Wetlands International, other International Organization Partners, and others in providing analyses and information to help Parties to apply the Strategic Framework to identify and designate Ramsar sites, including further identification of under-represented wetland types. **GO2** {CPs, Bureau, IOPs}
- 10.1.8 Continue to support the work of Wetlands International and others in the updating for each COP of the 1% thresholds for waterbird populations for the application of Criterion 6 for Ramsar site designation, having first undertaken international scientific consultation on its contents; seek to provide such population information for other wetland-dependent taxa; and apply this information for the designation of Ramsar sites. **GO2** {CPs, Bureau, IOPs} (Refer also to Operational Objective 12.2.)

See also COP8 Resolutions VIII.2, 4, 7, 10, 11, 13, 14, 21, 22, 33, 38 and 39 for additional actions related to this Operational Objective.

Operational Objective 10.2:

Maintain the Ramsar Sites Database and constantly update it with the best available information, and use the database as a tool for guiding the further designation of wetlands for the List of Wetlands of International Importance.

Actions

- 10.2.1 Ensure that the maps and descriptions of Ramsar sites submitted by Contracting Parties at the time of designation are complete, in the approved standard format of the Information Sheet on Ramsar Wetlands as amended by COP8 (Resolution VIII.13), and provide sufficient detail to be used for monitoring the ecological character of designated

³ In line with Articles 1.1 and 2.1 of the Convention, which include as Ramsar wetlands areas of marine water the depth of which at low tide does not exceed six metres, and indicates that Ramsar sites may “incorporate islands or bodies of marine water deeper than six metres at low tide lying within the wetlands.”

wetlands (refer to Operational Objective 11.1 below). **GO 2** {CPs, Bureau, Wetlands International}

- 10.2.2 Ensure that the social and cultural values and features of listed sites are fully recognized in the descriptions of Ramsar sites in the Information Sheet on Ramsar Wetlands, as the basis for their incorporation in site management planning. **GO 2** {CPs}
- 10.2.3 Submit missing or incomplete data sheets and/or maps of listed sites as a matter of utmost urgency, and also ensure that all previously submitted site descriptions are in the format of the approved Information Sheet on Ramsar Wetlands. **GO 2** {CPs}
- 10.2.4 Fully update and submit revised Ramsar Information Sheets as frequently as necessary to record changes in the status of sites, and at least at intervals of not more than six years, so that they can be used for reviewing change in ecological character and progress in achieving the Vision and Objectives of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Handbook 7) at each COP. **GO 2** {CPs, STRP, Bureau, Wetlands International}
- 10.2.5 Enhance the interactive capacity of the Ramsar Sites Database and its accessibility to stakeholders, including through links between the Database, the Ramsar Sites Directory Web presentation, the Ramsar Web site, and other interactive systems such as the Ramsar Data Gateway, as well as the publication of special reports and other outputs. **GO 2** {Bureau, Wetlands International, OCs}
- 10.2.6 Maintain, and make available and easily accessible, the *Directory of Wetlands of International Importance* in electronic format, including the preparation of a fully up-to-date version for each meeting of the Conference of Parties, and the *Annotated Ramsar List* in the three official languages. **GO 2** {Wetlands International, Bureau}

See also COP8 Resolutions VIII.8 and 13 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 11. MANAGEMENT PLANNING AND MONITORING OF RAMSAR SITES

Operational Objective 11.1:

Maintain the ecological character of all Ramsar sites.

Actions

- 11.1.1 Consistent with Article 3.1 of the Convention, define and apply the measures required to maintain the ecological character of each listed site, using as the basis for this the official definitions of “ecological character” and “change in ecological character” adopted by Resolution VII.10 and the integrated package of Convention tools for site management as presented in Ramsar Handbook 8 as well as the supplementary guidance adopted by COP8, and ensure that this information is included in the Information Sheet on Ramsar Wetlands (refer also to Actions 2.2.1. and 2.2.3). **GO 2** {CPs}

- 11.1.2 Apply the Convention's *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14) to develop management plans or strategies for all Ramsar sites. **GO 1, 2** {CPs, IOPs, OCs}
- 11.1.3 Establish, resources permitting, the necessary procedures for the creation and maintenance of the San José Record for the promotion of wetland management (Resolution VIII.15) and report to COP9 on its implementation. **GO 2** {Bureau, STRP}
- 11.1.4 Promote, as necessary, the establishment and implementation of zoning measures for larger Ramsar sites, wetland reserves, and other wetlands (Recommendation 5.3 and Resolution VIII.14) and strict protection measures for certain Ramsar sites and other wetlands of small size and/or particular sensitivity (Recommendation 5.3). **GO 1, 2** {CPs, IOPs, OCs}
- 11.1.5 Consider as a matter of priority the establishment of cross-sectoral site management committees for Ramsar sites, involving relevant government agencies, local community representatives, and other stakeholders, including the business sector. **GO 2** {CPs}
- 11.1.6 Continue to give high priority in the Operational Guidelines for the Small Grants Fund to support for management planning at Ramsar sites. **GO 2** {CPs, SC}

See also COP8 Resolutions VIII.1, 3, 8, 10, 14, 15, 16, 17, 20, 34 and 38 for additional actions related to this Operational Objective.

Operational Objective 11.2:

Monitor the condition of Ramsar sites, notify the Ramsar Bureau without delay of changes affecting Ramsar sites as required by Article 3.2, and apply the Montreux Record and Ramsar Advisory Mission as tools to address problems.

Actions

- 11.2.1 Establish for each Ramsar site an effective monitoring programme, ideally as part of the site management plan, which is designed to detect and provide early warning of changes in ecological character. In so doing, use the Convention's framework for designing an effective monitoring programme (Resolution VI.1) and its *Wetland Risk Assessment Framework* (Resolution VII.10) (Ramsar Handbook 8). **GO 2** {CPs, OCs}
- 11.2.2 Ensure that sites on the Ramsar List are used as baseline and reference areas for national, supranational/regional, and international environmental monitoring to detect trends in the loss of biological diversity, climate change, and the processes of desertification (Objective 4.1 of the Objectives for the List (Resolution VII.11), and report on status and trends to each meeting of the Conference of the Parties. **GO 1, 2** {CPs, Wetlands International, IOPs}
- 11.2.3 Ensure that at Ramsar sites where change in ecological character may occur as a result of proposed developments or changes in territorial and/or water use which have potential to affect them, an impact assessment is carried out which considers the full range of environmental, social and economic benefits and functions provided by the wetland, and that the resulting conclusions are communicated to the Ramsar Bureau, in line with

Article 3.2 of the Convention, and fully taken into account by the authorities concerned.
GO 2 {CPs} (Refer also to Actions 1.2.4 and 1.2.5)

- 11.2.4 In fulfilment of Article 3.2 of the Convention, report to the Ramsar Bureau without delay all actual or likely changes in ecological character on Ramsar sites, and include Ramsar sites “where changes in ecological character have occurred, are occurring or are likely to occur” in the Montreux Record as appropriate. **GO 2** {CPs, Bureau}
- 11.2.5 For sites included in the Montreux Record, request a Ramsar Advisory Mission of independent experts, where appropriate, to review the problems affecting the site and offer recommendations for remedial actions. **GO 2** {CPs, Bureau}
2003-2005 global implementation target: For all sites on the Montreux Record, and which have not been subject to a Ramsar Advisory Mission (RAM), CPs to request such a Mission prior to COP9.
- 11.2.6 Where a Ramsar Advisory Mission has been completed for a Montreux Record site, take all necessary steps to implement the recommendations, and report at regular intervals to the Bureau on the results of these actions. At the appropriate time, seek the removal of the site from the Montreux Record, having provided the Bureau and STRP with details of the site condition using the approved questionnaire (Ramsar Handbook 7). **GO 2** {CPs, STRP, Bureau}

OPERATIONAL OBJECTIVE 12. MANAGEMENT OF SHARED WATER RESOURCES, WETLANDS AND WETLAND SPECIES

Note: Where actions are drawn directly from the *Guidelines for international cooperation* (Ramsar Handbook 9), the cross-reference is indicated.

Operational Objective 12.1:

Promote inventory and integrated management of shared wetlands and hydrological basins.

Actions

- 12.1.1 Identify all wetland systems in each Contracting Party shared with other Parties and with non-parties and promote cooperation in their management with the adjoining jurisdiction(s), applying, where appropriate, the *Guidelines on integrating wetland conservation and wise use into river basin management* (Ramsar Handbook 4, Section A1 of the Guidelines), and the *Principles and Guidelines for integrating wetlands into Integrated Coastal Zone Management (ICZM)* (Resolution VIII.4) **GO 1, 3** {CPs}
2003-2005 global implementation target: All CPs to have identified their transboundary wetlands (see also 1.1.1). 50% of CPs to have identified cooperative management mechanisms.
- 12.1.2 Pursue cooperation on shared hydrological basins, lake systems and coastal systems through the establishment of bi- or multilateral management commissions. (Section A2 of the Guidelines). **GO 1, 3** {CPs}
2003-2005 global implementation target: 50% of CPs with shared basins and coastal systems to be part of joint management commissions or authorities.

- 12.1.3 Where appropriate, engage in joint impact assessment processes with neighbouring countries that share wetlands, international river basins, or coastal systems, taking note, where applicable, of the terms of the Espoo Convention on impact assessment in a European transboundary context. **GO 1, 3** {CPs} (Refer also to Action 2.2.3 and 2.2.4)
- 12.1.4 Ensure enhanced accessibility to information, analyses, good practice examples, and experience-sharing on integrating wetlands and biodiversity into integrated river basin management, including through the Ramsar/CBD River Basin Initiative. **GO 1, 3** {CPs, Bureau, CBD, IOPs, OCs}
2003-2005 global implementation target: River Basin Initiative fully operational.

See also COP8 Resolutions VIII.7, 8, 10 and 35 for additional actions related to this Operational Objective.

Operational Objective 12.2:

Promote cooperative monitoring and management of shared wetland-dependent species.

Actions

- 12.2.1 Identify and designate as Ramsar sites all wetlands which satisfy the relevant Ramsar Criteria in relation to wetland-dependent migratory species, giving priority in the first instance to waterbirds, fish, and marine turtles, especially those that are globally threatened. (Section B1 of the Guidelines) **GO 2, 3** {CPs, IOPs, CMS}
- 12.2.2 Continue to promote and support the development of further regional site networks and initiatives for wetland-dependent migratory species, as exemplified by the African-Eurasian Migratory Waterbird Agreement (AEWA), the Asia-Pacific Migratory Waterbird Conservation Strategy, the Western Hemisphere Shorebird Reserve Network, and others. (Sections B2 and B4 of the Guidelines) **GO 3** {CPs, IOPs, OCs} (refer also to Operational Objective 12.1)
- 12.2.3 Through the Memorandum of Understanding and associated Joint Work Plan with the Convention on Migratory Species and the African-Eurasian Migratory Waterbirds Agreement (AEWA), work cooperatively to identify and manage important sites for wetland-dependent migratory species, and promote jointly, where appropriate, the development of site networks referred to in the previous Action. (Section B3 of the Guidelines.) (Refer also to Operational Objective 12.1). **GO 2, 3** {STRP, Bureau, MedWet, OCs}
- 12.2.4 Promote and disseminate research into the population dynamics and sustainable harvesting of wetland dependent species, especially migratory waterbirds. **GO 1, 3** {STRP, Bureau, IOPs, OCs}
- 12.2.5 Ensure that national hunting legislation is consistent with the wise use principle for migratory waterbird and other wetland-dependent species, taking into account geographical range, life-history characteristics of species, and research on sustainable harvesting. **GO 1, 3** {CPs, Bureau, OCs}

See also COP8 Resolution VIII.19 for additional action related to this Operational Objective.

Operational Objective 12.3:

Support existing regional arrangements under the Convention and promote additional arrangements.

Actions

- 12.3.1 Continue to support the operation of the Mediterranean Wetlands Committee (MedWet/Com) and its related action programme, the Mediterranean Wetlands Initiative (MedWet) and its Coordination Unit. **GO 3** [MedWet, Bureau, IOPs, OCs]
- 12.3.2 Encourage development of regional arrangements under the Convention similar to MedWet, where appropriate, applying the *Guidance for the development of Regional Initiatives in the framework of the Convention on Wetlands* (Resolution VIII.30) for example in the Black Sea, Caspian Sea, the Caribbean, South America, and the Altaj-Sayansky region. **GO 3** {Concerned CPs, Bureau, MedWet, IOPs}

See also COP8 Resolution VIII.30 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 13. COLLABORATION WITH OTHER INSTITUTIONS

Operational Objective 13.1:

Work as partners with international and regional multilateral environmental agreements (MEAs) and other agencies.

Actions

- 13.1.1 Continue to strengthen cooperation and synergy with the Convention on Biological Diversity, the Convention to Combat Desertification, the Convention on Migratory Species and its Agreements, the World Heritage Convention, and the United Nations Framework Convention on Climate Change, in particular through the vehicles of Joint Work Plans and collaboration among the respective subsidiary scientific bodies of the conventions and the secretariats, and at national level among the Ramsar Administrative Authorities and Focal Points of the different MEAs. **GO 3** {STRP, CPs, Bureau, IOPs, OCs}
2003-2005 global implementation target: 3rd CBD-Ramsar Joint Work Plan fully implemented. CMS/AEWA Joint Work Plan in place and being implemented. Joint activities developed with UNCCD and UNFCCC, including through participation in the Joint Liaison Group with UNFCCC, CBD and UNCCD.
- 13.1.2 Maintain and, where appropriate, seek opportunities to further promote cooperation with UNESCO, in particular its Programme on Man and the Biosphere (MAB), especially as regards wetlands within Biosphere Reserves and in the area of the development of curricula to integrate wetland issues. **GO 2, 3** {CPs, CEPA, Bureau, IOPs, OCs}
- 13.1.3 Give priority to the implementation of the Memoranda of Cooperation or Understanding with the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention), the Convention for the Protection and Development of the Marine Environment of the Mediterranean Sea (Barcelona

Convention), the Convention on the Protection of the Marine Environment of the Baltic Sea, other regional seas conventions, and the Danube River Protection Convention, and seek to establish similar cooperative arrangements with other regional instruments, such as the Regional Organization for the Protection of the Marine Environment (ROPME).

GO 3 {Concerned CPs, Bureau, IOPs, OCs}

- 13.1.4 Establish working relations with the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), noting Sections F2 – F6 of the *Guidelines for international cooperation under the Ramsar Convention on Wetlands* (Ramsar Handbook 9). **GO 3** {Bureau, CITES}
- 13.1.5 Develop closer working relationships with appropriate regional bodies or programmes which have an interest in wetland conservation and wise use, including the Alliance of Small Island States (AOSIS), the Association of South East Asian Nations (ASEAN), the European Union (EU), the Council of Europe, the Southern African Development Community (SADC), the African Union (AU), and the Organization of American States (OAS). **GO 3** {CPs, SC, Bureau, MEAs, OCs}
- 13.1.6 Support and contribute to the development and implementation of the Plan of Action to Implement Africa's Wetland Management Strategy under the Environmental Initiative of NEPAD, the New Partnership for Africa's Development. **GO 1, 2, 3** {CPs, SC, Bureau, IOPs, MEAs, OCs}
2003-2005 global implementation target: NEPAD's Action Plan to have fully incorporated Ramsar issues and mechanisms, and being implemented by relevant CPs, in lines with WSSD targets.
- 13.1.7 Continue to contribute, through the application of Ramsar tools and mechanisms, to the implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States. **GO 1, 2, 3, 4** {CPs, SC, Bureau}
2003-2005 global implementation target: Review of Ramsar's contribution to the Barbados Programme of Action, as a contribution to the WSSD target.
- 13.1.8 Continue the development and implementation of joint work plans under the Memorandum of Cooperation between the Ramsar Convention and the South Pacific Regional Environment Program (SPREP). **GO3** {Concerned CPs, Bureau, MedWet, IOPs}
- 13.1.9 Review the advantages and disadvantages with regard to accession and corresponding financial contributions and, as appropriate, investigate the feasibility of regional economic integration or similar organizations/ institutions gaining Contracting Party status under the Convention, including the possibility of amending the Convention to that effect if necessary. **GO 3** {Bureau, SC, COP}.
- 13.1.10 Promote a UN General Assembly Resolution formally recognizing the Convention. In the meantime, pursue partnership approaches with the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), and other relevant UN agencies, as well as the Subcommittee on Water of the United Nations System Chief Executives Board for Coordination (Section C2 of the Guidelines.) **GO 3** {Bureau, SC}

- 13.1.11 Further develop working partnerships with other specialized bodies that deal with wetland-related issues, including through collaboration in the Ramsar/CBD River Basin Initiative (RBI). **GO 3** {Bureau, OCs}
- 13.1.12 Continue to contribute to the development and testing of harmonized information management and reporting systems with the appropriate MEAs, including exploration of modular-style national reporting formats, consolidated reporting formats, state of the environment reporting, and regional reporting. **GO 3, 4** {Bureau, OCs}

See also COP8 Resolutions VIII.3, 5, 14, 24 and 42 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 14. SHARING OF EXPERTISE AND INFORMATION

Note: Where actions are drawn directly from the *Guidelines for international cooperation* (Ramsar Handbook 9), the cross-reference is indicated.

Operational Objective 14.1:
Promote the sharing of expertise and information.

Actions

- 14.1.1 Using mechanisms such as the national focal points for communication, education and public awareness (CEPA) and for the STRP, promote the sharing of knowledge (traditional, indigenous, and more recently derived technologies and methods) at the global, regional, and national levels. (Section D1 of the Guidelines.) **GO 1, 3** {CPs, CEPA, STRP, Bureau}.
- 14.1.2 Recognize training as an important element of international cooperation under the Convention and provide access to such training, especially for wetland managers, and wetland educators and those others responsible for implementing the Convention, from other countries that would benefit from these opportunities. (Sections D2 and D3 of the Guidelines). **GO 3, 4** {CPs, Bureau, IOPs} (Refer also to Operational Objective 20.1).
- 14.1.3 Develop twinning and/or networks of transboundary wetlands and wetlands sharing common features, as an important mechanism for sharing knowledge and providing training opportunities. **GO 2, 3** {CPs, Bureau, IOPs, OCs}
2003-2005 global implementation target: At least 75 twinning arrangements to be in place and reported to the Bureau for Web publicity on the Ramsar Web site.
- 14.1.4 Further review and develop Internet-based resource kits and knowledge and information sharing, including the Convention's Wetland Expert Database, on topics including impact assessment, incentives, management planning, river basin management, participation, education and public awareness, and Ramsar sites. **GO 1, 2, 3** {CPs, Bureau, IOPs}
- 14.1.5 Further develop, use and advertise the availability of the Convention's Wetland Expert Database. **GO 1, 4**{Bureau, CPs, IOPs, OCs}

See also COP8 Resolution VIII.39 for additional action related to this Operational Objective.

OPERATIONAL OBJECTIVE 15. FINANCING THE CONSERVATION AND WISE USE OF WETLANDS

Note: Where actions are drawn directly from the *Guidelines for international cooperation* (Ramsar Handbook 9), the cross-reference is indicated.

Operational Objective 15.1:

Promote international assistance to support the conservation and wise use of wetlands.

Actions

- 15.1.1 Mobilize direct funding support from multilateral and bilateral development assistance agencies in order to assist developing countries and countries whose economies are in transition in the conservation and wise use of wetlands and in implementation of the present Strategic Plan. (Based on Section E1 of the Guidelines) **GO 1, 3, 4** {CPs, Bureau, IOPs}
2003-2005 global implementation target: Each CP with a bilateral donor agency to have encouraged it to give priority for funding for wetland conservation and wise use projects in relation to poverty alleviation and other WSSD targets and priorities.
- 15.1.2 Mobilize resources to support the implementation of management plans for Ramsar sites in developing countries and countries whose economies are in transition. **GO 2, 3** {CPs, Bureau, MedWet, IOPs} (Refer also to Operational Objective 11.1)
- 15.1.3 For those Parties with bilateral development assistance agencies, respond to sections E1, E2, E5, E7, E10, E11, E14 and E15 of the *Guidelines for international cooperation under the Ramsar Convention on Wetlands* (Ramsar Handbook 9), and especially consider issues such as long-term fund generation mechanisms, appropriate monitoring of projects, training of development assistance agency staff, priority for institutional capacity building, the need for cooperation between development assistance agencies, and the importance of coordination between bilateral development assistance agencies and the Ramsar Administrative Authorities in the donor and recipient countries. **GO 3, 4** {CPs, Bureau, IOPs}
- 15.1.4 Pursuant to 15.1.3, urge all Parties with bilateral development assistance agencies to report on their performance with regard to wetland-related activities at each COP. (Based on Section E5 of the Guidelines) **GO 1, 3, 4** {CPs}
- 15.1.5 For those Parties involved in the priority-setting for, and the determining of, the *modus operandi* of the multilateral development and environment-related assistance agencies, seek to ensure that wetland conservation and wise use is afforded due attention and priority. **GO 1, 3, 4** {CPs, Bureau, IOPs}
2003-2005 global implementation target: Relevant CPs to report to COP9 on ensuring that multilateral donor agencies afford priority to wetlands within poverty alleviation schemes.
- 15.1.6 Provide financial support, preferably on a medium and/or long-term basis, to the operations of the Ramsar Small Grants Fund and its Endowment Fund, and the Voluntary Fund for the Convention's Communication, Education, and Public Awareness

Programme, seeking to have available a minimum of one million US dollars annually for the former and half a million US dollars for the latter. (Based on Sections E4 and E9 of the Guidelines.) **GO 1, 3, 4** {Bureau, SC, CPs, OCs}

- 15.1.7 Mobilize resources to support the development of wetland training and education centres at Ramsar sites and the training of wetland educators in developing countries and countries with economies in transition. **GO 1, 2, 3, 4** {CPs, Bureau, MedWet, IOPs}
- 15.1.8 For those Parties eligible for development assistance, include projects for conservation and wise use of wetlands in national portfolios and plans for consideration by development assistance agencies, and give priority among these for projects to build institutional capacity. (Based on Sections E8 and E12 of the Guidelines) **GO 1, 3, 4** {CPs}
- 15.1.9 For eligible Contracting Parties of both the Ramsar Convention and the Convention on Biological Diversity (CBD), develop wetland conservation and wise use projects suitable for consideration by the Global Environment Facility (GEF), as part of the implementation of the Joint Work Plan with the CBD and in accordance with paragraphs 6 and 7 of Decision IV/4 of CBD's COP4 relating to inland water ecosystems. **GO 1, 3, 4** {CPs, Bureau, IOPs, OCs}
2003-2005 global implementation target: Assistance provided to at least 15 countries in preparing projects for submission to the Global Environment Facility.
- 15.1.10 Maintain close working relations with multilateral agencies that provide development and environment-related assistance in relation to project screening, development and evaluation, notably: the World Bank, UNDP, and UNEP, in particular as partners in the Global Environment Facility (GEF); regional funding agencies such as the Asian Development Bank, African Development Bank, Interamerican Development Bank, and the European Investment Bank; and the European Commission. **GO 1, 3, 4** {Bureau}
- 15.1.11 Assist, when requested, Contracting Parties and bilateral and multilateral development assistance agencies in the development, screening and evaluation of wetland projects. **GO 1, 3, 4** {STRP, Bureau}
- 15.1.12 Pursue involvement of the private sector (including corporations and foundations) in wetland conservation and seek opportunities for private sector funding of wetland projects under Ramsar. **GO 1, 3, 4** {Bureau, CPs, IOPs}
- 15.1.13 Promote establishment of effective mechanisms to encourage environmentally sound trade in wetland products, in particular from Ramsar sites, compatible with international trade agreements. **GO 1, 2, 3** {Bureau, CPs, IOPs, OCs}
- 15.1.14 Consider the possibility of creating a voluntary "Ramsar Label" for wetland products and services that are provided in both environmentally sound and socially equitable manners. **GO 1, 3** {Bureau, CPs, IOPs}

See also COP8 Resolutions VIII.1, 5, 6, 10 and 42 for additional actions related to this Operational Objective.

Operational Objective 15.2:

Ensure that environmental safeguards and assessments are an integral component of all development projects that affect wetlands, including foreign and domestic investments.

Actions

- 15.2.1 Work with international development agencies, including banks, financial institutions and private investors and developers, to ensure that proposed grants, loans, and development projects include environmental safeguards and environmental assessments of possible impacts upon wetlands. (Based on Section G1 of the Guidelines.) **GO1, 3** {CPs, Bureau, IOPs} (Refer also to Actions 1.2.3 and 1.2.4)
- 15.2.2 Ensure that domestic laws include environmental regulations, compatible with international trade agreements, and environmental impact assessments requirements for development projects that affect wetlands. (Based on Section G2 of the Guidelines.) **GO1, 3** {CPs}
- 15.2.3 Review wetland-related project development approval and consider the introduction of mechanisms to direct resources derived from these activities back to hands-on wetland management in the country. (Based on Section G3 of the Guidelines.) **GO1, 3** {CPs}

OPERATIONAL OBJECTIVE 16. FINANCING OF THE CONVENTION

Operational Objective 16.1:

Provide the financial resources required for the Convention's governance mechanisms and programmes to achieve the expectations of the Conference of the Contracting Parties.

Actions

- 16.1.1 Pay annual contributions to the Convention's core budget in full and promptly at the beginning of each calendar year. **GO4** {CPs}
- 16.1.2 Consider providing additional voluntary contributions to the Convention to support the Small Grants Fund and its Endowment Fund, the Voluntary Fund for the Convention's Communication, Education, and Public Awareness Programme, and the Training Service, regionally-based initiatives such as MedWet, the undertaking of Ramsar Advisory Missions for sites included in the Montreux Record and other Ramsar sites, and other priority activities as determined by the Strategic Plan. **GO4** {Bureau, CPs, IOPs, OCs}
- 16.1.3 Continue to consider including in the core budget of the Convention an additional allocation to defray the Ramsar Bureau costs related to the ordinary meetings of the COP, in order to allow the opportunity for all Contracting Parties to be able to offer to host meetings of the Conference of the Contracting Parties. **GO4** {Bureau, COP, SC}
- 16.1.4 At COP9, consider including within the core budget of the Convention an allocation to establish a Water Officer post and a Communication, Education, and Public Awareness Programme officer post to help accelerate implementation of this work. **GO1, 4** {Bureau, SC, COP}

2003-2005 global implementation target: Proposal for Bureau posts of a Water Officer and CEPA Programme Officer to have been prepared for consideration by COP9 for inclusion in the core budget of the Convention.

OPERATIONAL OBJECTIVE 17. INSTITUTIONAL MECHANISMS OF THE CONVENTION

Operational Objective 17.1:

Ensure that the Conference of the Contracting Parties, Standing Committee, Scientific and Technical Review Panel, and Ramsar Bureau are operating at a high level of efficiency and effectiveness to support implementation of this Strategic Plan.

Actions

- 17.1.1 Ensure that the Ramsar COP continues to have as its major focus the development of tools to assist Parties in implementing the Convention through the Strategic Plan, and a *modus operandi* that allows full and active participation by small as well as large Contracting Party delegations and the different categories of observers. **GO4** {COP, SC}
- 17.1.2 Keep under review and, if necessary, modify or enhance the roles, responsibilities, and financial resources available to the Standing Committee during each triennium. **GO4** {COP, SC}
- 17.1.3 Through the information provided in National Reports, evaluate and report on the implementation of the Strategic Plan at each meeting of the COP, and prepare for every second meeting a revised and updated Strategic Plan for the forthcoming two triennia. **GO4** {COP, SC, Bureau}
- 17.1.4 Review the working priorities, and *modus operandi*, and ways of financing, of the Scientific and Technical Review Panel (STRP) at each meeting of the COP. **GO4** {COP, SC}
- 17.1.5 Maintain as an ongoing priority action of the STRP, with the support of the Convention's network of STRP national focal points, IOPs and others, the development of new tools to assist Parties with the implementation of the wise use principle, as well as the review of the Ramsar Criteria for Identifying Wetlands of International Importance to ensure that these reflect global wetland conservation and wise use priorities. **GO1, 2, 4** {COP, STRP, Bureau}
- 17.1.6 Ensure that each Contracting Party has nominated a national focal point for the work of the STRP (as called for by Resolutions VII.2 and VIII.28) and two focal points (one government, one non-government) for the Communication, Education, and Public Awareness Programme (as called for by Resolutions VII.9 and VIII.31). **GO1, 4** {COP, CPs}
- 17.1.7 Review and approve annual Ramsar Bureau Work Plans, based on the Convention's Triennial Work Plan approved by the COP. **GO1, 4** {SC, Bureau}
- 17.1.8 Review and make recommendations to the COP regarding the staffing and budget requirements of the Ramsar Bureau which take account of the expectations raised by the Strategic Plan and triennial Convention Work Plans. **GO4** {Bureau, SC, COP}

See also COP8 Resolutions VIII.28, 42 and 45 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 18. INSTITUTIONAL CAPACITY OF CONTRACTING PARTIES

Operational Objective 18.1:

Develop the capacity within, and promote cooperation among, institutions in Contracting Parties to achieve conservation and wise use of wetlands.

Actions

- 18.1.1 Encourage the review of existing national institutions responsible for the conservation and wise use of wetlands, and on the basis of such a review, identify and implement measures to:
 - a) increase cooperation and synergy among institutions with direct or indirect responsibility for wetland issues, especially those responsible for the management of water resources and for biodiversity and wetland conservation and management; **GO1, 2, 4** {CPs}
 - b) promote enhanced cooperation, and where appropriate integrated approaches, among the national focal points of environment-related conventions, and consider establishing a coordinating committee to ensure that integrated approaches are taken; **GO3, 4** {CPs}
 - c) promote enhanced contact, and where appropriate close coordination, between the Ramsar Administrative Authority and national professional, technical, scientific and educational societies and agencies involved in wetland conservation or management, including those involved in social and cultural heritage issues; **GO1, 4** {CPs, OCs} and
 - d) provide appropriately trained staff, in adequate numbers, to enable these institutions to implement the Convention to full effect. **GO4** {CPs} (Refer also to Operational Objective 20.1)
- 18.1.2 Establish National Ramsar/Wetlands Committees to provide the opportunity for input from, and representation of, relevant government agencies, including national water management ministries and/or agencies, where appropriate, and non-governmental organizations, STRP and CEPA National Focal Points, key stakeholders, indigenous people and local communities, the private sector and interest groups, and land use planning and management authorities (Recommendation 5.13). When in place, ensure the proper functioning of these Committees. **GO1, 4** {CPs, Bureau, MedWet, IOPs}
- 18.1.3 Review the designated Ramsar national Administrative Authority (and provincial (sub-national) focal points where appropriate) and STRP and CEPA national focal points in each Contracting Party, with a view to ensuring that these positions are being effective in increasing involvement in the work of the Convention of all relevant agencies and organizations concerned with the conservation and wise use of wetlands. **GO1, 4** {CPs}

- 18.1.4 Assist in achieving a cohesive and coordinated national effort towards the implementation of the Convention, using Ramsar's national planning tool (based on the National Report Format) as an ongoing planning and monitoring mechanism. Ideally, this tool should be used by all relevant government departments/agencies and include input from National Ramsar/Wetland Committee members and other stakeholders as appropriate. **GO4** {CPs}

See also COP8 Resolutions VIII.3 and 42 for additional actions related to this Operational Objective.

OPERATIONAL OBJECTIVE 19. INTERNATIONAL ORGANIZATION PARTNERS AND OTHERS

Operational Objective 19.1:

Maximize the benefits of working with the Convention's International Organization Partners (IOPs) and others.

Actions

- 19.1.1 Establish with each International Organization Partner a programme of joint work based on this Strategic Plan, review it annually, and seek additional funding for the implementation of actions not covered by existing organizational budgets. **GO4** {Bureau, IOPs}
2003-2005 global implementation target: Each IOP and the Bureau to have established and be implementing a programme of joint work in support of the Convention, including joint actions by all IOPs.
- 19.1.2 Implement mechanisms for strengthening the contribution of networks of experts of the International Partner Organizations and other collaborating organizations to the work of the STRP and the Convention. **GO4** {Bureau, IOPs, STRP}
- 19.1.3 Review and renew formal agreements with the Convention's International Organization Partners as necessary. **GO4** {Bureau, IOPs}
- 19.1.4 Welcome and expedite review of applications by eligible organizations seeking the status of International Organization Partner of the Convention. **GO4** {SC, Bureau, IOPs}
- 19.1.5 Implement existing memoranda of cooperation with other bodies, such as Eurosite (the network of European natural heritage management bodies), The Nature Conservancy (TNC), Society of Wetland Scientists (SWS), Center for International Earth Science Information Network, Columbia University, USA (CIESIN), the International Association for Impact Assessment (IAIA), Ducks Unlimited (Canada, Mexico, USA), the Institute for Inland Water Management and Waste Water Treatment (RIZA, The Netherlands), the South Pacific Regional Environment Program (SPREP), the Lake Chad Basin Commission, and the Niger Basin Authority, through establishment of joint programmes of work, and seek to develop similar agreements with other appropriate bodies. **GO4** {Bureau, OCs}

OPERATIONAL OBJECTIVE 20. TRAINING

Operational Objective 20.1:

Identify the training needs of institutions and individuals concerned with the conservation and wise use of wetlands, particularly in developing countries and countries in transition, and implement appropriate responses.

Actions

- 20.1.1 Implement, and further develop and publicize, the Convention's Wetland Training Service. **GO4** {CPs, Wetlands International, Bureau, IOPs}
2003-2005 global implementation target: Ramsar Wetland Training Service in place and fully implemented.
- 20.1.2 Identify at national, provincial, and local levels the needs and target audiences for training in implementation of the Convention and, in particular, use of the Wise Use Guidelines and Ramsar Handbooks. **GO4** {CPs, Bureau, MedWet, IOPs}
2003-2005 global implementation target: At least half of CPs to have assessed national and local training needs.
- 20.1.3 Identify and disseminate, nationally, regionally and globally, information describing the current training opportunities in disciplines essential for the conservation and wise use of wetlands through the further development of the Bureau's Ramsar Wise Use Resource Centre (http://ramsar.org/wurc_index.htm) and the Directory of Wetland Management Training Opportunities (http://ramsar.org/wurc_training_directory.htm). **GO4** {CPs, Bureau, MedWet, IOPs, OCs}
- 20.1.4 Provide financial support, where possible, for expanding the Bureau's internship training programme. **GO4** {CPs, IOPs, OCs}
2003-2005 global implementation target: Resources provided to expand internship programme, including an Oceania intern.
- 20.1.5 Assemble and make available, or develop, new training activities and general training modules as necessary, for the use of the Ramsar Handbooks, with specialized modules including coverage of the following fields:
- a) wetland inventory, assessment and monitoring;
 - b) national wetland policies and plans;
 - c) integrated catchment/river basin and coastal zone planning and management;
 - d) integrated site management planning at the local, provincial or catchment/river basin level;
 - e) wetland restoration and rehabilitation;
 - f) invasive alien species;
 - g) agricultural impacts on wetlands and water resources;
 - h) impact assessment and strategic environmental assessment;
 - i) impacts of climate change, and adaptive management and mitigation of such impacts
 - j) economic valuation of wetlands;
 - k) communication, education and public awareness techniques.
- GO1, 2, 3, 4** {CPs, Bureau, MedWet, IOPs, OCs}

20.1.6 Provide opportunities for manager training by:

- a) encouraging personnel exchanges for on-the-job training, possibly between twinned sites;
- b) holding pilot training courses at specific Ramsar sites;
- c) siting wetland manager and wetland educator training facilities at Ramsar sites;
- d) obtaining and disseminating information about training courses for wetland managers around the world;
- e) establishing further regional training initiatives such as the Wetlands for the Future Initiative funded by the Government of the USA for the countries of Latin America and the Caribbean.

GO2, 3, 4 {CPs, Bureau, MedWet, IOPs, OCs}

20.1.7 Continue to encourage the development of projects for submission to the Small Grants Fund for support for training activities. **GO4** {CPs, SC}

20.1.8 Encourage further development and use of regional wetland training and research centres, including a Regional Ramsar Centre for Training and and Research on Wetlands in the Western Hemisphere (Resolution VII.26) and a Regional Ramsar Centre for Training and Research on Wetlands in Western and Central Asia (Resolution VIII.41). **GO1, 3, 4** {CPs, MedWet, IOPs, OCs}

20.1.9 Exchange information, technical assistance and advice, and expertise about training for the conservation and wise use of wetlands through the Communication, Education, and Public Awareness Programme, the Bureau, MedWet, and the IOPs of the Convention. **GO1, 3, 4** {CPs, Bureau, MedWet, IOPs}

OPERATIONAL OBJECTIVE 21. MEMBERSHIP OF THE CONVENTION

Operational Objective 21.1:

Secure the universal membership of the Convention.

Actions

21.1.1 Recruit new Contracting Parties through:

- a) seeking direct contact with non-Contracting Parties to provide information on the benefits of membership and advice or assistance in overcoming obstacles; **GO5** {SC, neighbouring CPs, Bureau, IOPs}
- b) intensifying contacts with the diplomatic representatives of non-Contracting Parties; **GO5** {Bureau}
- c) seeking assistance from the secretariats of other conventions, including the Regional Seas Conventions, and in-country offices of the United Nations Development Programme, the World Bank, and others; **GO5** {CPs, Bureau, MEAs, OCs}

- d) organizing subregional workshops involving Contracting Parties and non-Contracting Parties; **GO5** {CPs, Bureau}
- e) providing assistance for the identification of Wetlands of International Importance that could be listed as Ramsar sites upon accession; **GO5** {Bureau, IOPs, OCs}
- f) encouraging attendance by observers from non-Contracting Parties at regional meetings and meetings of the Conference of the Parties; **GO5** {Bureau, IOPs, OCs} and
- g) publishing and disseminating an accession kit to assist countries in the Oceania region (and Small Island Developing States more generally) through the accession process. {Bureau, CPs, IOPs, OCs}

Application of the Strategic Plan 2003-2008 by Convention bodies and collaborating partners

61. As indicated in the Actions designed to deliver each Operational Objective, achieving full implementation of the Strategic Plan requires the involvement of a number of different bodies and organizations. The process of planning and undertaking this implementation by the different bodies of the Convention and other organizations is outlined below.

The Contracting Parties, STRP National Focal Points, and National CEPA Focal Points

62. A substantial part of the implementation of this Strategic Plan is the responsibility of the Contracting Parties to the Convention. It is fully recognized that each Contracting Party is free to choose the extent to which it will implement the Strategic Plan, the resources it will allocate to the implementation, and the timeframes to be used.
63. To assist Contracting Parties in planning their implementation, the Standing Committee has adopted, in fulfillment of COP7 Resolution VII.27, a Ramsar National Planning Tool and National Report Format for reporting to COP8. This was based on the structure and content of the first Strategic Plan and was first issued, in electronic format, to Contracting Parties in 2000.
64. For national action planning and reporting to COP9 in 2005 and COP10 in 2008, the National Planning Tool and National Report Format will be revised so as to conform to the structure and content of this second Strategic Plan, taking into account the experience of Contracting Parties in its use for planning and reporting to COP8.
65. As well as providing a standard format for national reporting to the Conference of Contracting Parties, this National Planning Tool provides a procedure for Parties, through their National Ramsar Committees or other mechanisms, to determine their national priorities and targets for action under the relevant Objectives and Actions of the Strategic Plan.
66. Using the Strategic Plan, Contracting Parties will have prepared and announced their proposed national targets for each triennium prior to COP8 and COP9, such that realistic global and regional targets can be established for the Convention's Work Plans for 2003-2005 and 2006-2008 which are to be adopted by COP8 and COP9 respectively.
67. Government-designated National Focal Points for the Scientific and Technical Review Panel (STRP) contribute to the implementation of the STRP work plan (see below).
68. Government-designated National Focal Points (governmental and non-governmental) for wetland-related communication, education and public awareness (CEPA) contribute to the implementation of the Actions in the Strategic Plan related to the Ramsar CEPA Programme (Resolution VIII.31).

The Standing Committee and its Regional Representatives

69. Actions identified for the Standing Committee in the Strategic Plan and COP Resolutions are brought onto the Agenda of its annual meetings in each triennium, and procedures for their delivery are established through Decisions of the Standing Committee. The Regional Representatives in the Standing Committee have a special responsibility in promoting the implementation of the Strategic Plan in their respective regions.

The Scientific and Technical Review Panel (STRP)

70. From the Actions identified for it in the Strategic Plan and those embodied in COP Resolutions, the STRP prepares its triennial Work Plan at its first meeting of each triennium. The STRP reports to the Standing Committee at each of its annual meetings.

The Ramsar Bureau (the Convention's secretariat)

71. On the basis of the Actions identified for it in the Strategic Plan, the Ramsar Bureau prepares its annual Work Plan, which is approved by the Standing Committee. Included in the Bureau's Work Plan is that of the MedWet Coordination Unit, which operates under the aegis of the Convention and reports to the Secretary General.

The International Organization Partners (IOPs)

72. Through Action 19.1.1 of this Strategic Plan, each International Organization Partner of the Convention develops a programme of joint work with the Convention based on the Actions in Section II of the Strategic Plan that the IOPs are expected to contribute to or undertake, and to establish the targets for the delivery of these Actions.
73. Other organizations, particularly those with which the Convention has established a Memorandum of Cooperation or Agreement, are encouraged to develop similar joint plans which contribute to the delivery of Actions under Section II of the Strategic Plan.

Other multilateral environmental agreements (MEAs)

74. A key activity identified for further progress under General Objective 3 on International Cooperation is the establishment of harmonized working frameworks for the delivery of common elements of activity among MEAs. To this end the Ramsar Bureau will continue to develop bilateral joint work plans between the Ramsar Convention and other relevant MEAs, and will seek to further establish multilateral work plans and activities among them, for example, in relation to harmonized reporting requirements.
75. This harmonized implementation approach is designed to assist Contracting Parties in their delivery of commitments to all related MEAs, and to minimize the duplication of effort in doing so.

REFERENCE

Resolutions and Recommendations adopted by the Conference of the Contracting Parties relevant to the Strategic Plan

The Resolutions and Recommendations adopted by the Conference of the Contracting Parties which are relevant to each General Objective of this Strategic Plan are listed below.

Note that some Resolutions and Recommendations may include elements relevant to the delivery of more than one General Objective.

General Objective 1. The wise use of wetlands: To stimulate and assist all Contracting Parties to develop, adopt and use the necessary and appropriate instruments and measures to ensure the wise use of all wetlands within their territories

a) Wise use

Recommendation 3.3: Wise use of wetlands

Recommendation 4.10: Guidelines for the implementation of the wise use concept

Resolution 5.6: Additional guidance for the implementation of the wise use concept

Recommendation 7.1: A global action plan for the wise use and management of peatlands

Resolution VIII.12: Enhancing the wise use and conservation of mountain wetlands

Resolution VIII.14: New Guidelines for management planning for Ramsar sites and other wetlands

Resolution VIII.17: Guidelines for Global Action on Peatlands

Resolution VIII.32: Wise use of mangrove ecosystem resources

Resolution VIII.35: The impact of natural disasters, particularly drought, on wetland ecosystems

Resolution VIII.39: High Andean wetlands as strategic ecosystems

b) Inventory and assessment

Recommendation 5.2: Guidelines for interpretation of Article 3 (“ecological character” and “change in ecological character”)

Recommendation 5.3: The essential character of wetlands and the need for zonation related to wetland reserves

Resolution VI.1: Working definitions of ecological character, guidelines for describing and maintaining the ecological character of listed sites, and guidelines for operation of the Montreux Record

Resolution VII.10: Wetland Risk Assessment Framework

Resolution VII.20: Priorities for wetland inventory

Resolution VII.25: Measuring environmental quality in wetlands

Resolution VIII.6: A Ramsar Framework for Wetland Inventory

Resolution VIII.7: Gaps and harmonization of Ramsar guidance on wetland ecological character, inventory, assessment and monitoring

Resolution VIII.8: Assessing and reporting the status and trends of wetlands, and the implementation of Article 3.2 of the Convention

Need for national inventory: Recommendation 1.5, Recommendation 4.6, Resolution 5.3, Resolution VI.12

c) Policies and legislation, including impact assessment and valuation

Recommendation 4.4: Establishment of wetland reserves

Recommendation 5.3: The essential character of wetlands and the need for zonation related to wetland reserves

Recommendation 6.2: Environmental impact assessment

Recommendation 6.10: Promotion of cooperation on the economic valuation of wetlands

Resolution VII.6: Guidelines for developing and implementing National Wetland Policies

Resolution VII.7: Guidelines for reviewing laws and institutions to promote the conservation and wise use of wetlands

Resolution VII.16: The Ramsar Convention and impact assessment: strategic, environmental and social

Resolution VIII.9: “Guidelines for incorporating biodiversity-related issues into environmental impact assessment legislation and/or processes and in strategic environmental assessment” adopted by the Convention on Biological Diversity (CBD), and their relevance to the Ramsar Convention

Need for National Wetland Policies: Recommendation 1.5, Recommendation 3.3, Recommendation 6.9

d) Integrating wetlands into sustainable development

Recommendation 6.1: Conservation of peatlands

Recommendation 6.7: Conservation and wise use of coral reefs and associated ecosystems

Recommendation 6.8: Strategic planning in coastal zones

Recommendation 6.14: Toxic chemicals

Resolution VI.23: Ramsar and water

Resolution VII.18: Guidelines for integrating wetland conservation and wise use into river basin management

Resolution VII.21: Enhancing the conservation and wise use of intertidal wetlands

Recommendation 7.1: A global action plan for the wise use and management of peatlands

Recommendation 7.2: Small Island Developing States, island wetland ecosystems, and the Ramsar Convention

Resolution VIII.1: Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands

Resolution VIII.2: The Report of the World Commission on Dams (WCD) and its relevance to the Ramsar Convention

Resolution VIII.3: Climate change and wetlands: impacts, adaptation, and mitigation

Resolution VIII.4: Wetland issues in Integrated Coastal Zone Management (ICZM)

Resolution VIII.34: Agriculture, wetlands and water resource management

Resolution VIII.35: The impact of natural disasters, particularly drought, on wetland ecosystems

Resolution VIII.40: Guidelines for rendering the use of groundwater compatible with the conservation of wetlands

e) Restoration and rehabilitation

Recommendation 4.1: Wetland restoration

Recommendation 6.15: Restoration of wetlands

Resolution VII.17: Restoration as an element of national planning for wetland conservation and wise use

Resolution VII.24: Compensation for lost wetland habitats and other functions

Resolution VIII.16: Principles and guidelines for wetland restoration

f) Invasive alien species

Resolution VII.14: Invasive species and wetlands

Resolution VIII.18: Invasive species and wetlands

g) Local communities, indigenous people and cultural values

Recommendation 5.8: Measures to promote public awareness of wetland values in wetland reserves

Recommendation 5.10: The 25th anniversary wetland campaign for 1996

Resolution VI.21: Assessment and reporting on the status of wetlands

Recommendation 6.3: Involving local and indigenous people in the management of Ramsar wetlands

Resolution VII.8: Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands

Resolution VII.9: The Convention's Outreach Programme, 1999-2002

Resolution VIII.14: New Guidelines for management planning for Ramsar sites and other wetlands

Resolution VIII.19: Guiding principles for taking into account the cultural values of wetlands for the effective management of sites

Resolution VIII.36: Participatory Environmental Management (PEM) as a tool for management and wise use of wetlands

h) Private sector involvement

i) Incentives

Resolution VII.15: Incentive measures to encourage the application of the wise use principle

Resolution VIII.23: Incentive measures as tools for achieving the wise use of wetlands

j) Communication, education and public awareness

Recommendation 4.4: Establishment of wetland reserves

Recommendation 4.5: Education and training

Recommendation 5.8: Measures to promote public awareness of wetland values in wetland reserves

Recommendation 5.10: The 25th anniversary wetland campaign for 1996

Resolution VI.19: Education and public awareness

Resolution VII.9: The Convention's Outreach Programme, 1999-2002

Resolution VIII.31: The Convention's Programme on communication, education and public awareness (CEPA) 2003-2008

General Objective 2. Wetlands of International Importance: To stimulate and support all Contracting Parties in the appropriate implementation of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*, including the appropriate management of listed sites as a contribution to sustainable development.

- Recommendation 4.7: Mechanisms for improved application of the Ramsar Convention
- Recommendation 4.8: Change in ecological character of Ramsar sites
- Recommendation 5.3: The essential character of wetlands and the need for zonation related to wetland reserves
- Resolution 5.7: Management planning for Ramsar sites and other wetlands
- Resolution 5.9: Application of the Ramsar Criteria for Identifying Wetlands of International Importance
- Resolution VI.1: Working definitions of ecological character, guidelines for describing and maintaining the ecological character of listed sites, and guidelines for operation of the Montreux Record
- Recommendation 6.2: Environmental impact assessment
- Resolution VII.11: Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance
- Resolution VII.16: The Ramsar Convention and impact assessment: strategic, environmental and social; and the additional guidance on impact assessment adopted by (Resolution VIII.9)
- Resolution VII.10: Wetland Risk Assessment Framework
- Resolution VII.23: Issues concerning the boundary definitions of Ramsar sites and compensation of wetland habitat
- Resolution VIII.6: A Ramsar Framework for Wetland Inventory
- Resolution VIII.7: Gaps and harmonization of Ramsar guidance on wetland ecological character, inventory, assessment and monitoring
- Resolution VIII.8: Assessing and reporting the status and trends of wetlands, and the implementation of Article 3.2 of the Convention
- Resolution VIII.10: Improving implementation of the Strategic Framework and Vision for the List of Wetlands of International Importance
- Resolution VIII.11: Additional guidance for identifying and designating under-represented wetland types as Wetlands of International Importance
- Resolution VIII.13: Enhancing the information on Wetlands of International Importance (Ramsar sites)
- Resolution VIII.14: New Guidelines on management planning for Ramsar Sites and other wetlands
- Resolution VIII.15: The “San José Record” for the promotion of wetland management
- Resolution VIII.20: General guidance for interpreting “urgent national interests” under Article 2.5 of the Convention and considering compensation under Article 4.2
- Resolution VIII.21: Defining Ramsar site boundaries more accurately in Ramsar Information Sheets
- Resolution VIII.22: Issues concerning Ramsar sites that cease to fulfill or never fulfilled the Criteria for designation as Wetlands of International Importance
- Resolution VIII.33: Additional guidance for identifying, sustainably managing, and designating temporary pools as Wetlands of International Importance
- Resolution VIII.36: Participatory Environmental Management (PEM) as a tool for management and wise use of wetlands
- Resolution VIII.38: Waterbird population estimates and the identification and designation of Wetlands of International Importance

The Montreux Record: Recommendation 4.8, Resolutions 5.4, VI.1, VII.12 and VIII.8

Ramsar Advisory Missions: Recommendation 4.7, Resolutions VI.14 and VII.12

General Objective 3. International cooperation: To promote international cooperation through the active application of the *Guidelines for international cooperation under the Ramsar Convention*, and in particular to mobilize additional financial and technical assistance for wetland conservation and wise use.

Resolution 4.4: Implementation of Article 5 of the Convention

Recommendation 4.11: Cooperation with international organizations

Recommendation 5.4: The relationship between the Ramsar Convention, the Global Environment Facility and the Convention on Biological Diversity

Recommendation 5.6: The role of non-governmental organizations (NGOs) in the Ramsar Convention

Resolution VI.9: Cooperation with the Convention on Biological Diversity

Resolution VI.10: Cooperation with the Global Environment Facility (GEF) and its implementing agencies: the World Bank, UNDP and UNEP

Resolution VII.4: Partnerships and cooperation with other Conventions, including harmonized information management infrastructures

Resolution VII.19: Guidelines for international cooperation under the Ramsar Convention

Resolution VIII.5: Synergies with other environmental conventions

Resolution VIII.30: Regional initiatives for the further implementation of the Convention

Resolution VIII.42: Small Island Developing States in the Oceania region

Resolution VIII.43: A subregional strategy of the Ramsar Convention for South America

Resolution VIII.44: New Partnership for Africa's Development (NEPAD) and implementation of the Ramsar Convention in Africa

MedWet Initiative: Recommendation 5.14, Recommendation 6.11; Resolution VII.22; Resolution VIII.30

Flyway agreements: Recommendation 3.2, Resolution 4.4, Recommendation 4.12, Recommendation 6.4; Resolution VIII.37

General Objective 4. Implementation capacity: To ensure that the Convention has the required implementation mechanisms, resources and capacity to achieve its mission.

Recommendation 5.4: The relationship between the Ramsar Convention, the Global Environment Facility and the Convention on Biological Diversity

Recommendation 5.5: Inclusion of conservation and wise use of wetlands in multilateral and bilateral development cooperation programmes

Recommendation 5.6: The role of non-governmental organizations (NGOs) in the Ramsar Convention

Recommendation 5.7: National Committees

Resolution VI.21: Assessment and reporting on the status of wetlands

Resolution VII.3: Partnerships with international organisations

Resolution VII.5: Critical evaluation of the Convention's Small Grants Fund for Wetland Conservation and Wise Use (SGF) and its future operations

Resolution VII.26: Creation of a Regional Ramsar Centre for Training and Research on Wetlands in the Western Hemisphere

Resolution VII.28: Financial and budgetary matters
Recommendation 7.4: The Wetlands for the Future Initiative
Resolution VIII.25: The Ramsar Strategic Plan 2003-2008
Resolution VIII.26: The implementation of the Strategic Plan 2003-2008 during the triennium 2003-2005 and National Reports for Ramsar COP9
Resolution VIII.28: *Modus operandi* of the Scientific and Technical Review Panel (STRP)
Resolution VIII.29: Evaluation of the Ramsar Small Grants Fund for wetland conservation and wise use (SGF) and establishment of a Ramsar Endowment Fund

Development assistance

Recommendation 3.4: Responsibility of development agencies toward wetlands
Recommendation 3.5: Tasks of the Bureau in respect to development agencies
Recommendation 4.13: Responsibility of multilateral development banks (MDBs) towards wetlands
Recommendation 5.4: The relationship between the Ramsar Convention, the Global Environment Facility and the Convention on Biological Diversity
Recommendation 5.5: Inclusion of conservation and wise use of wetlands in multilateral and bilateral development cooperation programmes
Resolution VI.10: Cooperation with the Global Environment Facility (GEF) and its implementing agencies: the World Bank, UNDP and UNEP

Training:

Recommendation 4.5: Education and training
Recommendation 6.5: Establishment of further wetland manager training programmes
Resolution VIII.41: Establishment of a Regional Ramsar Centre for Training and Research on Wetlands in Western and Central Asia

General Objective 5. Membership: To progress towards the accession of all countries to the Convention.

Recommendation 1.1: Expanding the Convention's membership
Recommendation 1.2: Developing countries in the Convention
Recommendation 3.6: Further Contracting Parties in Africa
Recommendation 3.7: Further Contracting Parties in Central America, the Caribbean and South America
Recommendation 3.10: Further Contracting Parties in Asia and the Pacific
Recommendation 6.18: Conservation and wise use of wetlands in the Pacific Islands region

“Wetlands: water, life, and culture”

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.26

The implementation of the Strategic Plan 2003-2008 during the triennium 2003-2005 and National Reports for Ramsar COP9

1. EXPRESSING APPRECIATION to the 120 Contracting Parties that submitted their National Reports to this meeting of the Conference of the Parties concerning the implementation of the Ramsar Strategic Plan 1997-2002 during the triennium 2000-2002, and URGING the remaining five Parties to do so as a matter of priority;
2. NOTING the content of the Reports to this meeting of the COP of the Chairpersons of the Standing Committee and the Scientific and Technical Review Panel (STRP), as well as the Report of the Secretary General and the regional overviews of the implementation of the Convention;
3. AWARE of the information provided in the Report of the Secretary General concerning the experience of Contracting Parties in using the National Report Format adopted for COP8;
4. CONSIDERING that this meeting of the COP has adopted the Convention's Strategic Plan 2003-2008 (Resolution VIII.25), which includes actions to be undertaken by Contracting Parties and others;
5. RECALLING that Contracting Parties were requested by the Standing Committee to provide to the Ramsar Bureau their provisional national targets for the implementation of the Strategic Plan in the 2003-2005 triennium, as the basis for establishing realistic global targets for the Convention, and THANKING those 57 Contracting Parties which have provided this information;
6. FURTHER RECALLING that as part of their establishment of provisional national targets for 2003-2005 all Contracting Parties were requested to indicate their priority and the adequacy of the resources at their disposal for the implementation of each of the Operational Objectives of the draft Convention's Strategic Plan;
7. RECOGNIZING WITH CONCERN the fact that, among the Parties that have provided their provisional targets, some developed and, especially, developing countries have indicated that their level of available resources is not adequate to implement each of the Operational Objectives of the Strategic Plan during the triennium 2003-2005, including those identified as of high priority, and that in many cases the indication is that lack of resources is severely limiting, a situation that may apply to other Parties; and
8. CONSIDERING that as part of the revised *modus operandi* of the Scientific and Technical Review Panel adopted by this meeting by Resolution VIII.28, the Conference of the

Parties is requested to identify priorities for the work of the Panel during the coming triennium, in view of its large number of major tasks identified in the Strategic Plan 2003-2008 and the Resolutions adopted by the COP, and the limited capacity and resources of the Panel to undertake all these tasks;

THE CONFERENCE OF THE CONTRACTING PARTIES

9. APPROVES the global targets for the implementation of the Convention for 2003-2005, as annexed to this Resolution, and INSTRUCTS the Bureau to prepare a Work Plan for the Convention for 2003-2005 by incorporating these targets into Section II of the Convention's Strategic Plan 2003-2008 as adopted by this Conference (Resolution VIII.25), and to circulate this document widely to all Contracting Parties and relevant organizations;
10. URGES those Contracting Parties which have prepared Provisional National Targets and Actions for their implementation of the Strategic Plan during 2003-2005 to amend them as necessary, in the light of the Work Plan 2003-2005 to be circulated by the Bureau as per the previous paragraph, and to communicate the revised targets and actions to the Bureau not later than 30 June 2003;
11. STRONGLY URGES those Contracting Parties that have not yet prepared National Targets and Actions for their implementation of the Strategic Plan during 2003-2005 to do so as soon as the Bureau has circulated the Work Plan 2003-2005 as per paragraph 10 above, and to communicate their targets and actions to the Bureau not later than 30 June 2003;
12. URGES all Contracting Parties to undertake the revision or preparation, as appropriate, of their National Targets and Actions for the implementation of the Strategic Plan during 2003-2005 in consultation with their National Ramsar/Wetland Committees, where they exist, and also with all other relevant Government Ministries and agencies and the major groups of civil society recognized in Agenda 21;
13. INSTRUCTS the Ramsar Bureau to prepare a proposal for a simple National Report Format for COP9 for consideration by the Standing Committee at its meeting in February 2003, taking into account the experiences of Contracting Parties in making their National Reports to COP8;
14. REQUESTS that the proposed National Report Format for COP9 include, *inter alia*, a) codified questions on priorities and progress in implementation; b) precise indicators for the status of, and progress in, implementation; and c) explanatory text fields for reporting implementation progress since COP8;
15. INSTRUCTS the Ramsar Bureau to make available to all Contracting Parties as soon as possible in 2003 this National Report Format, once approved by the Standing Committee;
16. FURTHER INSTRUCTS the Ramsar Bureau to assist Parties in the preparation of the National Reports for COP9 by:
 - a) providing analytical examples of successfully completed reports;

- b) providing guidelines for the completion of the report, including recommendations, arranging (if resources become available) for consultancy services, and organizing training workshops at national or subregional levels;
 - c) assisting federal countries to develop more practical ways to deal with their specific situation; and
 - d) at the request of interested Parties, providing critical feedback on a first draft of the National Report;
17. URGES all Contracting Parties to use the National Report Format as a planning tool for action in the next triennium and to undertake the preparation of their National Reports for Ramsar COP9 in consultation with their National Ramsar/Wetland Committees, where they exist, and also with all other relevant Government Ministries and agencies, and the major groups of civil society recognized in Agenda 21;
18. FURTHER URGES Parties to consider initiating trials of joint reporting involving Ramsar and other multilateral environmental agreements, seeking the advice, as appropriate, of the United Nations Environment Programme;
19. REQUESTS the STRP to prepare a series of key indicators in relation to the effective implementation of the Strategic Plan in the next triennium, to be used as part of the National Report Format. These indicators should be adopted by the Standing Committee at its annual meeting in 2004, so that Parties may use them to complement their National Reports when they are finalised in preparation for COP9 in 2005;
20. REQUESTS the Ramsar Bureau to prepare a detailed review of the status and operations of National Ramsar/Wetland Committees, including their membership and terms of reference, and to make this available to all Contracting Parties as soon as possible, so that they may benefit from each other's good practice and experience;
21. REITERATES its encouragement to Contracting Parties who have not yet done so, to establish as soon as practicable National Ramsar/Wetland Committees which involve appropriate representation from governmental and non-governmental stakeholders, and in doing so to take into account the Ramsar Bureau's review of the status and operations of such Committees;
22. INSTRUCTS the Ramsar Bureau to prepare an analysis of the priorities for the global implementation of the Convention 2003-2005 indicated in the Resolutions adopted by this meeting of the Conference of the Parties, and REQUESTS the Standing Committee at its first meeting of the triennium to determine the priority activities which should be undertaken by the Bureau and the Scientific and Technical Review Panel during 2003-2005;
23. INSTRUCTS the Ramsar Bureau to continue to prepare annual Bureau Work Plans, based on the actions of the Strategic Plan 2003-2008 and Work Plan 2003-2005, for approval by the Standing Committee; and
24. REQUESTS the Ramsar Bureau and Contracting Parties to continue their efforts to work with bilateral and multilateral donors to mobilize funds for projects for the conservation

and wise use of wetlands in the context of poverty eradication strategies which involve a river basin, coastal zone, and holistic water resource management approach, taking into account the objectives and activities identified by Contracting Parties for the 2003-2005 triennium.

Annex I

2003-2005 global implementation targets for the Convention

These targets should be read in conjunction with the detailed text of each Action in Section II of the Convention's Strategic Plan 2003-2008 (Resolution VIII.25).

Operational Objective 1. Inventory and assessment

Operational Objective 1.1

Action No.	2003-2005 global target	
1.1.1	By COP9, all Parties without completed inventories to have initiated action in line with the Ramsar Framework for Wetland Inventory, and as far as possible to have completed and disseminated comprehensive national wetland inventories.	CPs, IOPs, Bureau, MedWet
1.1.2	All national wetland inventories initiated after COP8 to include information on wetland importance; potential Ramsar sites; wetlands for restoration; location of under-represented wetland types; and values and functions, in particular in relation to poverty eradication strategies.	CPs, IOPs
1.1.3	All wetland inventories to have full data management, custodianship, and metadata records in place.	CPs
1.1.4	By COP9, a Web-based metadatabase in place and populated with information on all national wetland inventories.	STRP, WI, CPs
1.1.5	An update to be completed of the <i>Global review of wetland resources and priorities for wetland inventory (GroWI)</i> with a report to COP9.	STRP, WI, Bureau
1.1.6	By COP9, all Parties with wetland inventories to have made these available to all stakeholders.	CPs

Operational Objective 1.2

Action No.	2003-2005 global target	
1.2.4	Wetland ecosystem vulnerability assessment methods available to COP9.	Bureau, STRP, MedWet, IOPs, MEAs
1.2.5	SC/Bureau to identify at least 20 Parties willing to undertake vulnerability assessments and report to COP9.	CPs, MedWet, IOPs
1.2.7	At least 50 CPs to have undertaken water quality and quantity assessments.	CPs, MedWet, IOPs

Operational Objective 2. Policies and legislation, including impact assessment and valuation

Operational Objective 2.1

Action No.	2003-2005 global target	
2.1.1	National Wetland Policy or equivalent instrument initiated by all Parties not	CPs

	having it, incorporating WSSD targets and actions, as appropriate.	
2.1.2	National Wetland Policy or equivalent instrument fully integrated into other strategic and planning processes by all Parties, including poverty eradication strategies and water resources management and water efficiency plans and national strategies for sustainable development in line with WSSD targets.	CPs, MEAs

Operational Objective 2.2

Action No.	2003-2005 global target	
2.2.1	SC/Bureau to identify at least 100 Parties to initiate and if possible complete by COP9 comprehensive reviews of their laws and institutions.	CPs
2.2.2	SC/Bureau to identify at least 50 Parties to have in place Strategic Environmental Assessment for policies, programmes and plans impacting on wetlands.	CPs
2.2.3	All CPs to have required EIA, as appropriate, for proposed projects, developments or changes which may impact on wetlands.	CPs, OCs
2.2.4	STRP to have made progress on methodologies for economic, social and environmental valuation, and all CPs with experience in this area to have engaged in the STRP work.	CPs, STRP, Bureau, MedWet, IOPs, OCs

Operational Objective 3. Integration of wetland wise use into sustainable development

Operational Objective 3.1

Action No.	2003-2005 global target	
3.1.1	STRP to spearhead process of reviewing and updating guidance on the Wise Use concept, including the ecosystem approach, in particular in line with the outcomes of WSSD.	STRP, CPs
3.1.3	All CPs to consider how to adapt and to incorporate, as necessary, into national practice the new management planning guidelines to the wise use of all wetlands.	CPs

Operational Objective 3.3

Action No.	2003-2005 global target	
3.3.2	Analysis of values and functions of Ramsar sites prepared by Bureau/Wetlands International and circulated.	Bureau, MedWet, Wetlands International

Operational Objective 3.4

Action No.	2003-2005 global target	
3.4.4	Guidance prepared on assessment of impact of large dams on wetlands and river systems.	STRP, Bureau, MedWet, IOPs

3.4.6	All CPs to have made available the guidance on water allocation and management for ecosystems to support decision-making on water resource management in all CPs, as a contribution to achieve the WDDs target on water resources management and water efficiency plans.	CPs
3.4.7	Guidelines on groundwater resources prepared.	Bureau, MedWet, STRP, IOPs
3.4.8	COP8 information on wetlands and mitigation and adaptive management for climate change made available.	STRP, Bureau, MedWet, Ocs, CPs
3.4.9	All relevant CPs to have assessed implications of Kyoto Protocol implementation on wetlands (including applying COP8 restoration guidelines).	CPs, OCs

Operational Objective 4. Restoration and rehabilitation

Operational Objective 4.1

Action No.	2003-2005 global target	
4.1.2	All CPs with lost or degraded wetlands to have identified priority sites for restoration; restoration projects underway or completed in at least 100 CPs.	CPs, MedWet, IOPs
4.1.3	Continue to add new case studies and methods to Ramsar wetland restoration Web site.	CPs, STRP, Bureau, MedWet, IOPs

Operational Objective 5. Invasive alien species

Operational Objective 5.1

Action No.	2003-2005 global target	
5.1.1	Address the problems posed by invasive species in wetland ecosystems in a decisive and holistic manner, making use, as appropriate, of the tools and guidance developed by various institutions and processes.	CPs
5.1.2	Guidance for invasives' management prepared.	CPs, STRP, Bureau, MedWet, GISP, IOPs, OCs

Operational Objective 6. Local communities, indigenous people and cultural values

Operational Objective 6.1

Action No.	2003-2005 global target	
6.1.5	Elaborated guidelines, developed jointly with CBD, available to COP9.	CPs, CEPA, Bureau, MedWet, IOPs, OCs

Operational Objective 8. Incentives

Operational Objective 8.1

Action No.	2003-2005 global target	
8.1.1	SC/Bureau to have identified at least 50 CPs to have reviewed policy and legal and institutional frameworks and sought to remove measures adversely affecting wetland conservation and wise use.	CPs

Operational Objective 9. Communication, education and public awareness

Operational Objective 9.1

Action No.	2003-2005 global target	
9.1.2	At least 50 CPs to have established national CEPA action plans.	CPs, CEPA
9.1.10	At least 75 CPs to have established at least one wetland education centre at a Ramsar site.	CPs, CEPA, IOPs, OCs

Operational Objective 10. Designation of Ramsar sites

Operational Objective 10.1

Action No.	2003-2005 global target	
10.1.1	Report on implementation progress to the Ramsar Bureau by 31 December 2003, with consolidated Bureau report circulated to all Parties by 31 March 2004. Each CP which has not designated a Ramsar site since accession to the Convention to have designated at least one new site. Designation of a further 55 million ha and 250 Ramsar sites, as progress towards global targets of 2500 sites and 250 million ha by 2010.	CPs, IOPs

Operational Objective 11. Management planning and monitoring of Ramsar sites

Operational Objective 11.2

Action No.	2003-2005 global target	
11.2.5	For all sites on the Montreux Record, and which have not been subject to a Ramsar Advisory Mission (RAM), CPs to request such a Mission prior to COP9.	CPs, Bureau

Operation Objective 12. Management of shared water resources, wetlands and wetland species

Operational Objective 12.1

Action No.	2003-2005 global target	
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12.1.1	All CPs to have identified their transboundary wetlands (see also 1.1.1). 50% of CPs to have identified cooperative management mechanisms.	CPs
12.1.2	50% of CPs with shared basins and coastal systems to be part of joint management commissions or authorities.	CPs
12.1.4	River Basin Initiative fully operational.	CPs, Bureau, CBD, IOPs, OCs

Operational Objective 13. Collaboration with other institutions

Operational Objective 13.1

Action No.	2003-2005 global target	
13.1.1	- 3 rd CBD-Ramsar Joint Work Plan fully implemented. - CMS/AEWA Joint Work Plan in place and being implemented. - Joint activities developed with UNCCD and UNFCCC, including through participation in the Joint Liaison Group with UNFCCC, CBD and UNCCD.	STRP, CPs, Bureau, IOPs, OCs
13.1.6	NEPAD's Action Plan to have fully incorporated Ramsar issues and mechanisms, and being implemented by relevant CPs, in lines with WSSD targets.	CPs, SC, Bureau, MEAs, OCs
13.1.7	Review of Ramsar's contribution to the Barbados Programme of Action, as a contribution to the WSSD target.	CPs, SC, Bureau, MEAs, OCs

Operational Objective 14. Sharing of expertise and information

Operational Objective 14.1

Action No.	2003-2005 global target	
14.1.3	At least 75 twinning arrangements to be in place and reported to the Bureau for Web publicity on the Ramsar Web site.	CPs, Bureau, IOPs, OCs

Operational Objective 15. Financing the conservation and wise use of wetlands

Operational Objective 15.1

Action No.	2003-2005 global target	
15.1.1	Each CP with a bilateral donor agency to have encouraged it to give priority for funding for wetland conservation and wise use projects in relation to poverty alleviation and other WSSD targets and priorities.	CPs, Bureau, IOPs
15.1.5	Relevant CPs to report to COP9 on ensuring that multilateral donor agencies afford priority to wetlands within poverty alleviation schemes.	CPs, Bureau, IOPs
15.1.9	Assistance provided to at least 15 countries in preparing projects for submission to the Global Environment Facility.	Bureau, IOPs, OCs

Operational Objective 16. Financing the Convention

Operational Objective 16.1

Action No.	2003-2005 global target	
16.1.4	Proposal for Bureau posts of a Water Officer and CEPA Programme Officer to have been prepared for consideration by COP9 for inclusion in the core budget of the Convention.	Bureau, SC, COP

Operational Objective 19. International Organization Partners and others

Operational Objective 19.1

Action No.	2003-2005 global target	
19.1.1	Each IOP and the Bureau to have established and be implementing a programme of joint work in support of the Convention, including joint actions by all IOPs.	Bureau, IOPs

Operational Objective 20. Training

Operational Objective 20.1

Action No.	2003-2005 global target	
20.1.1	Ramsar Training Service in place and fully implemented.	CPs, Wetlands International, Bureau, IOPs
20.1.2	At least half of CPs to have assessed national and local training needs.	CPs, Bureau, MedWet, IOPs
20.1.4	Resources provided to expand internship programme, including an Oceania intern.	CPs, IOPs, OCs

“Wetlands: water, life, and culture”

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.27

Financial and budgetary matters

1. RECALLING the budgetary provisions established by Article 6, paragraphs 5 and 6, of the Convention;
2. ACKNOWLEDGING WITH APPRECIATION the prompt payment by the majority of Contracting Parties of their contributions to the core budget of the Convention;
3. NOTING WITH GRATITUDE the additional financial contributions made by many Contracting Parties through their Ramsar Administrative Authority and other agencies, including some development assistance agencies, and also the contributions made by non-governmental organizations and the private sector for activities undertaken by the Ramsar Bureau, as shown in the information document Ramsar COP8 DOC. 12;
4. ACKNOWLEDGING ONCE MORE WITH APPRECIATION the effective financial and administrative services provided by IUCN – The World Conservation Union to the Ramsar Bureau; and
5. NOTING that Contracting Parties have been kept informed of the financial situation of the Convention secretariat through the financial audited reports for fiscal years 1999 and 2000 and the minutes of the Standing Committee meetings in 1999, 2000 and 2001, circulated to Contracting Parties in due time;

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6. NOTES WITH PLEASURE that since Ramsar COP7 in 1999 the Ramsar Bureau has managed the Convention's funds prudently and efficiently, ending each year with a small budget surplus which has been reverted into the Reserve Fund established by Resolution VI.17;
7. EXPRESSES ITS GRATITUDE to the Contracting Parties that have served in the Subgroup on Finance of the Standing Committee during the past triennium, and in particular to Armenia, which acted as Chair of the Subgroup;
8. DECIDES that the Terms of Reference for the Financial Administration of the Convention contained in Annex 3 to Resolution 5.2 shall be applied *in toto* to the 2003-2005 triennium;
9. FURTHER DECIDES that the Subgroup on Finance, as established by Resolution VI.17, shall continue to operate under the aegis of the Standing Committee and with the roles and responsibilities specified therein;

10. APPROVES the budget for the 2003-2005 triennium as attached as Annex I to enable the implementation of the annual work plans of the Ramsar Bureau;
11. DECIDES that the contribution of each Contracting Party to this budget shall be in accordance with the scale of assessments for the contribution of Member States to the United Nations budget as approved by the UN General Assembly for 2003 (Annex II) and yet to be approved for the years 2004 and 2005, except in the case of Contracting Parties which, in applying the UN scale, would make annual contributions to the Convention Budget of less than SFR 1,000, in which case the annual contribution shall be that amount. The difference between the assessed contribution for these Contracting Parties according to the UN scale and the minimum threshold of SFR 1,000 shall be allocated, when actual payments have been effected, to budget line 9 of the core budget (COP-related costs incurred by the Bureau). All other Contracting Parties will continue to be assessed in accordance with the UN scale of contributions as indicated in Annex II; and
12. CALLS UPON all Contracting Parties to pay their dues promptly by 1 January of each year, and URGES Contracting Parties in arrears to make a renewed effort to settle them.

Annex I

Core budget 2003-2005 (Swiss francs)

INCOME

The forecast income for 2003-2005 represents a 4% increase per year, based on the forecast income for 2002. The annual 4% increase is composed of 1.5% to cover inflation and 2.5% real growth (see actual figures at the bottom of the Expenditure chart in the next page).

	2002 (Forecast)	2003	2004	2005
1. Contributions from Parties	2,520,121	2,649,869	2,748,338	2,843,619
2. Voluntary contribution USA	696,960	732,284	760,256	787,322
3. Swiss income tax rebate	200,000	220,000	230,000	240,000
4. Interest	120,000	130,000	140,000	160,000
TOTAL INCOME	3,537,081	3,732,153	3,878,594	4,030,941
Budgeted expenditure		3,678,564	3,825,707	3,978,735
Difference*		53,589	52,887	52,206

* Items 1 and 2 of the income are calculated by applying the UN scale of assessments to the proposed expenditure (see next page), minus item 3 and 4 of the income. Nevertheless, in accord with Resolution VII.28, the minimum to be paid by a Party is one thousand Swiss francs per year. At the time of COP8, for 68 developing countries and countries with economies in transition, this is more than their percentage of contribution according to the UN scale. This creates the difference of income versus expenditure shown here. This additional amount, or portion thereof which is actually collected, shall be transferred to budget line 9 of the core budget (COP-related costs incurred by the Bureau), as per paragraph 11 of Resolution VIII.27.

Notes on income

1. Annual contributions from Contracting Parties (see Annex II with the list of contributions for 2003).
2. Voluntary contribution by the United States of America, equivalent to 22% of the total amount to be paid by Contracting Parties.
3. The Swiss Government, in addition to paying its annual dues, donates to the Ramsar core budget the income tax paid by the non-Swiss staff employed by the Ramsar Bureau.
4. Interest earned on deposits of cash not immediately needed for disbursement.

Annex I				
CORE BUDGET 2003-2005				
(Swiss francs)				
EXPENDITURES		2003	2004	2005
1	STAFF COSTS			
a)	Salaries and social charges	2,120,243	2,183,850	2,249,365
b)	Other employment benefits	194,536	198,427	202,395
c)	Staff hiring and departure costs	25,000	15,000	15,000
2	SCIENTIFIC AND TECHNICAL SERVICES			
a)	Ramsar Database	160,000	180,000	200,000
b)	STRP Support Service	110,000	110,000	110,000
3	SUPPORT TO REGIONAL INITIATIVES	82,386	86,150	89,596
4	TRAVEL ON OFFICIAL BUSINESS (International)	110,000	115,000	120,000
5	PURCHASE & MAINTENANCE OF EQUIPMENT / OFFICE SUPPLIES (including depreciation)	20,000	23,000	25,000
6	ADMINISTRATIVE SERVICES & OPERATING COSTS			
a)	IUCN Services	452,000	460,000	468,000
b)	Operating Costs	97,000	97,000	100,000
c)	Simultaneous interpretation at SC meetings		15,000	15,000
7	COMMUNICATIONS AND REPORTING			
a)	Publications	145,000	150,000	150,000
b)	Newsletter			
8	SUBSIDIARY BODIES			
a)	Standing Committee delegate support	42,000	45,000	45,000
b)	STRP members' support	42,000	20,000	45,000
c)	Regional representatives' support			
9	COP related costs incurred by the Bureau	43,399	107,280	123,379
10	MISCELLANEOUS			
a)	Bad debt provision	20,000	20,000	20,000
b)	Exchange loss			
	TOTAL FORECAST EXPENDITURE	3,678,564	3,825,707	3,978,735
	FORECAST INCOME *	3,678,564	3,825,707	3,978,735

* Including interest & Swiss income tax rebate

4% increase based on the 2002 forecast income and composed of:				
1.5% Inflation	53,056	55,178	57,386	
2.5% Growth	88,427	91,964	95,643	
	141,483	147,143	153,028	

Annual Contributions for the year 2003

(Note: For the fiscal years 2004 and 2005, see paragraph 11 of the Resolution.)

	2003	2003	2003
MEMBER STATE	UN	Ramsar	AnnCont
	%	%	CHF
Albania	0,00300	0,00302	1.000
Algeria	0,07000	0,07040	2.343
Argentina ¹	1,14900	1,15549	38.461
Armenia	0,00200	0,00201	1.000
Australia	1,62700	1,63619	54.462
Austria	0,94700	0,95235	31.700
Azerbaijan	0,00400	0,00402	1.000
Bahamas	0,01200	0,01207	1.000
Bahrain	0,01800	0,01810	1.000
Bangladesh	0,01000	0,01006	1.000
Belarus	0,01900	0,01911	1.000
Belgium	1,12900	1,13538	37.792
Belize	0,00100	0,00101	1.000
Benin	0,00200	0,00201	1.000
Bolivia	0,00800	0,00805	1.000
Bosnia & Herzegovina	0,00400	0,00402	1.000
Botswana	0,01000	0,01006	1.000
Brazil	2,39000	2,40350	80.002
Bulgaria	0,01300	0,01307	1.000
Burkina Faso	0,00200	0,00201	1.000
Burundi	0,00100	0,00101	1.000
Cambodia	0,00200	0,00201	1.000
Canada	2,55800	2,57245	85.625
Chad	0,00100	0,00101	1.000
Chile	0,21200	0,21320	7.096
China	1,53200	1,54065	51.282
Colombia	0,20100	0,20214	6.728
Comoros	0,00100	0,00101	1.000
Congo	0,00100	0,00101	1.000
Costa Rica	0,02000	0,02011	1.000
Cote d'Ivoire	0,00900	0,00905	1.000
Croatia	0,03900	0,03922	1.305
Cuba	0,03000	0,03017	1.004
Cyprus	0,03800	0,03821	1.272
Czech Republic	0,20300	0,20415	6.795
Dem.Rep. Congo	0,00400	0,00402	1.000

¹ Argentina requested that in applying the United Nations scale of assessment, its contribution for 2003 be adjusted by the rate proposed by the United Nations Committee on Contributions, unanimously adopted by all the Committee's members at its 62nd session. The Committee on Contributions recommended by consensus that, when assessing Argentina's contribution for 2003, the General Assembly should apply a rate of 0.969% instead of the rate of 1.149% originally foreseen.

Denmark	0,74900	0,75323	25.072
Dominican Republic	0,02300	0,02313	1.000
Ecuador	0,02500	0,02514	1.000
Egypt	0,08100	0,08146	2.711
El Salvador	0,01800	0,01810	1.000
Estonia	0,01000	0,01006	1.000
Finland	0,52200	0,52495	17.473
France	6,46600	6,50251	216.440
Gabon	0,01400	0,01408	1.000
Gambia	0,00100	0,00101	1.000
Georgia	0,00500	0,00503	1.000
Germany	9,76900	9,82417	327.004
Ghana	0,00500	0,00503	1.000
Greece	0,53900	0,54204	18.042
Guatemala	0,02700	0,02715	1.000
Guinea	0,00300	0,00302	1.000
Guinea-Bissau	0,00100	0,00101	1.000
Honduras	0,00500	0,00503	1.000
Hungary	0,12000	0,12068	4.017
Iceland	0,03300	0,03319	1.105
India	0,34100	0,34293	11.415
Indonesia	0,20000	0,20113	6.695
Iran, Islamic Rep.of	0,27200	0,27354	9.105
Ireland	0,29400	0,29566	9.841
Israel	0,41500	0,41734	13.892
Italy	5,06475	5,09335	169.535
Jamaica	0,00400	0,00402	1.000
Japan	19,51575	19,62596	653.263
Jordan	0,00800	0,00805	1.000
Kenya	0,00800	0,00805	1.000
Latvia	0,01000	0,01006	1.000
Lebanon	0,01200	0,01207	1.000
Libyan Arab Jamahiriya	0,06700	0,06738	2.243
Liechtenstein	0,00600	0,00603	1.000
Lithuania	0,01700	0,01710	1.000
Luxembourg	0,08000	0,08045	2.678
Madagascar	0,00300	0,00302	1.000
Malawi	0,00200	0,00201	1.000
Malaysia	0,23500	0,23633	7.866
Mali	0,00200	0,00201	1.000
Malta	0,01500	0,01508	1.000
Mauritania	0,00100	0,00101	1.000
Mauritius	0,01100	0,01106	1.000
Mexico	1,08600	1,09213	36.352
Monaco	0,00400	0,00402	1.000
Mongolia	0,00100	0,00101	1.000
Morocco	0,04400	0,04425	1.473
Namibia	0,00700	0,00704	1.000
Nepal	0,00400	0,00402	1.000
Netherlands	1,73800	1,74781	58.177
New Zealand	0,24100	0,24236	8.067
Nicaragua	0,00100	0,00101	1.000
Niger	0,00100	0,00101	1.000

Nigeria		0,06800	0,06838	2.276
Norway		0,64600	0,64965	21.624
Pakistan		0,06100	0,06134	2.042
Panama		0,01800	0,01810	1.000
Papua New Guinea		0,00600	0,00603	1.000
Paraguay		0,01600	0,01609	1.000
Peru		0,11800	0,11867	3.950
Philippines		0,10000	0,10056	3.347
Poland		0,37800	0,38013	12.653
Portugal		0,46200	0,46461	15.465
Republic of Korea		1,85100	1,86145	61.960
Republic of Moldova		0,00200	0,00201	1.000
Romania		0,05800	0,05833	1.941
Russian Federation		1,20000	1,20678	40.168
Saint Lucia		0,00100	0,00101	1.000
Senegal		0,00500	0,00503	1.000
Sierra Leone		0,00100	0,00101	1.000
Slovak Republic		0,04300	0,04324	1.439
Slovenia		0,08100	0,08146	2.711
South Africa		0,40800	0,41030	13.657
Spain		2,51875	2,53297	84.312
Sri Lanka		0,01600	0,01609	1.000
Suriname		0,00200	0,00201	1.000
Sweden		1,02675	1,03255	34.369
Switzerland		1,27400	1,28119	42.645
Syrian Arab Republic		0,08000	0,08045	2.678
Tajikistan		0,00100	0,00101	1.000
Thailand		0,29400	0,29566	9.841
The FYR of Macedonia		0,00600	0,00603	1.000
Togo		0,00100	0,00101	1.000
Trinidad & Tobago		0,01600	0,01609	1.000
Tunisia		0,03000	0,03017	1.004
Turkey		0,44000	0,44248	14.728
Uganda		0,00500	0,00503	1.000
Ukraine		0,05300	0,05330	1.774
United Kingdom		5,53600	5,56726	185.310
United Rep of Tanzania		0,00400	0,00402	1.000
USA ⁽¹⁾		0,00000	0,00000	
Uruguay		0,08000	0,08045	2.678
Uzbekistan		0,01100	0,01106	1.000
Venezuela		0,20800	0,20917	6.963
Viet Nam		0,01600	0,01609	1.000
Yugoslavia		0,02000	0,02011	1.000
Zambia		0,00200	0,00201	1.000
TOTALS		77,56200	78,00000	2.649.869
⁽¹⁾ Other Contributions		22,00000	22,00000	732.284
TOTAL		99,56200	100,00000	3.382.154

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.28

***Modus operandi* of the Scientific and Technical Review Panel (STRP)**

1. RECALLING the establishment by Resolution 5.5 of the Scientific and Technical Review Panel (STRP), made up of members with appropriate scientific and technical knowledge, appointed by the Conference of the Contracting Parties (COP), but participating as individuals and not as representatives of their countries of origin;
2. ALSO RECALLING Resolution VI.7 and Resolution VII.2 on this matter, which made successive modifications in the way in which the STRP and its work were organized;
3. THANKING the members and alternates of the STRP and its observer organizations and invited experts for their contributions since COP7, and for their expert advice on numerous scientific and technical issues important for implementation of the Convention;
4. RE-EMPHASIZING the need to establish a close link between the STRP and the network of scientists and experts in each Contracting Party, so that the Convention may benefit from the array of existing knowledge and experience;
5. RECOGNIZING the importance for the STRP to work in partnership with the equivalent bodies of those conventions with which Memoranda of Understanding or Cooperation are in place, namely the Convention on Biological Diversity, the Convention on Migratory Species, and the Convention to Combat Desertification, and other conventions and agreements; and
6. ALSO RECOGNIZING the need for continuing cooperation between the STRP and a number of expert networks, specialist groups and societies which exist, some in association with the official International Organization Partners of the Convention;

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7. REAFFIRMS the critical importance to the Convention of the work and advice of the Scientific and Technical Review Panel (STRP) in providing reliable guidance to the Conference of the Contracting Parties;
8. APPROVES the revised *modus operandi* for the STRP as annexed to this Resolution, and DECIDES that the provisions in the Annex supersede those in the previous Resolutions on the STRP dealing with the same issues;
9. ENDORSES the establishment of an STRP Support Service, working in open and transparent partnership with all International Organization Partners, STRP observer organizations and others, and INSTRUCTS the Ramsar Bureau to establish, with the approval of the Standing Committee, a contractual arrangement and terms of reference for the delivery of this Service;

10. RECOGNIZES the urgent need to ensure both that the Panel is provided with the necessary resources to undertake its work effectively and efficiently and that the Ramsar Bureau has sufficient capacity to support this work, and URGES Contracting Parties and others to afford the highest priority to securing continuity of such funding;
11. URGES those Contracting Parties that have not yet done so to appoint a National Focal Point for the STRP, as the COP urged in Resolution VII.2, so that they may contribute fully to, and be more effectively assisted by, the work of the Panel;
12. REVISES as follows the list of bodies and organizations invited to participate as observers in the meetings of the STRP during the 2003-2005 triennium, in addition to the International Organization Partners, and INVITES them to consider establishing close working cooperative arrangements with the STRP on matters of common interest:
 - the Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity (CBD)
 - the Scientific Council of the Convention on Migratory Species (CMS)
 - the Committee on Science and Technology of the Convention to Combat Desertification (UNCCD)
 - the Subsidiary Body on Scientific and Technical Advice of the United Nations Framework Convention on Climate Change (UNFCCC)
 - the secretariats of the CBD, CMS, UNCCD, UNFCCC and the Millennium Ecosystem Assessment
 - UNEP – World Conservation Monitoring Centre
 - the Society of Wetland Scientists
 - the International Association of Limnology
 - the Global Wetlands Economics Network
 - the International Mire Conservation Group
 - the International Peat Society
 - the Center for International Earth Science Information Network (CIESIN), Columbia University, USA
 - the International Association for Impact Assessment (IAIA)
 - The Nature Conservancy (TNC)
 - Ducks Unlimited (Canada, Mexico, and USA)
 - The World Resources Institute (WRI)
 - The Institute for Inland Water Management and Wastewater Treatment (RIZA) (The Netherlands)
 - LakeNet
13. FURTHER EMPHASIZES the value of participation by STRP members in meetings of the COP and Standing Committee, and REQUESTS Contracting Parties, the Standing Committee, and the Ramsar Bureau to do their utmost to secure any additional funding which might be necessary for this purpose;
14. REQUESTS the Standing Committee to a) define and estimate costs of the principal tasks and priorities for the work plan of the STRP on the basis of the decisions and the views expressed and priorities established by the Conference of the Contracting Parties; b)

appoint the members of the STRP from the list of candidates submitted by Contracting Parties; and c) designate the STRP Chair and Vice-Chair;

15. REAFFIRMS that the STRP shall have the same regional structure and proportional system of membership as the Standing Committee, as established in Resolution VII.1, and that, in order to attain equitable representation on the subsidiary bodies of the Convention, members of the STRP ought to be selected, as far as possible, from Contracting Parties different from those Parties elected to the Standing Committee; and
16. REQUESTS Contracting Parties to take into consideration the mechanism established in the annex to ensure continuity of membership of the STRP through the reappointment of a proportion of its members when proposing nominations for membership of the Panel.

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Annex

***Modus operandi* of the Convention's Scientific and Technical Review Panel (STRP)**

Establishing STRP tasks and priorities

1. The Conference of the Contracting Parties (COP) shall have available to it a list of STRP assignments, derived by the Bureau from the draft Convention Work Plan for the next triennium and draft Resolutions submitted to the COP. The COP shall establish the priorities for STRP work in the coming triennium.
2. The Standing Committee shall adopt the definitive list of STRP assignments for the triennium on the basis of the Convention Work Plan and Resolutions adopted by the COP, and will provide additional guidance on priority tasks.
3. At its first meeting, the STRP shall agree on its work plan and identify which tasks it considers can be undertaken during the triennium with the available resources and which ones will require additional resources for their implementation.
4. The Bureau shall circulate immediately by e-mail the work plan agreed by the STRP at its first meeting for comments by the Standing Committee and the STRP National Focal Points, with a deadline of three weeks for input, so as to ensure the maximum possible time for the STRP to undertake its work.

Schedule and purpose of meetings, and process between meetings

5. The STRP will meet twice in plenary during a triennium. The first meeting shall take place no later than six months after the COP, and the second meeting approximately nine months prior to the next COP.
6. The first meeting of the STRP in each triennium shall:
 - a) include an 'induction and briefing session' for all participants in order to ensure that they (particularly members appointed for the first time) are fully aware of their respective roles and responsibilities prior to making decisions on progressing the work requested of the Panel. The briefing will emphasize the role of the Panel in relation to that of the COP, the Standing Committee (to which the STRP reports), and the Ramsar Bureau.
 - b) establish the STRP work plan for the triennium, based on the tasks and priorities identified by the COP and Standing Committee, also taking into account issues arising from the Panel's role in strategically reviewing the current tools and guidance available to Parties and the new and emerging issues for the Convention;
 - c) establish an Expert Working Group for each substantive task in the STRP work plan, identify the members of each Working Group, and agree the *modus operandi* for each Working Group to undertake its tasks;

- d) identify additional experts to be invited to contribute to the work of each Working Group, either in the drafting of materials or in reviewing them. In doing that, the STRP should give due consideration to geographical and gender balance and to the language abilities of the proposed experts; and
 - e) identify key additional strategic issues for consideration by the STRP during the triennium and establish a Working Group to progress these for reporting to the next COP.
7. Thereafter, Expert Working Groups shall develop and undertake their work largely through electronic communication, tele- and video-conferences, virtual forums and exchange networks. The STRP Support Service shall assist in establishing such mechanisms as necessary.
8. Each Expert Working Group shall, as resources permit, meet in a workshop approximately nine months after the 1st STRP meeting in order to review draft materials, amend their parts of the work plan as necessary, and agree the steps to be taken for timely completion of their tasks.
9. Where the STRP determines that it requires the expertise of an invited expert to prepare draft materials for its review, resources permitting, the Bureau shall arrange as necessary for contracts to be let immediately after the period for comments on the STRP work plan is over. First draft materials prepared under these contracts will be available for review by the relevant STRP Working Group before any mid-term Working Group workshop.
10. Should the dates for the next COP be set less than three calendar years (36 months) after the previous COP, the STRP Working Groups shall review their workloads and agreed deliverables, and advise the Standing Committee of any proposed changes to the Panel's work plan.
11. The second meeting of the Panel shall:
- a) receive reports from each of its Expert Working Groups, including final draft guidelines and other materials;
 - b) review and approve finalization of these materials for consideration by the Standing Committee and COP;
 - c) identify any further work on each topic that it may consider is still needed, and make recommendations on this to the Standing Committee and COP; and
 - d) review the recommendations of the Working Group on key strategic issues for the Convention, and prepare these for consideration by the Standing Committee and COP.
12. The working language of the Panel shall be English. The ability of STRP members and invited experts to consult and use literature in other languages shall constitute an additional asset for their appointment.

The roles and responsibilities of the Panel and its members

13. The Terms of Reference of the STRP and its Members are to:
 - a) review the tasks and nature of the products requested of it by COP Resolutions and the Convention's Work Plan;
 - b) undertake strategic review of the current tools and guidance available to Parties and new and emerging issues for the Convention;
 - c) determine and agree a mechanism for the delivery of each of these tasks, including the establishment of Expert Working Groups as appropriate, advise on which tasks it does not have the expertise or capacity to progress, and receive the advice of the Standing Committee for this work plan;
 - d) identify, for each task the Panel proposes to undertake, and with the advice of any Working Group on the topic, the best global expert(s) either from within or outside the Panel to undertake drafting work, taking into account geographical and gender balance and language ability;
 - e) identify, for each product in the work plan, and with the advice of any Working Group and the STRP Support Service, additional experts to undertake review by correspondence of draft materials, as necessary;
 - f) make expert review of the draft products in its work plan, taking into account the views expressed by additional experts in d) above, agree any amendments needed, and transmit these revised products for consideration by the Standing Committee;
 - g) ensure, with the assistance of the Ramsar Bureau, that the work of the STRP contributes to and benefits from the work undertaken by similar subsidiary bodies of other multilateral environmental agreements (MEAs).
14. In undertaking their work, members of the STRP should, as set out in the ToR for STRP National Focal Points (NFPs), establish and maintain contact with the National Focal Points in their region or sub-region, with an agreed allocation of Contracting Parties to each regional member, in order to ensure that the views and expertise of NFPs is available to the Panel.
15. In undertaking their work, International Organization Partner (IOP) members of the STRP should ensure that their networks, including their expert Specialist Groups, are consulted on the work of the Panel and that their views and expertise is available to the Panel.
16. STRP members should, as resources permit, participate in meetings of the COP and Standing Committee.

The role of STRP Expert Working Groups and their Leads

17. Terms of Reference for Expert Working Groups established by the STRP are:

Under the guidance of the Working Group Lead, to:

- a) prepare a work plan for the Working Group tasks as identified by COP Resolutions, including scoping the structure and contents of any guidelines and reports and proposing a mechanism and timeframe for their delivery;
 - b) review draft materials prepared under this work plan, and advise on any necessary revisions, amendments or further work; and
 - c) advise the Panel when the Working Group's scientific and technical work on the guidelines and reports is complete, so that the materials can be recommended by the Panel to the Standing Committee for consideration.
18. The role and responsibilities of a Working Group Lead are to oversee and guide the work of the Expert Working Group so as to ensure timely review and delivery of its products, including through electronic networking and chairing of any Working Group workshop. In undertaking this role the Working Group Lead will work closely with the STRP Chair or Vice-Chair so as to keep the Chair or Vice-Chair advised on progress.
 19. Appointment of Leads of Working Groups will be made by the Chair of the STRP with the assistance of the Bureau at the first meeting of the STRP in the triennium. A Working Group Lead need not necessarily be an STRP member, but could also come from an IOP or other observer organization or from among the invited experts.
 20. A Working Group Lead should have proven international expertise in the theme of the Working Group and, ideally, previous experience of the *modus operandi* of the Convention and its bodies and the nature of the scientific and technical materials required by the Convention.
 21. Where a Working Group theme continues in the STRP work plan for more than one triennium, its Lead may, as appropriate, be appointed for a further term.
 22. Working Group Leads should be prepared to represent the Panel in contributing to the work of equivalent expert working groups established by other MEAs on similar topics. Working Group Leads should recognize and confirm the acceptance of such potential time commitments at the time of their appointment.

The role of the Chair and Vice-Chair of STRP

23. The post of Vice-Chair of the STRP has been created to provide support to the Chair.
24. The Chair and Vice-Chair of the STRP will be either regional members of the Panel appointed by the Standing Committee or the designated representative of an IOP member on the Panel.
25. The Vice-Chair should not be a regional member of the Panel from the same Ramsar region as the Chair; if the elected Chair is a designated representative member of an International Organization Partner, the Vice-Chair should be a regional Panel member.
26. The Chair and Vice-Chair must have the agreement of their institutions that they may devote sufficient work time during the triennium to permit fulfillment of their roles and responsibilities.

27. Upon election, the Chair and Vice-Chair will agree the division of responsibilities in relation to:
- a) oversight of the different thematic areas of work of the Panel, as agreed by the Panel; and
 - b) representation of the Panel at meetings of other MEAs and other scientific and technical initiatives of interest to the Convention.
28. The Terms of Reference of the Chair of STRP are to:
- a) chair the meetings of the Panel;
 - b) prepare, with the assistance of the Bureau, the Agenda, draft STRP work plan, and other papers for presentation to each meeting of the STRP;
 - c) appoint, with the assistance of the Bureau, the Lead for each Expert Working Group established by the Panel;
 - d) maintain contact with the leads of each Expert Working Group established by the Panel and others leading on the preparation of materials for review by the Panel, and, with the assistance of the STRP Support Service, ensure that progress is in accordance with the agreed work plan of the Panel;
 - e) report to the meetings of the Standing Committee on progress by the Panel on its tasks, and advise on any substantial modifications to the work plan;
 - f) report to the Standing Committee on the progress, achievements and recommendations for future *modi operandi* of the Panel during the next triennium;
 - g) make recommendations to the Standing Committee concerning those members of STRP who should be invited to remain on the Panel for a second triennium;
 - h) make recommendations to the Standing Committee concerning the reappointment of organizations with observer status on STRP on the basis of their contributions to the Panel during the triennium;
 - i) represent the Panel, as appropriate, at meetings of equivalent scientific and technical subsidiary bodies of other MEAs, and report to these bodies on the work plan and progress of the STRP, particularly on themes of common interest;
 - j) represent the Panel, as appropriate, at meetings of other scientific and technical initiatives of interest to the Convention; and
 - k) in undertaking j) and k) above, delegate responsibility for such representation to the Vice-Chair, Working Group Leads or others, as necessary.
29. The Terms of Reference of the Vice-Chair of STRP are to:
- a) deputize for the Chair in undertaking the tasks and responsibilities as identified in the Terms of Reference of the Chair;

- b) by agreement with the Chair, lead on ensuring the progress of specific thematic areas of the work of the Panel, as in 28(d) above; and
- c) by agreement with the Chair, collaborate in representing the Panel at meetings of other MEAs and other scientific and technical initiatives.

The role of observer organizations

- 30. The primary role of observer organizations is to bring technical and scientific review capacity on their topics of expertise to the review work of the Panel. However, given the lead technical prowess of such organizations, it may be appropriate that a member or members of their network take the lead in the role of an 'invited expert' to undertake drafting work for the Panel.
- 31. STRP observer status shall be a consistent mechanism for engaging the involvement of all scientific and technical organizations with which the Convention develops formal collaborative agreements.
- 32. The Panel may request that representatives of other relevant scientific and technical organizations be invited as observers to STRP, as it deems necessary, in order to increase the capacity of the Panel in specific subject areas on which it is requested to work.
- 33. Each observer organization shall identify to the Chair of the STRP and the Bureau a named representative who will participate in the meetings and work of the Panel. An observer organization should be prepared to participate in all Panel meetings during a triennium and should send the same representative to these meetings, if possible.
- 34. At each COP, a Resolution concerning the STRP will list the observer organizations to be invited to participate in the STRP work during the succeeding triennium.

The role of the Standing Committee

- 35. The STRP is responsible to the Standing Committee in undertaking its work. The role of the Standing Committee is to:
 - a) at its first meeting of the triennium, appoint the members of the STRP according to the proportional representation established in Resolution VII.2 concerning regional representation and membership from countries other than those appointed to the Standing Committee, and taking into account the recommendations of the STRP Chair concerning the reappointment of members from the previous triennium;
 - b) at its first meeting of the triennium, appoint the Chair and Vice-Chair of the STRP. Where possible, the Chair should have served as a member of the Panel during the previous triennium, so that she or he will have a working knowledge of the operations of the Panel;
 - c) at its first meeting of the triennium, adopt the definitive list of tasks and priorities for the STRP;
 - d) approve, by circulation, the work plan prepared by the STRP at its first meeting;

- e) at each subsequent meeting of the Standing Committee, receive a report on progress from the Chair of the STRP, and approve any changes to the STRP work plan;
- f) approve for consideration by the meeting of the Conference of the Contracting Parties the guidelines, reports and draft Resolutions prepared by the STRP; and
- g) approve for consideration by the meeting of the Conference of the Contracting Parties a Resolution concerning the STRP listing the observer organizations invited to participate in the STRP in the next triennium.

The role of the Ramsar Bureau and the STRP Support Service

36. The role of the STRP Support Service is to:

- a) establish improved links with, and knowledge of, existing expert networks operated by the Convention (Ramsar Experts Database, STRP National Focal Points), IOPs, and other organizations with observer status to STRP and/or with which the Convention has developed links;
- b) further develop and build the capacity of the network of STRP National Focal Points and their within-country expert networks;
- c) identify gaps in expert network coverage in relation to the STRP's work, and seek to fill those gaps through identification and establishing linkage with other existing networks and the establishment of new networks as appropriate;
- d) advise the STRP on appropriate experts from these networks to contribute to the work of the STRP; and
- e) support the work of Expert Working Groups established by the STRP, on behalf of the Bureau.

37. The STRP Support Service will be operated under a contractual arrangement with the Ramsar Bureau and the supervision of the Ramsar Standing Committee, and will work in an open and transparent partnership with all International Organization Partners, STRP observer organizations, and others as appropriate.

38. The role and responsibilities of the Bureau in relation to the STRP are to:

- a) prepare and make logistical arrangements for STRP meetings;
- b) assist the Chair of the STRP in preparing draft agendas and other materials for STRP and related meetings;
- c) advise and brief the Chair on matters of conduct and process of the Panel;
- d) provide scientific and technical assistance to the Panel's work and its progress;

- e) review and advise the Chair and Panel on the materials it prepares so as to ensure that these are consistent with the expectations of the Contracting Parties and of a style and length consistent with current Convention practice;
- f) advise the Standing Committee on these matters;
- g) oversee the work of the STRP Support Service, as resources permit, for the preparation of substantive guidelines and other reports by external experts, in consultation with the STRP Chair and relevant Working Group Leads;
- h) support the STRP Support Service in its development of the STRP National Focal Points network, so as to ensure that it is able to contribute effectively to the work of the STRP;
- i) identify, with the assistance of the STRP Support Service, costs of preparing each substantive task identified for the work of the Panel, and in the light of priorities for tasks established by the COP and Standing Committee, advise the Standing Committee on which tasks cannot be undertaken without additional resources, and seek such resources, as necessary; and
- j) provide an 'induction and briefing session' for all STRP participants during the first meeting of the Panel in each triennium in order to ensure that they are aware of their respective roles and responsibilities prior to making decisions on progressing the work requested of the Panel, as well as of the role of the Panel in relation to that of the Standing Committee to which the STRP is responsible.

The role of National Focal Points

- 39. The Terms of Reference of STRP National Focal Points, as approved by the 24th meeting of the Standing Committee, are retained (Annex 1), with the addition that, upon appointment by the Administrative Authority a National Focal Point should complete and return a short questionnaire (to be developed by the Bureau) in order to identify and make accessible his or her areas of skill and expertise relevant to the work of the Panel.
- 40. STRP National Focal Points shall, as far as possible, contribute to the work of the Expert Working Groups established by the STRP.

The process and criteria for the appointment of STRP members

- 41. Contracting Parties shall be invited to nominate candidates to serve in the STRP in each triennium at the time of distribution of the official documentation for the COP (e.g., three months before the opening of the meeting). When issuing the call for nominations for STRP members, the Bureau will, as far as possible, identify likely topics for upcoming STRP work, drawn from the draft Convention Work Plan, anticipated COP Resolutions, and ongoing responsibilities of the Panel.
- 42. Nominees for appointment should, as far as possible, have international as well as national expertise in their topics, and they must be sufficiently fluent in reading and speaking English to be able to participate fully in the review work of the Panel.

43. Nominees, at the time of their nomination, shall complete a short questionnaire provided by the Bureau as part of the call for nominations concerning their experience and expertise, and also provide a declaration that they are able to commit the necessary time, including attendance at meetings, to fulfill their role as an STRP member. Nominees must confirm at the time of nomination that their institution or employer has agreed that they may commit the necessary time to the work of the Panel and indicate whether they will require financial assistance to attend meetings of the STRP and/or Working Groups.
44. The Standing Committee shall appoint the members of STRP from the list of candidates submitted by Contracting Parties as soon as feasible after the close of the COP, seeking to ensure that appointed members have expertise relevant for the delivery of the priority tasks identified in the STRP work plan.
45. Membership of the STRP shall be as established by Resolution VII.2 – i.e., the STRP shall have the same regional structure and proportional system of membership as the Standing Committee, as established in Resolution VII.1, and the members of the STRP ought, as far as possible, come from Contracting Parties different from those Parties elected to the Standing Committee in order to attain equitable representation on the STRP.
46. In the event that a vacancy for a regional member of the Panel arises during the triennium, the Standing Committee will review other nominees from the region and appoint a replacement member as soon as practicable, if necessary by correspondence should the vacancy arise between Standing Committee meetings.

Continuity of Panel membership

47. In order to ensure continuity of expertise and working practices, approximately half the regional members of the STRP will be reappointed for a second term, with reappointments being, as far as possible, equitable amongst Ramsar regions.
48. The Chair of STRP, following appropriate consultations with current members, will recommend to the Standing Committee at the end of the triennium the names of those members who should be considered for reappointment. This recommendation shall apply to both regional members and the designated representatives of International Organization Partners. These recommendations will be transmitted to Contracting Parties at the time of the call for nominations for the next triennium.
49. No regional member shall serve more than two consecutive terms.
50. Members being proposed for reappointment must have demonstrated a capability of contributing effectively to the review work of the Panel and have confirmed their willingness to be reappointed.
51. International Organization Partners should, as far as possible, designate the same representative as a member of STRP for consecutive terms for approval by the Standing Committee.

Continuity of STRP tasks

52. The COP should, in addition to identifying in its Resolutions where it is essential that work required of STRP must be delivered to the next COP, as far as possible indicate ongoing work that should continue beyond the next COP.
53. STRP Expert Working Groups on topics and tasks that will continue for more than a single triennium will, where appropriate, remain in existence for more than one triennium, as recommended by the STRP to the Standing Committee.

Harmonizing the work of the STRP and the subsidiary bodies of other Multilateral Environmental Agreements (MEAs)

54. The Chair of the STRP, working with the chairs of the scientific and technical subsidiary bodies of other MEAs, should seek to identify, in collaboration with the Bureau and the secretariats of other MEAs, clear and agreed mechanisms for input and collaboration among subsidiary bodies.
55. In doing so, the Bureau and the STRP should be involved and participate as much as possible in the mechanisms agreed by the MEAs under the auspices of the United Nations Environment Programme (UNEP) and any other international process dealing with the synergies among MEAs.

Resourcing the work of the Panel

56. In order to ensure that the needs and priorities of the COP can be efficiently and effectively met by the STRP, a budget for future STRP work should, resources permitting, cover:
 - a) costs of attendance at STRP meetings and Working Group workshops, as appropriate, by members from developing countries and countries with economies in transition;
 - b) drafting and finalization of materials requested by the COP by independent expert consultants, as necessary, for review by the Panel; and
 - c) travel, subsistence and administrative budget for the STRP Chair and Vice-Chair.
57. To ensure the appropriate level of support to the STRP and its National Focal Point network, the STRP Support Service, working under a contractual arrangement to the Ramsar Bureau, has been established to provide expert advice to the Panel and its Working Groups, and as a support service to the network of STRP National Focal Points.

Annex 1

Terms of Reference for the STRP's National Focal Points

The Convention's Scientific and Technical Review Panel (STRP) was established through Resolution 5.5 of the 5th Meeting of the Conference of the Contracting Parties (Kushiro, 1993) to provide scientific and technical advice to the Standing Committee and the Ramsar Bureau, and through them, to the Conference of the Contracting Parties.

Through Resolution VII.2 of the 7th Meeting of the Conference of the Contracting Parties (1999), the composition and *modus operandi* of the STRP were modified such that the Panel now comprises 13 experts from the six Ramsar regions, designated by the Conference of the Contracting Parties, to provide advice in their personal capacity, and not as representatives of their countries or governments. In addition, the STRP has as full members representatives of the Convention's International Organization Partners, as well as observers from several expert bodies and other international environment conventions.

Through Resolution VII.2, the COP also invited all Contracting Parties to nominate a suitably qualified expert in each country to act as the Focal Point for STRP matters at the national level.

The following Terms of Reference were prepared by the STRP at its 8th meeting, held in Gland, Switzerland on 22-24 September 1999 and approved by the Standing Committee at its 24th Meeting on 29 November – 2 December 1999.

1. The main function of the STRP National Focal Point (NFP) in each country is to provide input, and support as appropriate, to the implementation of the Work Plan of the STRP, as approved by the first full Meeting of the Standing Committee which follows each COP.
2. In order to do so, the National Focal Point should, as much as possible, consult with and seek input from other experts and expert bodies in his/her country. The Focal Point is encouraged to use the opportunities of suitable national meetings, newsletters, e-mail, etc., to canvas the views of the expert community, and, when feasible, to organize expert consultations on key issues in the STRP Work Plan. The latter should be done in consultation with the appropriate regional member(s) of the STRP or Working Group Lead.
3. The input of the National Focal Point should be channeled, by preference, through the STRP member leading each thematic area of the Work Plan or through the STRP's regional representatives. When this is not practical, the input of the NFP may also be channeled through the STRP Support Service or the appropriate Regional Coordinator within the Ramsar Convention Bureau.
4. In general, the STRP network of National Focal Points will operate through correspondence, and as much as possible through e-mail. To this effect, the Ramsar Bureau will include the National Focal Points with access to e-mail connections in its list server devoted to STRP members. In addition, the Bureau will create a dedicated section in its Web site for the presentation and consideration of STRP matters.
5. Due to financial limitations, the main working language of the STRP and its network of National Focal Points is English. Nevertheless, the Ramsar Bureau will endeavour to

translate into French and Spanish key discussion documents that NFPs could be particularly encouraged to comment on.

6. STRP National Focal Points in each country are expected to maintain regular contact, and endeavour to identify and undertake activities of common interest, with their equivalent National Focal Points of the technical and scientific bodies of other relevant international and regional environment-related conventions, and especially for those with which the Ramsar Convention has in place a Memorandum of Cooperation or Understanding, namely, the Conventions on Biological Diversity, Desertification, Migratory Species, and World Heritage.
7. The National Focal Points are also expected to be involved in the monitoring and evaluation of projects funded under the Ramsar Small Grants Fund for Wetland Conservation and Wise Use (SGF), as may be required by the Ramsar Administrative Authority in each country and/or the agency implementing the project.
8. The National Focal Points should provide advice to, and participate in, meetings of the National Wetland/Ramsar Committee or similar bodies (Biodiversity Committees, for example) where they exist. They should also assist in disseminating information on the work of the STRP, interpreted as appropriate to the national context, to relevant individuals and bodies in their countries.
9. The National Focal Points should take an active role in supporting national wetland inventory activities and in supporting the efforts of his/her Contracting Party to implement the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.29

Evaluation of the Ramsar Small Grants Fund for Wetland Conservation and Wise Use (SGF) and establishment of a Ramsar Endowment Fund

1. RECALLING paragraph 16 of Resolution VII.5, which requested the Standing Committee to continue to evaluate the functioning of the Ramsar Small Grants Fund for Wetland Conservation and Wise Use (SGF) and to report on the results to Ramsar COP8;
2. NOTING the excellent work of the Standing Committee in making the SGF more effective, including the adoption of the *Operational Guidelines* for the Ramsar SGF for the period 2000-2002 and its revisions, the application of the principle of geographical equity when allocating the resources at the disposal of the Fund, and the feasibility study of transferring operation of the SGF to another body; and ALSO NOTING the outstanding efforts of the Ramsar Bureau in supporting the work of the Standing Committee in this matter;
3. NOTING that in accordance with the Terms of Reference for the post of Senior Advisor for Environment and Development Cooperation (SAEDC) at the Ramsar Bureau, adopted by the Standing Committee by Decision SC24-24 during its 24th Meeting, the SAEDC has the responsibility to assist the Committee and the Secretary General in relation to fundraising for the Ramsar SGF;
4. EXPRESSING ITS SINCERE APPRECIATION to Austria, Belgium, Denmark, Germany, Iceland, Ireland, Japan, Monaco, Netherlands, Sweden, the United Kingdom, the United States of America, and the World Wide Fund for Nature (WWF) for having made contributions to the Ramsar SGF, or directly funded projects submitted to the Fund, during the period 2000-2002 in the amount of 1.4 million Swiss francs, which has allowed the implementation of 37 projects in 34 developing countries and countries with economies in transition;
5. NOTING ONCE MORE WITH CONCERN that in spite of these generous contributions the level of funding at the disposal of the SGF has not been sufficient to support a considerable number of valuable projects that were submitted by eligible Contracting Parties, and that a renewed effort is required to attract greater financial resources with longer-term guarantees for the Fund;
6. HAVING RECEIVED and debated the discussion paper prepared by the Ramsar Bureau at the request of the Subgroup on Finance of the Standing Committee on the *Feasibility of establishing an Endowment Fund to resource the Ramsar Small Grant Fund for Wetlands Conservation and Wise Use* (Ramsar COP8 DOC. 17); and

7. EXPRESSING ITS APPRECIATION to the Contracting Parties that have submitted their comments in response to the mail consultation carried out on this matter by the Ramsar Bureau through its diplomatic notification 2001/8 of 18 December 2001, and NOTING that many of the comments contain valuable views for further study of the effective functioning of the SGF and for assessing the viability of the proposed Endowment Fund;

THE CONFERENCE OF THE CONTRACTING PARTIES

8. REITERATES its conviction that the Ramsar Small Grants Fund for Wetland Conservation and Wise Use (Ramsar SGF) continues to be an extremely valuable mechanism for facilitating the implementation of the Convention in developing countries and countries with economies in transition;
9. RECOGNIZES AT THE SAME TIME that the current SGF can be further improved in its operation, especially in relation to project submission and selection, and in the monitoring and evaluation of their implementation;
10. REQUESTS the Standing Committee, with the assistance of the Ramsar Bureau, when adopting the *Operational Guidelines* for the Ramsar SGF for the period 2003-2005, to consider improving further the SGF mechanism in the areas identified in the previous paragraph;
11. URGES Contracting Parties and other donors to continue making annual voluntary contributions to the SGF; and REQUESTS the Ramsar Bureau, especially the SAEDC, to redouble their efforts to find the sources of funding and to send out a call for contributions every year to the Contracting Parties which might be in a position to provide them, as well as to other potential donors;
12. AGREES TO ESTABLISH a Ramsar Endowment Fund to resource the SGF, which shall become operational when the Standing Committee establishes its *modus operandi* according to paragraph 13 below;
13. AUTHORIZES the Standing Committee to establish the *modus operandi* of the Ramsar Endowment Fund, taking into account the views expressed by Contracting Parties during the debate on this matter, and on the basis of the following principles:
 - a) the contributions to the Ramsar Endowment Fund shall be voluntary;
 - b) the operation and management of the Ramsar Endowment Fund shall be under the authority of this Conference of the Parties;
 - c) the Ramsar Endowment Fund shall become operational when the Standing Committee has agreed the Fund's *modus operandi* and when a certain threshold level of capital has been guaranteed;
 - d) there shall be an interim review of the Endowment Fund at COP9 based on recommendations from the Standing Committee, and a comprehensive review at

COP10 where, if the threshold capital has not been guaranteed by that time, the continued existence of the Endowment Fund shall be reexamined; and

- e) the Standing Committee shall create a body of financial experts to manage the finances of the Endowment Fund;
14. AUTHORIZES FURTHER the Standing Committee to start operating the Endowment Fund as soon as the threshold level of capital, as stipulated in the *modus operandi*, has been reached; and
 15. CALLS UPON foundations, non-governmental organizations, businesses and individuals to make contributions to the Ramsar Endowment Fund; and INVITES Contracting Parties to consider making contributions to the Ramsar Endowment Fund when the *modus operandi* of the Endowment Fund has been established.

"Wetlands: water, life, and culture"
8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002

Resolution VIII.30

Regional initiatives for the further implementation of the Convention

-
1. RECOGNIZING the importance of regional initiatives in promoting the objectives of the Convention in general and in implementing the Ramsar Strategic Plan in particular, as they can build upon bio-geographic commonalities, shared wetland systems and wetland-dependent species, and solidly established common social and cultural links;
 2. CONSIDERING that the Convention, through its provisions under Article 5 as elaborated by the *Guidelines for international cooperation under the Ramsar Convention* (Resolution VII.19), provides the appropriate framework for promoting international collaboration among Parties and other partners;
 3. ACKNOWLEDGING the positive, catalytic, and decisive role of international collaboration in planning and providing technical and financial support for projects and activities with that aim;
 4. RECOGNIZING in this context that a framework guidance on the development of and support for regional initiatives to implement the Convention will be useful;
 5. RECALLING Resolution VII.22 on "Collaborative structure for Mediterranean wetlands" and COP Recommendations 5.14 and 6.11 on the Mediterranean Wetland Initiative (MedWet), and ACKNOWLEDGING that MedWet can be a model example of such regional initiatives;
 6. TAKING INTO ACCOUNT that following Decision SC25-31 of the Standing Committee a Coordination Unit for MedWet has been established in Athens, Greece, in 2001 under the authority of the Secretary General of the Convention, with the financial support of the Greek Government; and
 7. FURTHER TAKING INTO ACCOUNT that the Government of Greece has offered to continue hosting and contributing financially to the operation of the MedWet Coordination Unit in Athens for the triennium 2003-2005;

THE CONFERENCE OF THE CONTRACTING PARTIES

8. ENDORSES the *Guidance for the development of Regional Initiatives in the framework of the Convention on Wetlands* presented in Annex I to this Resolution;

9. CONSIDERS appropriate the inclusion of a budget line “Support to Regional Initiatives”, when one or more regional initiatives are evaluated by the COP, in accordance with the above *Guidance*, as worthy for financial support from the Convention core budget;
10. CALLS UPON Contracting Parties to take into consideration the *Guidance* referred to in paragraph 8 when launching and developing a regional initiative;
11. APPROVES, within this context and for the years 2003-2005, the financial support from the Convention core budget to be provided to the MedWet Initiative as reflected in the MedWet Coordination Unit Budget 2003-2005, presented in Annex II of this Resolution;
12. RECOGNIZES the critical importance of financial and political support from Contracting Parties of the region to the MedWet Initiative, and especially from the host country of its Coordination Unit; EXPRESSES ITS SINCERE GRATITUDE to the Government of Greece for hosting the MedWet Unit in Athens, including the provision of adequate office space and financial resources to cover all other expenses during 2001 and 2002; and ACCEPTS the generous offer of the Government of Greece to continue providing office facilities and financial support during the triennium 2003-2005 for the same purpose;
13. APPROVES the budget of the MedWet Coordination Unit as contained in Annex II of this Resolution;
14. AUTHORIZES the Secretary General to conclude, taking due account of the *Guidance* and in consultation with the Chair of the Standing Committee, a Memorandum of Understanding (MoU) with the Greek Government with regard to the specific financial and institutional arrangement of the MedWet Coordination Unit in Athens for the years 2003-2005, and DIRECTS the Secretary General to report to the Standing Committee on the conclusion and implementation of this MoU; and
15. REQUESTS the Secretary General to ensure that the experience of the MedWet Coordination Unit and its partners will be at the disposal of other regional initiatives as required and in the most appropriate form.

Annex I

Guidance for the development of regional initiatives in the framework of the Convention on Wetlands

AIM

1. The overall aim of regional initiatives should be to promote the objectives of the Convention in general and to implement the Ramsar Strategic Plan in particular, through regional and subregional cooperation on wetland-related issues of common concern.

SUBSTANTIVE ELEMENTS

2. Regional and subregional initiatives should be based on a bottom-up approach. As a matter of priority, the involvement of as many as possible Contracting Parties of the region or subregion(s) covered by the new initiative should be sought from the start.
3. Each initiative should entail the participation, from the start, not only of the Administrative Authorities responsible for the application of the Convention in the Contracting Parties involved, but also of all other relevant stakeholders with an interest in and directly or indirectly responsible for wetland issues, including the ministries responsible for the environment and water issues, intergovernmental bodies, NGOs, academia, and economic actors.
4. A regional initiative should base its operation on the development of networks of collaboration established upon clearly defined terms of reference, thus creating an enabling environment for the involvement of all stakeholders at all levels.
5. At an early stage, a regional initiative should seek collaboration with other intergovernmental or international partners operating in its region, by establishing complementary and non-duplicative activities.
6. The operation of a regional initiative should be based upon strong scientific and technical backing, provided by relevant institutions which should be recognized as partners in the initiative.
7. The strategic and operational targets of a regional initiative should be fully aligned with the Strategic Plan of the Convention by means of policy and site technical work and activities.

FINANCIAL AND OTHER SUPPORT

8. A regional initiative requires both political and financial support from Contracting Parties and other partners from the region. A substantial support from the host country is especially important if a regional office is to be established.
9. The launching of a regional or subregional initiative should rely upon secured start-up funding for planned activities and projects.

10. Financial support from the Convention's core budget, should the Conference of the Parties so decide, will be provided for a pre-determined period of time – in principle not more than three years. After such a period, the support should be phased out. A regional initiative should generate its own resources and should become financially self-sufficient in the long term. When deciding financial support from the Convention's core budget, geographically equitable distribution should be taken into account.

GOVERNANCE

11. Regional initiatives should establish their own advisory mechanisms, involving all the stakeholders, in order to provide guidance and insight. The Conference of the Parties and the Standing Committee shall receive, through the Ramsar Bureau, reports on their activities and shall oversee their general policies relating to the implementation of the Convention.
12. Specific arrangements as to the coordination between a regional initiative and the Convention should be worked out by the Ramsar Bureau under the guidance of the Standing Committee, and such arrangements should ultimately be approved by the Conference of the Parties.

Annex II

MedWet Coordination Unit Budget 2003-2005 (Swiss Francs)

INCOME

	2003	2004	2005
1. Host country (Greece)	240,000	240,000	240,000
2. Ramsar core budget (budget line 3)	82,836	86,150	89,596
3. MedWet Countries	105,164	111,615	118,227
TOTAL INCOME	428,000	437,765	447,823
Budgeted expenditure	428,000	437,765	447,823

Notes on income

1. Contribution by the Host Country (Greece), as proposed in the letter of the Minister of Environment, Physical Planning and Public Works to the Secretary General of the Convention, dated 17 July 2002.
2. Contribution from the Ramsar core budget for the triennium 2003-2005 (budget line 3 – Support to regional initiatives)
3. Additional annual contributions from the Contracting Parties participating in MedWet earmarked to cover the costs of the MedWet Unit (see table 1 with the list of contributions for 2003).

MedWet Coordination Unit Budget 2003-2005 (Swiss francs)				
EXPENDITURES				
		2003	2004	2005
1	STAFF COSTS	325,500	335,265	345,323
	a) MedWet Coordinator	108,000	111,240	114,577
	b) Policy Officer (50%)	52,500	54,075	55,697
	c) Programme development officer	61,500	63,345	65,245
	d) Communications/Information officer	61,500	63,345	65,245
	e) Office administrative assistant	42,000	43,260	44,558
2	EXPERTS & CONSULTANTS	35,000	35,000	35,000
3	TRAVEL	30,000	30,000	30,000
4	OFFICE COSTS	37,500	37,500	37,500
	a) General expenses / utilities	12,000	12,000	12,000
	b) Communications	15,000	15,000	15,000
	c) Equipment purchase / maintenance	10,500	10,500	10,500
	TOTAL	428,000	437,765	447,823

Notes on expenditure

1. Positions 1a and 1b are currently covered by the financial contribution of the host country (Greece).
2. Positions 1c and 1d are currently covered by the host country (Greece) through a secondment by the Greek Biotope Wetland Centre (EKBY).
3. A ~~4~~ 3% annual increase in gross salaries is foreseen for cost of living and performance-related salary increases.

Table 1: Additional contributions earmarked for MedWet Unit costs

Name of Country	UN %	Ramsar %	2003	2004	2005
			corrected for min CHF450	corrected for min CHF450	corrected for min CHF450
			CHF	CHF	CHF
Albania	0,003	0,0182	450	450	450
Algeria	0,070	0,4237	450	455	483
Bosnia & Herzegovina	0,004	0,0242	450	450	450
Bulgaria	0,013	0,0787	450	450	450
Croatia	0,039	0,2361	450	450	450
Cyprus	0,038	0,2300	450	450	450
Egypt	0,081	0,4903	494	526	559
France	6,466	39,1381	39,408	41,990	44,621
Greece	0,539	3,2625	3,285	3,500	3,720
Israel	0,415	2,5120	2,529	2,695	2,864
Italy	5,065	30,6564	30,868	32,890	34,951
Jordan	0,008	0,0484	450	450	450
Lebanon	0,012	0,0726	450	450	450
Libyan Arab Jamahiriya	0,067	0,4055	450	450	462
Malta	0,015	0,0908	450	450	450
Monaco	0,004	0,0242	450	450	450
Morocco	0,044	0,2663	450	450	450
Portugal	0,462	2,7964	2,816	3,000	3,188
Slovenia	0,081	0,4903	494	526	559
Spain	2,519	15,2457	15,351	16,357	17,382
Syrian Arab Republic	0,080	0,4842	488	520	552
FYR Macedonia	0,006	0,0363	450	450	450
Tunisia	0,030	0,1816	450	450	450
Turkey	0,440	2,6633	2,682	2,857	3,036
Yugoslavia	0,020	0,1211	450	450	450
TOTALS		100	105,164	111,615	118,227

Note: This table is calculated using the UN scale of contributions for 2003. The calculations for 2004 and 2005 are only indicative; the exact numbers will be calculated on the basis of the UN scale for each year, when it is known. Minimum contribution is set to 450 Swiss Francs.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.31

The Convention's Programme on communication, education and public awareness (CEPA) 2003-2008

1. AWARE of the importance of communication, education and public awareness (CEPA) as central and cross-cutting elements for implementing the Convention;
2. NOTING that the Convention's Strategic Plan 2003-2008 recognizes the critical importance of CEPA for pursuing its General Objectives, and in particular General Objective 1 relating to the wise use of all wetlands, as follows: "To stimulate and assist all Contracting Parties to develop, adopt and use the necessary and appropriate instruments and measures to ensure the wise use of all wetlands within their territories";
3. RECALLING that Resolution VII.9 adopted the first *Convention's Outreach Programme 1999-2002 – Actions to promote communication, education and public awareness to support implementation of the Convention on Wetlands (Ramsar, Iran, 1971)*;
4. RECOGNIZING the importance ascribed to communication, education and public awareness in the outcomes of the World Summit on Sustainable Development, and that, therefore, CEPA for sustainable development, promoting the ecological, social, cultural and economic values of wetlands, should be a focus of Ramsar's future CEPA activities;
5. SEEING WITH SATISFACTION that, as requested by Resolution VII.9, as at 30 September 2002 86 Contracting Parties have designated their Government Focal Points for CEPA and 69 Parties their national non-governmental CEPA Focal Points;
6. NOTING WITH PLEASURE that the analysis of 119 National Reports submitted for COP8 has revealed that there are at least 480 wetland education centres found in 68 Contracting Parties, that in 18 Contracting Parties wetland issues are addressed at all levels in formal education curricula, and that in a further 58 Contracting Parties wetland issues are addressed at some levels in formal education curricula;
7. CONGRATULATING the 26 Contracting Parties that have formed national CEPA Task Forces and in particular Australia, Germany, and Hungary for having developed National Wetland CEPA Action Plans as urged by Resolution VII.9, but CONCERNED that so few Parties have done likewise;
8. COMMENDING those governments, non-governmental organizations, and local stakeholders in over 70 countries that have undertaken special events to promote World Wetlands Day on 2 February;

9. EXPRESSING THANKS to the Ramsar International Organization Partners (IOPs) for their ongoing support to CEPA activities globally and within many Contracting Parties;
10. CONGRATULATING the Governments of Spain and Switzerland for their financial support for the publication of “Our wetland heritage” on the occasion of COP8, and the Danone Group for its continuing sponsorship of the Convention’s Evian Initiative, which has a significant communications component;
11. EXPRESSING SATISFACTION with the work done by the Ramsar Bureau in relation to CEPA in general and to communications in particular, in spite of the very limited financial and human resources at its disposal for this purpose, and REGRETTING that insufficient effort has been made so far to resource the Voluntary Fund for the Convention’s Outreach Programme established by Resolution VII.28; and
12. THANKING those who participated in the workshop convened by the Ramsar Bureau in June 2002 to refine and further elaborate a second CEPA programme, and also those CEPA Focal Points, representatives from Ramsar’s IOPs and other conventions, and other CEPA experts who contributed their views, as well as the participants in the CEPA Workshop organized as part of the Global Biodiversity Forum held immediately before this COP, and the Ministry of Environment of the Autonomous Government of Valencia, Spain, for the financial support provided for the Workshop;

THE CONFERENCE OF THE CONTRACTING PARTIES

13. ADOPTS the Convention’s *Programme on communication, education and public awareness (CEPA) 2003-2008*, contained in Annex I to this Resolution, as an instrument to provide guidance to Contracting Parties, the Ramsar Bureau, the Convention’s International Organization Partners (IOPs), other NGOs, local stakeholders and others in the development of appropriate actions to support the implementation of the Convention at the international, regional, national and local levels;
14. ENCOURAGES the Contracting Parties to adopt the concept ***Ramsar CEPA for Sustainable Development*** to effectively address the ecological, social, cultural and economic values of wetlands through this programme;
15. INSTRUCTS the Scientific and Technical Review Panel (STRP) to establish, as appropriate, an Expert Working Group on CEPA with suitable members and a chair from the Panel as well as other invited CEPA experts;
16. REQUESTS the Standing Committee to recognize the critical role that CEPA plays by ensuring that all future triennial work programmes of the STRP integrate CEPA as a cross-cutting tool in all specific tasks requested of the panel, and set priorities for these tasks;
17. ENDORSES as immediate tasks of the STRP’s CEPA Expert Working Group those activities outlined in Annex II to this Resolution;
18. REQUESTS the Ramsar Bureau to undertake specific efforts to obtain resources for the Voluntary Fund for the Convention’s Outreach Programme, noting that the tasks of the STRP CEPA Working Group should be conducted using financial resources from this Voluntary Fund or other such contributions;

19. REAFFIRMS the call made in Resolution VII.9 for all Contracting Parties to nominate as a matter of priority suitably qualified Government and Non-government Focal Points for wetland CEPA and to inform the Ramsar Bureau accordingly;
20. URGES all Contracting Parties, as suggested in Resolution VII.9 and in the CEPA Programme 2003-2008, to establish appropriately constituted Task Forces, where no mechanism exists for this purpose currently, to undertake a review of needs, capacities and opportunities in the field of wetland CEPA, and based upon this to formulate their Wetland CEPA Action Plans (at national, sub-national, catchment, or local levels) for priority activities which address international, regional, national, and local needs;
21. STRONGLY URGES all Contracting Parties to seek to develop and implement their Wetland CEPA Action Plans as integrated components of their broader environment, biodiversity, wetland and water management policy instruments and programmes, and to ensure that CEPA is recognized as underpinning the effective delivery of these activities;
22. CALLS UPON those Contracting Parties with wetland CEPA plans to evaluate the effectiveness of those plans on a regular basis, to amend their priority actions where necessary, and to provide feedback to the STRP CEPA Working Group on such reviews and revisions;
23. REQUESTS Contracting Parties and the Convention's IOPs to submit to the Ramsar Bureau, for consideration by the STRP CEPA Working Group, case studies outlining and demonstrating the lessons learned from CEPA-related efforts, including consideration of highly successful as well as less effective activities;
24. ENCOURAGES the Contracting Parties to review and improve, as necessary, the content of wetland-related components of education curricula, and to do so in collaboration with the Ministry of Education and other education authorities;
25. REITERATES the call to multilateral and bilateral donors and private sector sponsors to support appropriate actions as set out in the Ramsar CEPA Programme 2003-2008;
26. ALSO REITERATES ITS SUPPORT for the Wetland Link International programme of The Wildfowl & Wetlands Trust, UK (WWT) as a cornerstone of the CEPA Programme, and AGAIN EXPRESSES CONCERN about the lack of significant financial support for the global and national development of this programme;
27. URGES the Ramsar Bureau to strengthen the capacity of the CEPA Focal Points by clarifying their roles through the STRP CEPA Working Group, and by the provision of training through the Ramsar Wetland Training Service, once established.;
28. FURTHER URGES Contracting Parties, multilateral and bilateral donors, and private sector sponsors to contribute to the Voluntary Fund for the Convention's Outreach Programme to enable improved international coordination of CEPA, including greater support in this area for the use of the three working languages of the Convention, financing of the Wetland Link International programme, facilitating the work of the STRP's CEPA Working Group, and supporting the production of resource materials for World Wetlands Day celebrations and events;

29. ENCOURAGES those Contracting Parties with established, or proposed, wetland education centres and related facilities to support their participation in the global network of such centres under the Wetland Link International programme of the WWT' (UK), and for those centres to become key places of learning and training about wetlands and wetland-related CEPA;
30. DIRECTS the Secretary General to strengthen collaboration with the Executive Secretary of the Convention on Biological Diversity, through the mechanism of the established Joint Work Plan, for harmonising the respective CEPA programmes of the two conventions, and to further investigate and pursue, as appropriate, opportunities to do likewise with other conventions and programmes;
31. INVITES the Ramsar IOPs and other organizations with which the Ramsar Bureau has collaborative agreements to support the implementation of the Ramsar CEPA Programme at the global, regional, national or local levels, as appropriate, with the expertise, networks, skills and resources they have at their disposal;
32. FURTHER URGES Contracting Parties to encourage their wetland site managers to participate in the Ramsar Forum, the CEPA e-lists, and other communications networks operating under the Convention, as a way to accelerate the sharing of information, experiences and expertise amongst all Contracting Parties and other stakeholders; and
33. URGES those Parties with other national and local languages different from the three official languages of the Convention to consider translating key Ramsar guidance and guidelines into those languages in order to make them more widely available.

Annex I

Programme on communication, education and public awareness (CEPA) 2003-2008 of the Convention on Wetlands (Ramsar, Iran, 1971)

Background

1. At the 7th Meeting of the Conference of the Contracting Parties (COP7) in San José, Costa Rica in 1999, Resolution VII.9 adopted the first programme of actions for promoting communication, education and public awareness (CEPA – see Appendix 1 for explanation of these terms) under the Convention. This programme was in direct response to the first Strategic Plan of the Convention, and in particular General Objective 3.
2. The adopted CEPA programme was for the period 1999-2002, and accordingly a review process was undertaken to further improve and elaborate the programme for adoption at COP8 in Valencia, Spain, in November 2002. National Reports submitted in advance of COP8 were used to inform this review process, and there was consultation with experts in the field, Ramsar International Organization Partners (IOPs), and national CEPA Government and Non-government Focal Points.
3. This CEPA Programme, as presented below, is intended to operate for a six-year period in conjunction with the second Strategic Plan of the Convention adopted at COP8, namely for the period 2003-2008.

Major achievements under the first CEPA programme

4. There is considerable evidence from the National Reports and other sources of a rising interest and increasing commitment to wetland CEPA within the Convention:
 - a) although only three Contracting Parties (Australia, Germany, and Hungary) have submitted their National CEPA Action Plans to the Ramsar Bureau, there are many other Parties currently working towards that goal. Twenty-four Parties have established CEPA Task Forces, for some countries an essential first step in developing an Action Plan, but many other countries have reported that implementation of the CEPA Programme is already an integral part of their National Ramsar Committee's work programme;
 - b) there is evidence of a great deal of relevant and effective wetland CEPA activity at local, national, regional and international levels;
 - c) there is already administrative and other support within the Ramsar Bureau dedicated to CEPA: i) since April 2001 a dedicated area on the Convention's Web site has been providing CEPA resource materials as well as basic information about the CEPA Programme; and ii) CEPA e-mail lists in English, French and Spanish were launched in May 2001 to encourage the exchange of wetland CEPA information, with membership including all CEPA Focal Points as well as many other interested parties;

- d) with the identification of at least 480 wetland education centres located in 68 countries, 260 of them linked to Ramsar sites, there is a tremendous opportunity to develop an effective centre network through the Wetland Link International initiative being delivered by The Wildfowl & Wetlands Trust (UK) and, in the future, to develop wetland centres at Ramsar sites as key locations for promoting CEPA; and
- e) there is an evolving approach within the Convention to wetland management planning that includes community participation and education, and much evidence of a rapidly growing knowledge of participatory techniques within the Convention.

Investing in CEPA - Opportunities and benefits

- 5. The following are some of the opportunities and benefits that may arise from investing in CEPA:
 - a) wetland issues can increasingly become part of the business of other sectors and not just that of the environment, thereby mainstreaming the conservation and wise use of wetlands into society and government;
 - b) communities use resources sustainably as a result of engagement and agreement to collaborative plans, thereby reducing conflict;
 - c) communities agree to invest in restoration and long-term stewardship of wetlands; and
 - d) there is a public constituency that speaks for and helps set the agenda for wetland conservation and wise use.
- 6. There is an emerging CEPA Work Programme for the Convention on Biological Diversity, and discussions are underway on a work programme on education, awareness and participation for the United Nations Framework Convention on Climate Change. These CEPA programmes can add value to each other, especially in sharing knowledge about how to undertake effective CEPA programmes. At the national level connecting work and experts in these areas presents an opportunity.

Vision and guiding principles

Vision

- 7. The vision of the Ramsar Convention's CEPA Programme is:

“People acting for the wise use of wetlands.”

Guiding principles

- 8. The following are the guiding principles that underpin the Ramsar CEPA Programme:

- a) Wetlands provide important goods and services which help sustain human life, conserve biological diversity, and combat the impacts of climate change and desertification. Communication, education and public awareness (CEPA) are the tools for placing people's social, political, economic and cultural realities within the context of the goods and services provided by wetland ecosystems.
- b) The Ramsar Convention seeks to motivate people to appreciate the values of wetlands so that they become advocates for wetland conservation and wise use and may act to become involved in relevant policy formulation, planning and management.
- c) The key actors in the implementation of the Ramsar Convention need effective CEPA tools and expertise to engage major stakeholders and to convey appropriate messages in order to mainstream the wise use principle throughout society.
- d) Wise use issues and concepts need to be communicated effectively to ensure participation of major stakeholders from different sectors and mainstreaming of the issues in sector plans and actions. This communication needs to operate laterally, across and between relevant sectors, and also vertically from stakeholders to governments and back.
- e) Support for the CEPA Programme should be recognized by Parties to the Convention as an investment which will reduce conflicts over wetland resources, increase the number of advocates, actors and networks involved in the issues, and build an informed decision-making and public constituency. CEPA mobilises actions directed at achieving the wise use of wetlands. CEPA should form a central part of implementing the Ramsar Convention by each Contracting Party.

General and Operational Objectives

- 9. The CEPA Programme has three General Objectives and under each a number of Operational Objectives.
- 10. **General Objective 1 - To gain acceptance of the value and effectiveness of wetland-related communication, education and public awareness (CEPA) processes at all levels throughout the Convention.**

Operational Objective 1.1 - Integrate CEPA processes into all levels of policy development, planning and implementation of the Convention.

Operational Objective 1.2 - Demonstrate that CEPA processes are effective in achieving Ramsar's wetland wise use objectives at the global, national and local levels.

- 11. **General Objective 2 - To provide support and tools for the effective national and local implementation of wetland-related communication, education and public awareness (CEPA) activities.**

Operational Objective 2.1 - Provide national leadership, networks and cohesive frameworks to support and catalyse CEPA for the wise use of wetlands.

Operational Objective 2.2 - Transfer, exchange and share CEPA information and expertise that promotes and results in the wise use of wetlands.

Operational Objective 2.3 - Improve the individual and collective capacity and opportunities of people to participate in and contribute to using wetlands wisely, through the recognition of the values of wetland resources.

12. **General Objective 3 - To mainstream the wise use of wetlands within society and enable people to act.**

Operational Objective 3.1 - Foster sustained national campaigns, programmes and projects to raise community awareness of the important ecosystem services provided by wetlands as well as their social, economic and cultural values.

Operational Objective 3.2 - Support and develop mechanisms to ensure that CEPA processes are incorporated into participatory, multi-stakeholder wetland management.

Operational Objective 3.3 - Promote and support the role of wetland and other education centres as focal points of global, national and local CEPA efforts.

Actions to pursue the Vision and Objectives

13. The Actions in this Programme are addressed to the following responsible bodies of the Convention:

CPs:	The Contracting Parties to the Convention, in particular the Administrative Authority in each country and the Ramsar/Wetlands National Committees (or equivalent bodies) that should be in place in each Party
CEPA:	The Convention's Communication, Education and Public Awareness National Focal Points
STRP:	The Scientific and Technical Review Panel, its CEPA Working Group and its network of National Focal Points
Bureau:	The Ramsar Bureau (the Convention's secretariat)

14. The Programme also identifies actions involving collaborating partners of the Convention:

IOPs:	International Organization Partners, at present BirdLife International, IUCN – The World Conservation Union, Wetlands International, and the World Wide Fund for Nature (WWF)
OCs:	Other collaborators, including those with which Ramsar has agreements in place, in particular UNESCO Man and the Biosphere Programme (MAB); Eurosite (the network of European natural heritage management bodies); The Nature Conservancy (TNC), Society of Wetland Scientists (SWS), Center for International Earth Science Information Network, Columbia University, USA (CIESIN), The International Association for Impact Assessment (IAIA), and Ducks Unlimited (Canada, Mexico and USA)

15. Those responsible for implementing, or who are urged to assist in implementing, each Action in the Programme are indicated in brackets {...}; for example: {CPs, STRP, Bureau}.

General Objective 1:	To gain acceptance of the value and effectiveness of wetland-related communication, education and public awareness (CEPA) processes at all levels throughout the Convention.
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Operational Objective 1.1 Integrate CEPA processes into all levels of policy development, planning and implementation of the Convention.

Actions:

- 1.1.1 Ensure that by the 9th Meeting of the Conference of the Contracting Parties, CEPA is integrated into all Convention work programmes, including joint work plans with other conventions and organizations, and is also considered in the development of all further Ramsar guidance for Parties. {COP, Bureau, STRP, IOPs}

- 1.1.2 Integrate wetland CEPA into all relevant regional (where applicable), national, catchment and local wetland and other appropriate sectoral policies, strategies, plans and programmes, such as those for biodiversity conservation, water management, fisheries, poverty reduction, etc. {CPs, CEPA}
- 1.1.3 Establish an STRP Expert Working Group on CEPA to undertake a programme of work as set out in Annex II of Resolution VIII.31. {STRP, Bureau, IOPs, OCs}

Operational Objective 1.2 Demonstrate that CEPA processes are effective in achieving Ramsar's wetland wise use objectives at the global, national and local levels.

Actions:

- 1.2.1 Develop pilot projects to evaluate a range of approaches for applying CEPA in promoting the wise use of wetlands, in particular involving those who make a direct use of wetland resources. {STRP, CPs, CEPA, IOPs}
- 1.2.2 Review existing CEPA programmes and case studies and document the lessons learned regarding effective approaches from these experiences. {STRP, CPs, CEPA, IOPs}
- 1.2.3 Make the findings and conclusions drawn from Actions 1.2.1 and 1.2.2 available to Parties and the broader community through appropriate mechanisms (see Operational Objectives 2.1, 2.2 and 2.3). {Bureau, CPs, CEPA, IOPs}

General Objective 2:	To provide support and tools for the effective implementation of national and local wetland-related communication, education and public awareness (CEPA) activities.
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Operational Objective 2.1 Provide national leadership, networks and cohesive frameworks to support and catalyse CEPA for the wise use of wetlands.

Actions:

- 2.1.1 Contracting Parties (as requested by Resolution VII.9) are urged as a matter of priority to appoint suitably qualified persons to fulfil the roles of national government and non-government Focal Points for wetland CEPA, and to advise the Ramsar Bureau of the persons fulfilling these roles and their contact details. {CPs}
- 2.1.2 Establish a national Wetland CEPA Task Force (if no other mechanisms exist for this purpose), ensuring suitable stakeholder and NGO representation, to undertake a review of needs, skills, expertise and options and to set priorities for the implementation of this programme of work. {CPs, CEPA, OCs}
- 2.1.3 Formulate, drawing upon the *Additional Guidance on reviewing and action planning for wetland communication, education and public awareness (CEPA)* developed for this purpose, a national (and, where appropriate, sub-national, catchment or local) action plan for wetland CEPA which incorporates the conclusions to emerge from Action 2.1.2 above, and provide a

copy of this to the Ramsar Convention Bureau so that it can be made available to other Parties and interested organizations and individuals. (The *Additional Guidance* document is available in hard copy from the Bureau and in html at http://ramsar.org/outreach_reviewsactionplansI.htm.) {CPs (national Wetland CEPA Task Force or similar body), IOPs, OCs}

- 2.1.4 Review and, where appropriate, integrate wetland CEPA into the business of national wetland, biodiversity, forestry, agriculture, irrigation, power generation, mining, tourism, and fisheries committees and other relevant policy and planning committees where they exist. {CPs}
- 2.1.5 As part of undertaking actions 2.1.2, 2.1.3 and 2.1.4, ensure that attention is given to the efficiency and effectiveness of communication and information-sharing systems between relevant government ministries, departments and agencies, and where necessary develop mechanisms to address any shortcomings. {CPs}
- 2.1.6 Collaborate globally and nationally to encourage synergy with the CEPA activities under other international conventions and programmes, including the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change, and the UNESCO Man and the Biosphere Programme. {Bureau, CPs, CEPA, IOPs}
- 2.1.7 Establish and maintain an on-line searchable listing of expertise in CEPA and of the CEPA Focal Points, one which can be accessed to assist CEPA at national and international levels, and promote this service to assist CEPA programmes and activities. {Bureau, CPs}

See also Action 1.1.2 above.

Operational Objective 2.2 Transfer, exchange and share CEPA information and expertise that promotes and results in the wise use of wetlands.

Actions:

- 2.2.1 Continue to develop the Convention's Web site and the CEPA mini-Web site within it, which has been designed specifically for the CEPA programme, and add resource materials to ensure that these remain a cornerstone of this CEPA programme globally. {Bureau}
- 2.2.2 Encourage Ramsar's International Organization Partners (IOPs), especially the IUCN's Commission on Education and Communication, and other organizations with which collaborative agreements are in place, also to make available suitable resource materials to assist the global CEPA programme and information on effective CEPA approaches. {Bureau, IOPs}
- 2.2.3 Continue to produce, distribute and share resource materials to support wetland CEPA actions. {Bureau, IOPs, CPs, CEPA, OCs}
- 2.2.4 Maintain, and seek to expand, the Ramsar global e-mail networks to include Ramsar Administrative Authorities, Ramsar national wetland CEPA Focal Points, CEPA professionals, Ramsar site managers, those facilities dedicated to environmental

education and awareness raising, and local stakeholders. Establish and support similar national e-groups and the linking of these with the global network. {Bureau, CPs, CEPA, IOPs, OCs}

- 2.2.5 Promote and seek to resource the coordination of the Wetland Link International programme of the Wildfowl & Wetland Trust, UK, in order to allow it to assist wetland education centres to create a global network and national centres of excellence for promoting CEPA, and to facilitate information exchange between centres in developed and developing countries and countries with economies in transition. {CPs, Bureau, IOPs}
- 2.2.6 Promote and seek to resource the twinning of wetland education centres to encourage the exchange and transfer of information and expertise between centres in developed countries and those in developing countries and countries in transition. {CPs, CEPA, IOPs}
- 2.2.7 Establish a Ramsar photolibrary to support global, national and local efforts to raise awareness and appreciation of wetland resources and how these can be used wisely. {Bureau}

Operational Objective 2.3 Improve the individual and collective capacity and opportunities of people to participate in and contribute to using wetlands wisely, through the recognition of the values of wetland resources.

Actions:

- 2.3.1 Review the current national needs and capacities in the areas of wetland CEPA, including in relation to the establishment and operations of wetland education centres (see Operational Objective 3.3) and use this to define capacity-building priorities within the national wetland CEPA action plan (see Action 2.1.3). {CPs, CEPA}
- 2.3.2 In collaboration with Ramsar's International Organization Partners, identify sources of expert information and training opportunities in wetland CEPA in order to facilitate the sharing of expertise and knowledge at the local, national, regional and global levels. {Bureau, CPs, CEPA}
- 2.3.3 Seek resources through appropriate mechanisms to support the capacity building identified as priorities through Action 2.3.1, ensuring that key groups such as women and indigenous and rural communities are not overlooked. {CPs}
- 2.3.4 Review formal educational curricula to ensure that they are incorporating information on the ecosystem services provided by wetlands, promoting the wise use principle, and recognizing the importance of CEPA in pursuing the objective of wise use. {CPs, IOPs, OCs}

<p>General Objective 3:</p>	<p>To mainstream the wise use of wetlands within society and enable people to act.</p>
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Note: the foregoing Operational Objectives all contain actions which contribute toward achieving this General Objective as well.

Operational Objective 3.1 Foster sustained national campaigns, programmes and projects to raise community awareness of the important ecosystem services provided by wetlands as well as their social, economic and cultural values.

Actions:

- 3.1.1 Undertake national campaigns, programmes or projects to raise awareness, build community support, and promote stewardship approaches and attitudes towards wetlands. {CPs, CEPA, OCs}
- 3.1.2 Celebrate World Wetlands Day/Week with appropriate national and local events and promotions and the distribution of resource materials, in order to raise awareness of wetland values and functions. {CPs, CEPA, Bureau, IOPs, OCs}
- 3.1.3 Collaborate with the media to inform decision-makers and the broader society about the values and benefits of wetlands. {CPs, CEPA, Bureau, IOPs, OCs}
- 3.1.4 Promote appropriate Wetlands of International Importance as 'demonstration sites' for Ramsar's wise use principle and ensure that they are suitably equipped in terms of capacity, signage, and interpretive materials. {CPs, CEPA}

Operational Objective 3.2 Support and develop mechanisms to ensure that CEPA processes are incorporated into participatory, multi-stakeholder wetland management.

Actions:

- 3.2.1 Develop, for consideration at COP9, additional guidance based on practical experiences to enhance Ramsar's *New Guidelines for management planning for Ramsar sites and other wetlands*, the *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands*, and the *Guiding principles for taking into account the cultural values of wetlands for the effective management of sites* by showing the positive role of CEPA in local management action. {STRP, CPs, IOPs}
- 3.2.2 Once the above guidance has been adopted, seek to apply it fully within each jurisdiction. {CPs}
- 3.2.3 Ensure that multi-stakeholder bodies are in place to guide and inform catchment/river basin and local wetland-related planning and management, and that these bodies include appropriate expertise in CEPA. {CPs}
- 3.2.4 Ensure that catchment/river basin planning and management documents include communication, education and public awareness and capacity building as complementary processes in the delivery of overall water and wetland management objectives. {CPs}

- 3.2.5 Where they do not already exist, introduce into site management plans the appropriate strategies and actions for complementary communication, education and public awareness. {CPs}

Operational Objective 3.3 Promote and support the role of wetland and other education centres as focal points for global, national and local CEPA efforts.

Actions:

- 3.3.1 Seek to establish education centres at Ramsar and other wetland sites to provide focal points for local and national CEPA activities. {CPs}
- 3.3.2 Where wetland education centres exist, review the information they present and ensure that it is serving to promote in suitable ways the Ramsar Convention and its wise use principle, and also that the centres are helping to foster communication and, where appropriate, participation, among the local wetland management 'actors' and stakeholders. {CPs, CEPA, IOPs, OCs}
- 3.3.3 For existing and future wetland education centres, encourage their participation in the Wetland Link International network of WWF, UK, as a mechanism for gaining access to global and national expertise in CEPA (see Action 2.2.5 also). {CPs, CEPA, IOPs, OCs}
- 3.3.4 Seek to involve suitable places of learning, education and training (museums, zoos, aquaria, botanic gardens and related institutions) in national CEPA efforts; encourage the development of wetland-related interpretative exhibits and programmes at such venues, and also facilitate linkages with wetland-based centres. (see Operational Objective 2.3) {CPs, CEPA, IOPs, OCs}
- 3.3.5 Encourage National CEPA Focal Points to collaborate with wetland and other education centres and, as appropriate, include a representative of such centres on Wetland CEPA Task Forces or other planning bodies (see Actions 2.1.1 and 2.1.2). {CPs, CEPA, IOPs, OCs}

Appendix 1

Understanding what is meant by the terms “communication, education and public awareness” and “mainstreaming”

1. In applying this programme, it is important that Contracting Parties and other interest groups share a common understanding of what is meant by the term “Communication, education and public awareness”. The advice presented below is based on the *Mainstreaming Biological Diversity* publication (produced by UNESCO, the Convention on Biological Diversity, and the World Conservation Union – IUCN) and is intended to give a sense of what practitioners in this field commonly mean by these terms, as well as the perspectives which have been used in formulating this programme.
2. Communication is the two-way exchange of information leading to mutual and enhanced understanding. It can be used to gain the involvement of ‘actors’ and stakeholders and is a means to gain cooperation of groups in society by listening to them first and clarifying why and how decisions are made. In an instrumental approach, communication is used with other instruments to support wetland conservation, to address economic constraints, and to motivate action.
3. Education is a process that can inform, motivate and empower people to support wetland conservation, not only by inducing lifestyle changes, but also by fostering changes in the way that individuals, institutions, business and governments operate.
4. Awareness brings the issues relating to wetlands to the attention of individuals and key groups who have the power to influence outcomes. Awareness is an agenda setting and advocacy exercise which helps people to know what and why this is an important issue, the aspirations for the targets, and what is and can be done to achieve these.
5. Mainstreaming is another term used in this CEPA programme. While it has many definitions, in this context it has been used to mean the processes by which societies, businesses and governments can be brought to recognize the full functions, services, and benefits derived from ecosystems, and the natural environment, and then act to give these values appropriate effect in decision-making. Mainstreaming is therefore at the centre of achieving sustainable or wise use.

Appendix 2

Possible target groups and stakeholders of the CEPA Programme of the Convention on Wetlands

1. There are a large number of possible target groups for this CEPA Programme which fall within the broadest category of the general community or civil society. To assist Contracting Parties and others using this Programme to decide on the actions they will take, this Appendix describes 27 subgroups of civil society which have been identified as those people who can make a significant and immediate difference in the status and long-term sustainability of wetlands.
2. In developing national or local programmes of action based on this CEPA Programme, Contracting Parties and others are urged to take this Appendix into consideration for their own situations in determining those which are their highest priority target groups.
3. A fundamental assumption of the CEPA Programme is that, as a consequence of the actions taken in response to it, there will be an increasing number of “actors” who become agents, ambassadors or advocates for the Convention on Wetlands and the principles it seeks to encourage. Support for the CEPA Programme should therefore be seen as an investment which aims to help decision-makers and mobilise local-scale actions directed at achieving the conservation and wise use of wetlands.

A) PEOPLE IN GENERAL

Target Group/Individuals	Rationale
Landowners (especially those who are responsible for managing wetlands)	These are the people who are making decisions which impact directly upon wetlands. Parties and Ramsar must inform them and provide them with access to expert information and expertise.
Indigenous people and local communities	Many indigenous people and local communities associated with wetlands have great knowledge of managing these ecosystems in a sustainable way, and in some instances have an ongoing cultural association with wetlands. Ramsar should aim to encourage the sharing of this experience with other wetland managers and acknowledge indigenous peoples' stewardship of wetlands.
Women	Engaging more women in wetland management is a priority, as in many cultures they tend to be more entrepreneurial in the family unit and more amenable to changing lifestyle habits. They may also tend to communicate more often with the children within the family.
Children	Children are the next generation of environmental managers and caretakers, and Ramsar must ensure that they are aware of the importance of wetlands and how to use them wisely. Children can also become teachers of their parents through their own education.

National and local non-government organizations	In many countries local NGOs are vital for achieving action. They need to have expert information and expertise available to them.
Those responsible for electronic and print media	Conveying positive and informative messages about wetlands to the general community can be accelerated through news and other stories in the electronic and print media.
Community leaders and prominent people – athletes, sports people, religious leaders, artists, royalty, teachers, opinion leaders, etc.	Community leaders can use their public profile to draw attention to issues, and those who have empathy for wetland conservation may be ideal ambassadors to promote the Ramsar message.

B) GOVERNMENTS AT ALL LEVELS

Target Group/Individuals	Rationale
Environmental policy makers and planners within local administrations, provincial/ state and national government administrations.	These officials are key decision-makers at the local level and subregional and national scales. Their actions can impact directly on wetlands, positively or negatively, either at the local level or catchment/river basin scale.
Wetland site managers (wardens, rangers, etc.) within local, provincial/state and national government administrations.	These people have a special need to receive advice on the best practices in managing wetland ecosystems, and on gaining public support and participation for their work, especially where they are responsible for managing a Ramsar site. Site managers also have valuable first-hand experience with wetland management, and finding ways to allow these experiences to be shared between them and with others is a priority.
National Administrative Authorities of the Ramsar Convention	They should have the best information at their disposal for efficient application and dissemination.
National Administrative Authorities and Focal Points for other environment-related conventions	If there is to be a more integrated approach to managing land and water resources, including wetlands, there is a need to create greater understanding of and empathy for the Ramsar Convention among those implementing the other conventions.
National consultative and advisory committees for the Ramsar Convention and other environment-related conventions (such as National Ramsar Committees).	Similarly, there is a need to create greater understanding of and empathy for the Ramsar Convention among those who are advising governments on implementation of Ramsar and the other conventions.
The Ministers responsible for all sustainable development and education portfolios and environment-related conventions as well as Members of Parliament - National, State/Provincial and local.	Ramsar needs to gain the support of these Ministers and all government members, for they have direct input to policy setting, budget allocation, etc. Those Members of Parliament in the opposition parties may be in this position in the future.

National aid agencies, bilateral donors	The Convention needs to ensure that there is a good general understanding about what it does within those organizations that are dealing with governments on a range of sustainable development issues. Ramsar must ensure that the relevant officials are well briefed and able to support Ramsar principles through on-ground projects in the Contracting Parties.
Ambassadors and the staff of overseas missions.	It is important that these officials fully understand the Ramsar Convention and its <i>modus operandi</i> so that national governments can be better informed.

C) INTERNATIONAL AND REGIONAL ORGANIZATIONS

Target Group/Individuals	Rationale
Global organizations – World Bank, Global Environment Facility, United Nations Development Programme, United Nations Environment Programme, Global Water Partnership, etc.	The Convention needs to ensure that there is a good general understanding about what it does within those organizations that are dealing with governments on range of sustainable development issues. Where the organizations have funding programmes, Ramsar must ensure that the relevant officials are well briefed and able to support Ramsar principles through on-ground projects in the Contracting Parties.
Regional organizations – South Pacific Regional Environment Program, European Commission, Southern Africa Development Community, Regional Development Banks, ASEAN Environmental Programme, etc.	As above.
Global NGO partners and other international and regional NGOs	Ramsar's four official NGO partners (IUCN, WWF, Wetlands International, and BirdLife) are all active and effective in promoting the Ramsar Convention. There is a need to involve more of these regional and international NGOs in communicating the Ramsar message.
The secretariats of other environment-related instruments (CBD, CCD, CMS, FCCC, CITES, World Heritage, MAB)	This is essential if there is to be increasing synergy among the conventions at the global and national scales.

D) THE BUSINESS SECTOR

Target Group/Individuals	Rationale
Potential sponsors, supporters	Ramsar promotes sustainable use of wetlands and must therefore engage with the business sectors to ensure that the activities being undertaken by them are not acting contrary to the objectives of the Convention.

Key business sectors <ul style="list-style-type: none"> • Water and sanitation • Irrigation and water supply • Agriculture • Mining • Forestry • Fishing • Environmental managers • Tourism • Waste disposal • Energy 	Within the business sectors these, and some others, are the industries which have the potential for major negative impacts on wetlands. Ramsar must promote practices within these industries to ensure that their activities are not resulting in wetland loss.
Professional Associations	Ramsar should encourage the application of Ramsar wise use practices through these professional associations.

E) THE EDUCATION SECTOR AND LEARNING INSTITUTIONS

Target Group/Individuals	Rationale
Education ministries, curriculum development authorities, examination boards and universities, in-service trainers, etc.	All of these can assist in gaining the inclusion of wetland conservation and wise use issues in school and other formal curricula.
National and international teachers' associations	The incorporation of Ramsar principles into curricula and learning programmes generally can be accelerated through working collaboratively with teacher associations.
National and international networks, associations and councils of environmental education	Wetlands and water issues can be incorporated into the curricula and other materials being developed by these organizations.
Wetland/ Environment Centres, Zoos, Aquaria, Botanic Gardens, etc.	These are ideal venues for promoting the Ramsar message and efforts should be intensified, in order to have suitable information and materials and programmes available within them.
National and international networks of libraries.	The library networks provide an excellent avenue for making information on Ramsar and wetlands more accessible to the general community.

Annex II

Priority tasks of the STRP's CEPA Working Group in the triennium 2003-2005

1. For each task within the STRP's programme of work for the triennium, provide ongoing input to the various working groups to ensure CEPA issues are considered fully and reflected appropriately in the guidance developed for Parties' consideration at COP9.
2. Evaluate the CEPA-related information provided in the National Reports submitted for COP8 and identify the major impediments and constraints being experienced by Parties in this area. Provide summary advice on this to the STRP and Standing Committee, and use it to guide the actions of this Working Group.
3. Review existing Ramsar guidance, and develop additional guidance, as required, for Parties, STRP, Bureau and IOPs, on CEPA issues and on opportunities which exist in the Ramsar Strategic Plan 2003-2008 to further the objectives of the CEPA Programme.
4. Develop for consideration at COP9 additional guidance based on practical experiences to enhance Ramsar's *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14), *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands* (Resolution VII.8), and the *Guiding principles for taking into account the cultural values of wetlands for the effective management of sites* annexed to Resolution VIII.19, in order to show the role of CEPA in local management action (Action 3.2.1 from the CEPA programme).
5. Review Ramsar's other guidance for Parties (as contained in the Wise Use "Toolkit") and, where appropriate, develop additional guidance to indicate how CEPA can be integrated into these policy and planning approaches.
6. Review the CEPA programmes and activities of other international conventions and programmes, including but not restricted to the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change, and the UNESCO Man and the Biosphere Programme (MAB), and provide advice to the Ramsar Bureau on how to advance more harmonised approaches. (Action 2.1.5 from the CEPA programme)
7. Develop the scope and Terms of Reference for pilot projects to evaluate a range of approaches for applying CEPA in promoting the wise use of wetlands (Action 1.2.1 from the CEPA programme)
8. Review existing models and case studies for undertaking wetland CEPA activities and document the lessons learned from these experiences. (Action 1.2.2 from the CEPA programme). Make these conclusions and case studies available to the Ramsar Bureau for distribution to Contracting Parties and other interested bodies. (Action 1.2.3 from the CEPA programme).

9. In coordination with the Ramsar Bureau, ensure that the conclusions from the reviews and revision of National Wetland CEPA Action Plans are available to all Contracting Parties, as working examples of CEPA Action Plans.

“Wetlands: water, life, and culture”

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.32

Conservation, integrated management, and sustainable use of mangrove ecosystems and their resources

1. RECOGNIZING the major importance of the wide range of ecological goods and services provided by mangrove ecosystems, including their vital role in acting as spawning and nursery areas for many species of economic importance, and the economic, social and environmental importance of mangroves for, *inter alia*, fishing, biodiversity, coastal protection, recreational activities, education, and coastal and shelf water quality;
2. ALSO RECOGNIZING that the survival of a large number of local communities and indigenous peoples depends upon the productivity and health of mangrove ecosystems;
3. RECOGNIZING FURTHER that mangrove ecosystems are important for regulation of natural processes and maintaining biological diversity in the coastal zones of the countries in which they occur, and that many species, notably, *inter alia*, fish, molluscs, crustaceans, migratory and resident waterbirds, and aquatic mammals, as well as threatened species, are ecologically dependent upon mangroves and their surrounding areas;
4. AWARE that healthy mangrove ecosystems, in conjunction with their associated coral reefs, seagrass beds, and intertidal flats, can play an important role in mitigating climate change and sea-level rise, including through carbon sequestration and the buffering of sea-level rise and storms, particularly in view of the current extent of coral bleaching and Intergovernmental Panel on Climate Change (IPCC) predictions of future increase in coral bleaching, as is recognized in document COP8 DOC. 11 and Resolution VIII.3;
5. CONCERNED that, despite this widely-recognized importance of mangrove ecosystems, the area of mangrove ecosystems continues to decrease in many countries as the result of destruction and degradation through human activities that use mangroves and their surrounding areas, or that disrupt the flow of freshwater or tidal flows to mangrove ecosystems, without appropriate planning, management and control mechanisms;
6. AWARE of the increasing availability of knowledge about practices related to the sustainable use of mangrove ecosystems by the ancestral communities of users and that experiences and technical knowledge about the conservation and sustainable use of these ecosystems should receive wide dissemination at the national and global levels;
7. TAKING NOTE of the need to strengthen at the global level the mechanisms for exchanging good practices and technical knowledge about mangrove ecosystems and to benefit from those exchanges, while at the same time promoting and strengthening these activities among local communities, with the cooperation, where appropriate, of local

people and national or international organizations with knowledge or interest in the sustainable use of the biological diversity of mangrove ecosystems;

8. AWARE that Contracting Parties to this Convention have concluded through Action 6.2.3 of its Strategic Plan 1997-2002 that mangrove ecosystems are under-represented in the List of Wetlands of International Importance, and that guidance on the identification and designation of mangrove ecosystems has been adopted by this meeting of the Conference of the Parties (Resolution VIII.11);
9. RECOGNIZING that mangrove ecosystems are dependent on ecological processes and influenced by socio-economic processes that occur in river basins and the wider coastal zones in which they occur, and that their capacity to continue to provide their values and functions depends upon sustainable land-use management at the wider scale, as is recognized by Resolution VII.18 concerning river basin management and the guidance adopted by this meeting concerning site-based management planning (Resolution VIII.14), water allocation and management (Resolution VIII.1), and integrated coastal zone management (Resolution VIII.4);
10. RECALLING Resolution VII.21, which specifically refers to mangrove ecosystems as an integral part of intertidal wetlands which have been lost and degraded due to unsustainable activities; and
11. ALSO RECALLING the Annex to Resolution VIII.11 which refers to the principal factors causing loss and damage to mangrove ecosystems worldwide as a result of unsustainable exploitation practices, such as habitat destruction, hydrological changes, pollution, and unsustainable aquaculture;

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12. REQUESTS Contracting Parties with mangrove ecosystems in their territories to review, and as appropriate to modify their national policies and strategies that could have harmful effects on these ecosystems, and to implement measures to protect and restore their values and functions for human populations, recognizing their rights, uses and traditional customs and the maintenance of biodiversity, and to cooperate at the international level to agree regional and global strategies for their protection;
13. ALSO REQUESTS the Contracting Parties with mangroves ecosystems in their territories to promote their conservation, integrated management and sustainable use within the context of the national policies and regulatory frameworks, and in accordance with environmental and strategic assessments of the activities that could affect, directly or indirectly, the structure and function of the mangrove ecosystems;
14. EXHORTS relevant Contracting Parties to update information on mangrove ecosystem cover and their conservation status, as well as the forms and levels of their use, and to provide this information to the Ramsar Bureau and the Convention's Scientific and Technical Review Panel (STRP) so as to assist their work as called for in Resolution VIII.8 concerning status and trends in wetlands;
15. ALSO EXHORTS those Contracting Parties with mangrove ecosystems within their territories to exchange information relating to their conservation, integrated management,

and sustainable use, especially where this involves the full participation of local communities and indigenous peoples;

16. REQUESTS the Ramsar Bureau and the STRP, as resources permit, and the Contracting Parties to contribute to the initiatives concerning the transfer of environmentally sound technologies for the sustainable management of mangrove ecosystems, and to make this available to the users;
17. ALSO REQUESTS Contracting Parties with mangrove ecosystems within their territories, including those of their dependent territories, according to their capacities and internal regulations, to designate mangrove ecosystems that fulfill the criteria for their inclusion in the List of Wetlands of International Importance, in order to create a coherent national and international network of designated Ramsar sites as called for in the Strategic Framework and Vision for the List of Wetlands of International Importance (Resolution VII.11), and in doing so to emphasize particularly those Ramsar sites which are important for local communities and indigenous peoples in terms of their subsistence and cultural values;
18. ALSO REQUESTS all relevant Contracting Parties to recognize the importance of mangrove ecosystems for migratory and non-migratory birds, and to designate such areas as Ramsar sites that qualify under Criteria 4, 5, and 6 of the *Strategic Framework* adopted by Resolution VII.11, in order to contribute to the establishment of coherent flyway-scale networks of Ramsar sites, in line, as appropriate, with the Joint Work Plan of the Ramsar Convention, Convention on Migratory Species, and African-Eurasian Migratory Waterbird Agreement (AEWA) as endorsed by Resolution VIII.5 and other conventions or related agreements;
19. ENCOURAGES all relevant Contracting Parties to take into account in their management planning for Ramsar sites with mangrove ecosystems, applying the *New Guidelines for management planning for Ramsar sites and other wetlands* and other guidance adopted by this meeting (Resolutions VIII.1, VIII.4, and VIII.14), the ecological and socio-economic factors that occur in river basins and coastal zones to which they are related, and to ensure that their wider land-use planning and management does not adversely affect their mangrove ecosystems, such as through the introduction of pollutants, modification of water flows, sediment inputs, and exotic species;
20. ALSO ENCOURAGES all relevant Contracting Parties to recognize fully the important role mangrove ecosystems can play in mitigating climate change and sea-level rise, especially in low-lying areas and Small Island Developing States, and to plan their management, including required adaptation measures, so as to ensure that the mangrove ecosystems may respond to impacts caused by climate change and sea-level rise;
21. URGES all relevant Contracting Parties to identify the factors degrading their mangrove ecosystems and to seek to restore such ecosystems, using the guidance on this matter adopted by this meeting (Resolution VIII.16), so that they can deliver their range of values and functions; and
22. REQUESTS the Ramsar Bureau to make all possible efforts to secure financial resources and advance technical cooperation for promoting the conservation, integrated management, and sustainable use of mangrove ecosystems and their resources through

appropriate existing partnerships and agreements with international and regional organizations.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)
Valencia, Spain, 18-26 November 2002**

Resolution VIII.33

**Guidance for identifying, sustainably managing, and designating
temporary pools as Wetlands of International Importance**

1. RECALLING that in Resolution 5.6 Contracting Parties adopted *Additional guidance for the implementation of the wise use concept*, which stressed that at local level “in order to achieve wise use of wetlands, it is necessary to attain a balance that ensures the maintenance of all wetland types through activities that can range from strict protection all the way to active intervention, including restoration”;
2. ALSO RECALLING Recommendation 5.3, which called for the establishment of strict protection measures for Ramsar sites and wetland reserves of small size or particular sensitivity, and Action 5.2.5 of the Convention’s Strategic Plan 1997-2002, which indicated that Contracting Parties should promote the establishment and implementation of protection measures for such wetlands;
3. FURTHER RECALLING that the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11) indicates that smaller wetlands should not be overlooked for designation as Wetlands of International Importance and that such wetlands may be especially important in maintaining habitat or ecological community-level biological diversity;
4. RECOGNIZING that temporary pools, which are small wetlands of all climatic regions, contribute to the maintenance of global biological diversity through the highly specialized plant and animal communities which depend upon them, and that these wetlands have important socio-economic values which include, *inter alia*, storage of water for use by local communities, especially pastoral communities in arid zones; provision of grazing areas to these communities; environmental education, facilitated by the small size of these pools; and scientific research, notably concerning the adaptation of whole biotic communities to unstable environments; and NOTING that they also have cultural values, especially in some dry regions, including karst areas and steppic areas;
5. CONCERNED that temporary pools are often neglected due to their ephemeral character and are disappearing worldwide because of abandonment of traditional life styles and ~~land~~ agricultural use, as well as from unsustainable management practices, including permanent flooding, land-filling for agricultural and urban developments; negative changes to their very specific hydrology, both in surface and groundwater fluxes, as is recognized by the *Guidelines for rendering the use of groundwater compatible with the conservation of wetlands* (Resolution VIII.40); overexploitation of their renewable resources; and other indirect causes;
6. RECALLING that Operational Objective 6.2 of the 1997-2002 Strategic Plan is “To increase the area of wetland designated for the List of Wetlands of International Importance, particularly for wetland types that are under-represented either at global or

national level”, and that the Convention’s Strategic Plan 2003-2008 (Resolution VIII.25) reiterates that designation of wetland types under-represented in the List requires priority attention; and

7. CONCERNED that temporary pools are under-represented in the Ramsar List of Wetlands of International Importance;

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8. ADOPTS for application by Contracting Parties the *Guidance for identifying, sustainably managing, and designating temporary pools as Wetlands of International Importance*, annexed to this Resolution;
9. CALLS UPON Contracting Parties to secure the wise use of temporary pools within their territory by ensuring, as a high priority, that their management is sustainable, respecting their specific characteristics and addressing root causes of their loss and degradation, taking into consideration this guidance, and including by:
 - i) undertaking, as far as possible, baseline inventory of temporary pools;
 - ii) raising awareness of their presence and their specific values and functions;
 - iii) ensuring the maintenance of their specific hydrological functioning;
 - iv) ensuring that their natural resources are sustainably used and not overexploited;
 - v) recognizing the importance of temporary pools to local communities and indigenous peoples, and committing support for their management and protection; and
 - vi) undertaking regular surveillance of temporary pools so as to identify and avert any threat to their values and functions, always considering the traditional uses and management;
10. ALSO CALLS UPON Contracting Parties to renew their efforts, as a high priority, to work in collaboration with local communities and indigenous peoples to designate examples of temporary pools, where appropriate, for the List of Wetlands of International Importance, taking into consideration the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11, Ramsar Handbook 7) and the present guidance, and to report to COP9 on their progress with the designation for the List of sites including this wetland type; and
11. INSTRUCTS the Ramsar Bureau to incorporate, as appropriate, the Annex to this Resolution into the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*.

Annex

Guidance for identifying, sustainably managing, and designating temporary pools as Wetlands of International Importance

Introduction

1. Resolution 5.6 adopted *Additional guidance for the implementation of the wise use concept*, stressing that at local level “in order to achieve wise use of wetlands, it is necessary to attain a balance that ensures the maintenance of all wetland types through activities that can range from strict protection all the way to active intervention, including restoration. Wise use activities therefore can be varied in nature, ranging from very little or no resource exploitation, to active resource exploitation as long as it is sustainable. . . . Wetland management should be adapted to specific local circumstances, sensitive to local cultures and respectful of traditional uses.”
2. Recommendation 5.3 called for the establishment of strict protection measures for Ramsar sites and wetland reserves of small size or particular sensitivity. This call was reiterated in Action 5.2.5 of the Convention’s Strategic Plan 1997-2002, adopted by Resolution VI.14 (COP6, Brisbane, 1996), which indicates that Contracting Parties should promote the establishment and implementation of protection measures for such wetlands. Furthermore, it is important to note that approaches called for in Recommendation 5.3 are not the only tools available to promote wetland conservation and that this is also effective when it happens as a result of voluntary actions by informed citizens.
3. Guidance concerning the designation of small wetlands as Wetlands of International Importance is included in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*, adopted by COP7: “Smaller sites should not be overlooked. In developing a systematic approach to Ramsar site designation, Contracting Parties are encouraged to recognize that potential Ramsar sites are not necessarily the largest wetlands within the territory. Some wetland types either never were or are no longer found as large wetland systems, and these should not be overlooked. They may be especially important in maintaining habitat or ecological community-level biological diversity.”
4. Furthermore, Operational Objective 6.2 of the 1997-2002 Strategic Plan is “To increase the area of wetland designated for the List of Wetlands of International Importance, particularly for wetland types that are under-represented either at global or national level”. The Convention’s Strategic Plan 2003-2008 (Resolution VIII.25) reiterates that designation of wetland types under-represented in the List requires priority attention, with priority wetland types identified as including arid zone wetlands – regions of major occurrence and importance for temporary pools.
5. However, out of the 1180 designated Ramsar sites (as at August 2002), only 70 have been designated with temporary pools as their primary wetland type, although it should be noted that temporary pools also occur as lesser features of significantly more Ramsar sites.

6. This additional guidance provides information to support Contracting Parties in their application of the Convention's wise use concept so as to secure the sustainable use of temporary pools, and their application of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* for the identification and designation of temporary pools as Ramsar sites. The guidance has been prepared in recognition of the fact that temporary ponds are often undervalued as wetlands because of their generally small size and seasonal or ephemeral nature, yet such wetlands can be of critical importance for the maintenance of biodiversity and as sources of water, food and other wetland products for local communities and indigenous peoples and their ways of life, particularly in arid and semi-arid areas and those which are vulnerable to persistent drought.

Identification of temporary pools

7. Temporary pools are usually small (< 10 ha in area) and shallow wetlands which are characterized by an alternation of flooded and dry phases, and whose hydrology is largely autonomous. They occupy depressions, often endorheic¹, which are flooded for a sufficiently long period to allow the development of hydromorphic² soils and wetland-dependent aquatic or amphibious vegetation and fauna communities. However, equally importantly, temporary pools dry out for long enough periods to prevent the development of the more widespread plant and animal communities characteristic of more permanent wetlands.
8. The water supply for temporary ponds usually comes from precipitation, from run-off from their often small and discrete catchment, and/or from the groundwater table. Temporary pools can also be important for groundwater recharge in karstic, arid and semi-arid areas.
9. Pools which are in direct physical contact with permanent, surface wetlands such as lake edges, permanent marshes or large rivers are excluded from this definition.
10. Temporary pools can occur in many different parts of the world, but are particularly well represented in karstic, arid, semi-arid, and mediterranean-type regions.
11. Since temporary pools are defined by their size and their hydrological functioning, whilst the Ramsar Classification System for Wetland Type is based chiefly on vegetation, temporary pools are covered by a number of categories of wetland types in the Classification System:
 - a) they can occur as a *Marine/coastal wetland* under category E (Sand, shingle or pebble shores; includes sand bars, spits and sandy islets; includes dune systems and humid dune slacks);
 - b) they can occur as an *Inland wetland*, under categories N (Seasonal/ intermittent/ irregular rivers/streams/creeks), P (Seasonal/intermittent freshwater lakes (over 8 ha); includes floodplain lakes), Ss (Seasonal/intermittent saline/ brackish/alkaline marshes/pools), Ts (Seasonal/ intermittent freshwater marshes /pools on inorganic

¹ Endorheic: a water body which loses water only by evaporation, i.e. no stream or river flows from it.

² Hydromorphic soils: waterlogged soils which develop under conditions of poor drainage in marshes, swamps, seepage areas, or flats.

soils; includes sloughs, potholes, seasonally flooded meadows, sedge marshes), W (Shrub-dominated wetlands; shrub swamps, shrub-dominated freshwater marshes, shrub carr, alder thicket on inorganic soils), and Xf (Freshwater, tree-dominated wetlands; includes freshwater swamp forests, seasonally flooded forests, wooded swamps on inorganic soils); and

- c) they can occur as a *Human-made wetland*, in category 2 (Ponds; includes farm ponds, stock ponds, small tanks; (generally below 8 ha).

12. Significant and characteristic features of temporary pools include:

- a) the ephemeral nature of their wet phase, normally with shallow waters, which means that they may not appear as obvious wetlands for most of the time;
- b) their total dependence upon local hydrology, especially with the absence of any link to permanent aquatic habitats;
- c) the uniqueness of their vegetation with, for example, typical communities of aquatic ferns (*Isoetes* species, *Marsilea* species, *Pilularia* species), normally endangered, and other amphibious plants such as *Ranunculus* species and *Calitriche* species;
- d) the uniqueness of their invertebrate communities and a particular abundance of endangered faunal groups such as amphibians and branchiopod crustaceans, often due to the absence of fish as predators;
- e) their particularly good representation in arid, semi-arid and mediterranean-type zones (including occurring as surface features in karst landscapes);
- f) the human-made nature of many temporary pools in different parts of the world, created either as a result of extractive activities or for water retention and storage for use by local communities; and
- g) their provision of nesting places for waterbirds.

Sustainably managing temporary pools

13. There are a number of threats to the sustainable maintenance of temporary pools, the most important of which include:

- a) alteration of the delicate hydrological functioning upon which they depend, including drainage for land conversion and conversely their transformation into more permanent pools, which leads to encroachment by less specialized, more competitive plant and animal species and which may threaten the key biodiversity values of temporary pools through increases in predators or competitors;
- b) the vulnerability of temporary pools and their biological diversity to increasing and persistent drought in arid and semi-arid regions;
- c) unsustainable exploitation of the natural resources of temporary pools, such as over-grazing, excessive harvesting of vegetation for fodder, and over-abstraction of water;

- d) solid waste dumping;
 - e) indirect threats including pollution, excessive water abstraction or diversion in the catchment, and natural changes through filling in from sedimentation and shrub encroachment;
 - f) abandonment of traditional life styles and land uses leading to neglect of the temporary ponds and loss of recognition of their values and functions; and
 - g) lack of recognition of their values and functions.
14. To secure the sustainable management of temporary pools, the following approaches should be applied:
- a) ensuring that temporary pools are included as a wetland type in national wetland inventories;
 - b) ensuring that the specific hydrological functioning upon which temporary pools depend, including their independence from permanent surface waters, is maintained;
 - c) ensuring that natural resources provided by temporary pools, such as water and fodder, are not over-exploited;
 - d) undertaking a regular surveillance of known temporary pools so as to avert any of potential direct or indirect threats which may appear;
 - e) ensuring that the impact of the creation of a new pool is assessed prior to its creation so as to ensure that the broader ecosystem surrounding it will not be negatively affected; and
 - f) raising awareness of the existence of temporary pools and their specific values and functions as wetland ecosystems.

Designation of temporary pools as Ramsar sites: the application of the Ramsar Criteria

15. Ramsar Criteria 1 to 4 of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* are particularly relevant to the designation of temporary pools as Ramsar sites. However, because of their generally small size, temporary pools seldom regularly support sufficiently large numbers of waterbirds for Criteria 5 and 6 to apply, although their importance for waterbirds in maintaining the biological diversity of the area can be recognized using Criterion 3, and as critical sites for waterbirds during their life cycle, particularly in arid and semi-arid regions, using Criterion 4. Most fish species do not occur in temporary ponds as they cannot generally survive their dry phases, but Criteria 7 and 8 may apply to temporary pools where they support fish species that are capable of survival in mud or in cysts during dry periods.
16. In applying Criterion 1, Contracting Parties should take into account the particular representation of temporary pools in karstic, arid or sub-arid (including Mediterranean-type) zones: this wetland type is particularly representative of these biogeographic regions.

17. In applying Criterion 2 and 4, it should be recognized that the characteristic plant and animal communities of temporary pools are:
 - a) virtually dependent on this wetland type during at least part of, and often for all of, their life cycle; and
 - b) very vulnerable by nature, being totally dependent on the very specific hydrological conditions of the pool: by altering the hydrology to drier or wetter conditions, whole plant and animal communities characteristic of temporary pools can be rapidly lost.
18. A number of species typical of temporary pools, for example aquatic ferns (*Isoetes* spp., *Marsilea* spp., *Pilularia* spp.), are globally or nationally threatened and listed in Protected Species Lists or Red Data Books. National key sites for such species are appropriate for consideration for designation under Criterion 2.
19. Contracting Parties should be aware that the importance of temporary pools is not linked to their size, and that important sites in terms of their contribution to global biodiversity can be only a few hectares or even square meters, in size.
20. Where possible, temporary pools designated as Ramsar sites should include their entire (usually small) catchments, so as to maintain their hydrological integrity.
21. Concerning the application of Criterion 4, it should be noted that temporary pools often occur as clusters or complexes of pools, sometimes involving hundreds of pools. In areas where rainfall is very localized, at any one time different pools may be dry or filled. When filled they may provide habitats for waterbird populations which move around the entire area. Such waterbird populations are thus dependent upon the whole cluster of pools rather than individual pools. Therefore, wherever possible, designation of a Ramsar site should include the whole cluster of temporary pools, noting especially the guidance provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (paragraph 50 in the annex to Resolution VII.11) concerning designating clusters of small sites and especially those in arid or semi-arid zones and of a non-permanent nature.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.34

Agriculture, wetlands and water resource management

1. RECOGNIZING that agriculture, whether large- or small-scale, shifting or permanent, extensive or intensive, commercial or subsistence, including crop production, animal breeding, pastoralism, horticulture, and plantation, is an essential activity for human survival and food security at local, national and global levels, and for sustaining livelihoods;
2. ALSO RECOGNIZING that in many parts of the world, agricultural activity has been responsible for creating distinctive and characteristic landscapes, including wetland ecosystems;
3. FURTHER RECOGNIZING that agriculture is also a major form of land use and that river valleys, floodplains, and coastal lowlands in particular have frequently been used for agriculture because of their natural suitability and the demands of agriculture for flat, fertile land and a ready supply of fresh water, and that therefore there is a high priority to ensuring that agricultural practices are compatible with wetland conservation objectives;
4. AWARE that wetlands can play important roles in relation to agriculture, such as abating the effects of storm and flood events, thus helping to protect both habitation and agricultural land, contributing to the replenishment of aquifers that are the source of water for irrigation, and constituting the habitat of wild relatives of cultivated crops and grasses;
5. NOTING the high dependence of local communities on wetland resources, particularly in developing countries and notably in terms of small-scale subsistence agriculture, domestic water supply, and other uses that may contribute directly to poverty alleviation;
6. ALSO NOTING that the poor, in particular women, often depend on wetland resources for their livelihoods and can be severely disadvantaged if wetlands are degraded or lost;
7. CONSCIOUS on the one hand that drainage and intensive cultivation of such areas have led to widespread and continuing wetland loss, and on the other hand that sustainable agriculture supports some important wetland ecosystems;
8. AWARE that agriculture can have impacts on water quantity and quality, and in particular that agriculture is a) a major user of water, and b) in certain cases, a major polluter, for example through pollution of surface and groundwater due to the runoff of fertilizers and plant protection products such as herbicides, fungicides and pesticides; and REALIZING that the precise impacts of agriculture on wetlands and water resources vary within and between regions, depending upon natural conditions and upon the type of technologies applied;

9. NOTING that uncertainties relating to wetland tenure systems and user rights over wetlands and water resources can have severe negative impacts on sustainable wetland management and in particular on poor communities that depend upon wetlands resources;
10. FURTHER AWARE that economic hardship in many parts of the world is causing people to practice some forms of unsustainable agriculture, resulting in degradation of natural resources, including vegetation, soil and fresh water, and that these phenomena may be exacerbated by the direct or indirect effects of agricultural policies and practices in other parts of the world;
11. CONCERNED that global climate change and accelerated desertification are projected to have major impacts on future patterns of availability and distribution of water, and on the functions and values of wetlands, as well as on agricultural production;
12. CONVINCED that, in conformity with the Ramsar 'wise use' concept (as defined by the Conference of Parties), concerted efforts are required to achieve a mutually beneficial balance between agriculture and the conservation and sustainable use of wetlands, and to prevent or minimize the adverse effects from agricultural practices on the health of wetland ecosystems throughout the world, taking into account the precautionary approach as set out in Principle 15 of the Rio Declaration on Environment and Development;
13. FURTHER CONVINCED of the important role in the area of agriculture and water of United Nations specialized agencies and programmes and relevant international initiatives;
14. AWARE of the Dialogue on Water, Food and the Environment coordinated by the International Water Management Institute (IWMI) and involving a broad range of international partners;
15. TAKING INTO CONSIDERATION the information and guidance contained in the Ramsar Handbooks for the wise use of wetlands, especially the *Guidelines for integrating wetland conservation and wise use into river basin management* adopted by the 7th Conference of the Contracting Parties, as well as the River Basin Initiative being developed jointly by the Secretariats of this Convention and the Convention on Biological Diversity (CBD), and Ramsar COP7 Resolutions VII.8 and VII.21, paragraph 15;
16. FURTHER TAKING INTO CONSIDERATION the CBD Decision III/11 on Conservation and sustainable use of agricultural biological diversity and the multi-year Work Programme in Decision V/5; and TAKING INTO ACCOUNT the relevant sections of the 3rd Joint Work Plan 2002-2006 between the CBD and the Ramsar Convention, in particular Activity 5;
17. REALIZING that the present meeting of the Conference has adopted further guidance relevant to agriculture, wetlands and water resource management, notably the Resolutions on *Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands* (Resolution VIII.1), *New Guidelines for management planning for Ramsar sites and other wetlands* (Resolution VIII.14), *The Report of the World Commission on Dams (WCD) and its relevance to the Ramsar Convention* (Resolution VIII.2), *Climate change and wetlands: impacts, adaptation and mitigation* (Resolution VIII.3), *Principles and guidelines for wetland restoration* (Resolution VIII.16), and on impact assessment (Resolution VIII.9); and NOTING that the Resolutions on *The Ramsar Strategic Plan 2003-2008* (Resolution VIII.25), *Incentive*

measures as tools for achieving the wise use of wetlands (Resolution VIII.23), *Guidelines for rendering the use of groundwater compatible with the conservation of wetlands* (Resolution VIII.40), and *Conservation, integrated management, and sustainable use of mangrove ecosystems and their resources* (Resolution VIII.32) are relevant for the preparation of guidelines on agriculture, wetlands and water resource management; and

18. AFFIRMING that this Resolution is intended to focus specifically on the relationship between agriculture and wetlands and is not in any way intended to be used to support agricultural policies that are inconsistent with trade-related agreements;

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19. CALLS UPON Contracting Parties to ensure that management plans for Ramsar sites and other wetlands are developed within wider integrated catchment management approaches which duly acknowledge the need for appropriate implementation of agricultural practices and policies that are compatible with wetland conservation and sustainable use goals, and URGES Parties to identify and enhance positive incentives for the conservation and sustainable use of wetlands, including sustainable agricultural systems related to these wetlands;
20. FURTHER URGES the Contracting Parties when reviewing land tenure policies to consider, where appropriate, wetland tenure systems and user rights in a manner that promotes fair, transparent and sustainable management of wetlands and their resources;
21. URGES Contracting Parties, when reviewing their agricultural policies, to identify possible subsidies or incentives that may be having negative impacts on water resources in general and on wetlands in particular, in their territories and/or elsewhere in the world, consistent with their other international rights and obligations, and to remove or replace them by incentives that would contribute to wetland conservation;
22. INVITES Contracting Parties that have not yet done so to initiate intra- and inter-ministerial dialogues including, as appropriate, institutions represented in Ramsar/ National Wetland Committees where these have been established, with a view to enhancing integration of relevant policies related to the conservation of water resources, wetlands, and biodiversity;
23. REQUESTS Contracting Parties, when implementing this Resolution, to ensure that the activities and support measures indicated in paragraph 21 should not support agricultural policies that are inconsistent with trade-related agreements;
24. INVITES the International Organization Partners (IOPs) to the Convention, in close cooperation with the Ramsar Bureau, to work with other relevant bodies, in particular the Food and Agriculture Organization of the United Nations (FAO), to expand upon current reviews of the-state of knowledge concerning the interactions between agricultural practices and wetland functions and values;
25. REQUESTS the Scientific and Technical Review Panel (STRP), working in cooperation with relevant international organizations and drawing on the review requested from the IOPs, to:

- a) establish a framework for identifying, documenting and disseminating good agriculture-related practice, including site-specific and crop-specific information, and policies that demonstrate sustainable use of wetlands for agriculture; and
 - b) use this framework to develop for consideration at COP9, and possible incorporation into the site-management guidelines annexed to Resolution VIII.14, wetland-type specific management guidelines to
 - enhance the positive role that sustainable agricultural practices may have vis-à-vis the conservation and wise use of wetlands;
 - minimize the adverse impacts of agricultural practices on wetland conservation and sustainable use goals; and
 - include examples based on wetland-type specific needs and priorities that take into account the variety of agricultural systems;
26. INVITES the National STRP Focal Points to provide Contracting Parties' input for the preparation of the review and concise guidelines called for in the preceding paragraph;
 27. REQUESTS the Ramsar Bureau, with the support of Contracting Parties and IOPs, to identify agriculture-related management practices developed for areas that include Ramsar sites, to contribute this information to the preparation of the guidelines as requested in paragraph 25 above, and to share it with the Secretariats of CBD and the Convention to Combat Desertification (CCD);
 28. FURTHER REQUESTS the STRP to ensure that adequate consideration of agriculture and wetland issues is incorporated into other relevant areas of work that the STRP may be dealing with, including global climate change, groundwater and its interaction with surface water, toxic chemicals, and desertification, as a contribution in the latter case to the implementation of the Memorandum of Cooperation between Ramsar and CCD;
 29. FURTHER REQUESTS the Ramsar Bureau to ensure that the corresponding information generated by the implementation of this resolution, once approved at COP9, will be incorporated in future updates of the Ramsar Wise Use Handbooks and to work closely with the CBD Secretariat to incorporate appropriate joint actions derived from the content of this Resolution in the next review of their Joint Work Plan;
 30. FURTHER REQUESTS the Secretary General to seek Ramsar representation in the Dialogue on Water, Food and the Environment and to build on existing links with that Dialogue's secretariat; and
 31. INVITES Contracting Parties, IOPs, STRP members and National Focal Points, and others to contribute information on wetlands and agriculture to the Wise Use Resource Centre maintained by the Ramsar Bureau, to the activities of the River Basin Initiative and to the Dialogue on Water, Food and Environment and future meetings of the World Water Forum.

"Wetlands: water, life, and culture"

**8th Meeting of the Conference of the Contracting Parties
to the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.35

**The impact of natural disasters, particularly drought, on wetland
ecosystems**

1. RECALLING Article 3.1 of the Convention, whereby Contracting Parties have committed themselves to formulate and implement their planning so as to promote the conservation of wetlands included in the List of Wetlands of International Importance, and as far as possible the wise use of wetlands in their territory;
2. ALSO RECALLING that under Article 3.2 of the Convention, each Contracting Party has agreed that it will arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change as the result of technological developments, pollution or other human interference, and to report any such change, without delay, to the Ramsar Bureau;
3. FURTHER RECALLING that in Recommendation 4.8 the Contracting Parties instructed the Ramsar Bureau to maintain the "Montreux Record" of listed sites where change in ecological character has occurred, is occurring or is likely to occur; that in Resolution 5.4 they established guidelines for the operation of this Montreux Record and determined that its purpose should be, *inter alia*, to identify priority sites for positive national and international conservation attention; and that in Resolution VI.1 they adopted a revised procedure for its operation;
4. RECOGNIZING the importance under the Convention of assessing and reporting the status and trends in the ecological character of Ramsar sites and other wetlands, including through a management planning process, as outlined in Ramsar COP8 DOC. 20;
5. FURTHER RECOGNIZING that through Resolution VIII.8 Contracting Parties have confirmed that Article 3.2 reports should be made for types and causes of adverse, human-induced, change in ecological character in order, *inter alia*, to provide the basis for analysis of status and trends in Ramsar sites in line with Objective 4.1 of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11);
6. ALSO RECOGNIZING that through Resolution VIII.1 Contracting Parties have emphasised the critical importance of maintaining water allocations to ensure that wetlands can continue to provide their many values and functions, including, *inter alia*, water retention and purification, groundwater recharge, and the provision of water, food and fiber for people and for the maintenance of global biological diversity;

7. NOTING that wetlands in drylands are of critical importance for the survival of people and biological diversity; and that, through Resolution VIII.33 adopted by this meeting, Contracting Parties have recognized the particular importance of temporary pools and their unique biological diversity in such regions;
8. AWARE of the Memorandum of Cooperation between the Ramsar Convention and the UN Convention to Combat Desertification concerning collaborative actions on wetlands in drylands, and WELCOMING the development by the Convention on Biological Diversity of a Collaborative Partnership in the implementation of the CBD's programme of work on dry and sub-humid lands, and the involvement of the Ramsar Convention in this partnership through the 3rd CBD/Ramsar Joint Work Plan;
9. CONCERNED that frequent and persistent drought in several arid and semi-arid regions of the world, including the Middle East and Central Asia, is having devastating impact on the ecological character of those Ramsar sites that do not normally experience such drought, and ALSO CONCERNED that such droughts will increase the vulnerability of wetlands through increasing competing demands of agricultural irrigation, energy generation, and human and livestock consumption for the water resources upon which they depend;
10. AWARE that, as outlined in document COP8 DOC. 11, climate change projections indicate that other natural disasters, such as storms and floods, may also increase in frequency and severity and that such events can cause serious damage to the ecological character of wetlands;
11. WELCOMING the "Tehran Communiqué" issued by Contracting Parties and other participants at the Ramsar West and Central Asia Subregional meeting, held on 3-5 February 2002, in Tehran, Islamic Republic of Iran, which recognized the impact of drought on a considerable number of major wetlands in the region; affirmed the importance of confronting all the underlying causes of wetlands degradation, and emphasised, in order to increase the effectiveness and utility of the Montreux Record, the necessity to address, in addition to human-induced changes, naturally-induced changes in the ecological character of wetlands, as well as the need to develop monitoring and assessment of such changes; and
12. MINDFUL of the significance of synergies with the other multilateral environmental agreements with a particular focus on the impacts of drought; namely the United National Convention to Combat Desertification and the UN Framework Convention on Climate Change;

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13. UNDERLINES the devastating impacts of drought in areas where it is not normally experienced, and other natural disasters, on the ecological character of Wetlands of International Importance and other wetlands in affected countries;
14. URGES Contracting Parties affected by drought to seek to maintain, as far as is practicable, the continued allocation of water to Ramsar sites and other wetlands in accordance with their natural hydrological regimes, so as to ensure that they can continue

to provide their full range of values and functions for people and biological diversity, as called for in Resolution VIII.1;

15. REQUESTS affected Contracting Parties to monitor and assess the impacts of drought in areas where it is not normally experienced, and other natural disasters, on the ecological character of Ramsar sites and other wetlands and on the livelihoods of local communities and indigenous peoples dependent upon these wetlands within their territory and, for designated Ramsar sites, to report this to the Ramsar Bureau so that this information can be made available to the Scientific and Technical Review Panel to assist in its reporting to COP9 on the status and trends in the ecological character of sites in the Ramsar List, as called for in Resolution VIII.8;
16. ENCOURAGES Contracting Parties to report to the Ramsar Bureau, in accordance with Article 3.2, the impact of drought and other natural disasters on the ecological character of Ramsar sites, including the consequences of people's responses to natural disasters, in line with the confirmation in Resolution VIII.8 that such reports should be made for types and causes of adverse, human-induced, change in ecological character; and
17. FURTHER ENCOURAGES Contracting Parties with Ramsar sites affected by drought or other natural disasters to use the mechanisms and benefits of the Montreux Record by placing such sites that are in need of priority conservation action on the Record and, as appropriate, seeking national and international assistance to support their conservation action.

"Wetlands: water, life and culture"

**8th Meeting of the Conference of the Contracting Parties to
the Wetlands Convention (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.36

Participatory Environmental Management (PEM) as a tool for management and wise use of wetlands

1. AWARE that sustainable management of wetlands requires an integrated approach incorporating knowledge from many sources – local and regional, traditional and scientific – for identification and prioritisation of the most important problems and for proposing efficient solutions to those problems;
2. TAKING INTO ACCOUNT that the participation of all sectors in sustainable management of wetlands optimizes human, economic and environmental resources to the point that in many regions it is considered a process that can contribute to reducing poverty and improving the quality of life;
3. RECOGNIZING the close relationship between societies and wetlands and taking into account the importance of these ecosystems in the cultural, ecological, social, political and economic aspects of the life of local inhabitants;
4. RECALLING the *Guidelines for the implementation of the wise use concept* (Recommendation IV.10) and *Additional guidance for the implementation of the wise use concept* (Resolution V.6), which promote participation of local communities and indigenous peoples in the preparation of management plans and in the decision-making process regarding wetlands designated as Ramsar sites;
5. ALSO RECALLING Resolution VII.8, entitled *Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands*;
6. FURTHER RECALLING that the Johannesburg Declaration on Sustainable Development, paragraph 26, recognizes that sustainable development requires broad-based participation in policy formulation, decision-making and implementation at all levels, and that the Plan of Implementation of the World Summit on Sustainable Development, paragraph 128, underscores the importance of ensuring public participation in decision-making, so as to further Principle 10 of the Rio Declaration on Environment and Development;
7. ALSO AWARE of the need to involve many social actors (the public and private sectors, non-governmental organizations and local communities, among others) in the management and sustainable use of wetlands;
8. ALSO RECOGNIZING that strategies of local participation contribute to the implementation of activities that promote sustainable use and exploitation of the natural resources of wetlands;

9. FULLY AWARE that Participatory Environmental Management (PEM) is a learning process that helps improve joint capacities for study and action among all those involved in the conservation of wetlands;
10. ALSO TAKING INTO ACCOUNT that PEM promotes active and full participation of local communities and indigenous peoples in the adoption and application of decisions related to the use and sustainable management of wetlands;
11. RECALLING that Decision IV/4 of COP4 of the Convention on Biological Diversity on status and trends of the biological diversity of inland water ecosystems and options for conservation and sustainable use, Annex I, paragraph 9(e), recommends Parties to involve as far as possible, and as appropriate, local communities and indigenous people in development of management plans and in projects that may affect inland water biological diversity;
12. FURTHER RECOGNIZING that PEM improves communication and exchange of information, contributing to a reduction of environmental conflicts, promoting continuity and sustainability of management activities;
13. FURTHER TAKING INTO ACCOUNT that there are positive experiences of participatory management of wetlands involving local communities, indigenous peoples, the private sector, universities, non-governmental organizations and the public sector that sustainably manage resources within wetlands; and
14. NOTING the experiences and case studies around the world presented at the Third Technical Session of Ramsar COP7 on "Participation at all levels for conservation and wise use of wetlands";

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15. RECOGNIZES Participatory Environmental Management (PEM) as a useful tool for achieving sustainability in the use and management of wetlands;
16. REQUESTS the Scientific and Technical Review Panel (STRP) to prepare for COP9 methodologies or guidelines for effective implementation of PEM, gathering case studies and taking into account the content of the annex to this resolution;
17. URGES the Contracting Parties to inform COP9 on progress and successful experiences in applying PEM strategies; and
18. ALSO URGES multilateral and bilateral donors to provide financial resources for projects that promote the use of PEM strategies for wetland management.

ANNEX

Introduction

1. Participatory Environmental Management (PEM) is a tool that by including knowledge from many sources – traditional, scientific, technical and administrative, among others – permits an integrated approach to problems and priority activities. This makes the management of ecosystems, specifically wetlands, more efficient, effective and lasting in social, environmental and economic terms. Because it optimizes resources and makes management more effective, PEM is now considered to be a process that can contribute to overcoming poverty in many regions.

Benefits of PEM

2. Participatory Environmental Management:
 - a) is a tool that can help reduce poverty and improve the quality of life;
 - b) facilitates a coherent definition of the needs in accordance with the context and reality of the region;
 - c) by allowing incorporation of all actors (the public and private sectors, local communities, universities and others), strengthens and provides training for the structures of local organization;
 - d) identifies more efficient, effective and lasting solutions in economic, social and environmental terms, thus creating collateral benefits;
 - e) optimizes resources (technical, financial and cultural) available for environmental management strategies;
 - f) by incorporating knowledge from many sources and points of view (especially those directly related to the wetlands in question), facilitates the exchange of knowledge;
 - g) promotes capacities from the base up and the cultural appropriation of the territory;
 - h) by improving communication and exchange of information among actors, creates an environment of confidence;
 - i) can be used for settling environmental conflicts; and
 - j) promotes opportunities for participation in other areas.
3. It should be taken into account that PEM, as any process, requires time and adequate planning, both in terms of land use and in relation to the required economic resources.
4. However, there are external elements that if “used” adequately can strengthen PEM strategies, such as those related to the development or application of legal mechanisms of social participation in the management of natural areas.
5. Two aspects that can lead to positive short-term or medium-term results are: a) the signing, application and compliance with international agreements, namely the Convention on Wetlands (Ramsar), the Convention on Biological Diversity (CBD), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), among others; and b) the strengthening of transnational networks for the exchange of experiences, access and diffusion of information and improvement of local technical capacities in the taking of joint decisions and the management of resources.

6. Equally important long-term but tangible results may be obtained through: a) mechanisms for international environmental cooperation that include the requirement of a specific commitment to use PEM techniques in the development of environmental projects; b) incentives for social participation in management strategies for natural areas; and c) advice and technical assistance for development of PEM projects.

Some aspects to be taken into account in the preparation and application of PEM strategies

7. Some of the main aspects to be taken into account for preparation and application of PEM strategies or for strengthening existing PEM strategies:
 - a) education and environmental awareness at all levels;
 - b) training of all participants;
 - c) identification of the need to assign specific funds for activities aimed at strengthening PEM;
 - d) equitable access to information;
 - e) application of participatory mechanisms through identification of local or regional leaders; and
 - f) monitoring and participatory research on the socio-cultural context and integrated analysis for identification of priorities and possible lines of action, and for early detection of conflicts.

Resolution VIII.37

International cooperation on conservation of migratory waterbirds and their habitats in the Asia-Pacific region

1. RECALLING Article 5 of the Convention, which calls for international consultation and coordination among Contracting Parties to support present and future policies and regulations concerning the conservation of wetlands and their flora and fauna;
2. ALSO RECALLING Recommendation 4.4, which called for networks of wetland reserves to be established; Recommendation 4.12, which recognized the flyway concept for the conservation of wetland bird species; Recommendation 6.4, which called for the establishment of a network of Ramsar-listed and other wetlands of international importance for migratory shorebirds along the East Asian-Australasian Flyway, managed so as to maintain their suitability for migratory shorebirds; and Recommendation 7.3, which requested Contracting Parties to extend their support to the *Asia-Pacific Migratory Waterbird Conservation Strategy 1996-2000* and work towards putting in place a secure and extended framework for international cooperation aimed at the conservation of migratory waterbirds and their habitats in the Asia-Pacific region beyond 2000;
3. FURTHER RECALLING Action 7.2.5 of the Convention’s Strategic Plan 1997-2002, intended to “enhance Ramsar’s contribution to international cooperation on shared wetland species, notably through cooperative arrangements with the Convention on Migratory Species, flyway agreements, networks and other mechanisms dealing with migratory species”, and Action 12.2.2 of the Convention’s Strategic Plan 2003-2008, which concerns continued support for the development of regional site networks and initiatives, as exemplified by the Asia-Pacific Migratory Waterbird Conservation Strategy;
4. AWARE of the significant progress achieved in protecting migratory waterbirds and their wetland habitats through the implementation of the *Asia-Pacific Migratory Conservation Waterbird Strategy 1996-2000* and the current implementation of the Strategy 2001-2005;
5. ACKNOWLEDGING the pivotal role of the Asia-Pacific Migratory Waterbird Conservation Committee, comprising representatives of numerous governments in the region, international organizations and non-government organizations, including Ramsar International Organization Partners, in directing the development and implementation of the Asia-Pacific Migratory Waterbird Conservation Strategy;
6. FURTHER ACKNOWLEDGING the considerable work undertaken in the region so far in response to Recommendations made by previous meetings of the Conference of the Contracting Parties which have called for greater conservation efforts for migratory waterbirds and their habitats in the Asia-Pacific region;

7. WELCOMING the commitment by the many Contracting Parties in the Asia-Pacific region to advancing the conservation of migratory waterbirds and their habitats through the Strategy;
8. AWARE that there are initiatives under way or being developed for cooperative actions on waterbird flyways in other parts of the world, including *inter alia* the African-Eurasian Migratory Waterbird Agreement, the Western Hemisphere Shorebird Reserve Network, and the Central Pacific Flyway Bird Conservation Working Group;
9. WELCOMING the Memoranda of Cooperation or Agreement developed between the Ramsar Bureau and the Secretariat of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), the South Pacific Regional Environment Programme (SPREP), BirdLife International, Wetlands International, and the World Wide Fund for Nature as mechanisms to improve international cooperation on the conservation of migratory species;
10. CONVINCED of the need for continued concerted multilateral collaboration for the conservation of migratory waterbirds and wetlands within the East Asian-Australasian, Central Asian-Indian, and Central Pacific Flyways; and
11. FURTHER CONVINCED that the Ramsar Convention, through the cooperative actions of its Contracting Parties and partner organizations along the East Asian-Australasian, Central Asian-Indian, and Central Pacific Flyways, can facilitate further strengthening of a multilateral approach to waterbird conservation in the Asia-Pacific region;

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12. CONGRATULATES Wetlands International for its work over the past six years in coordinating the development and implementation of the Asia-Pacific Migratory Waterbird Conservation Strategy, the Governments of Australia and Japan for providing major resources and support for this work, and other governments, International Organization Partners, and NGOs for their support for its implementation;
13. CALLS UPON Contracting Parties to extend their support to the Asia-Pacific Migratory Waterbird Conservation Committee in pursuing the full implementation of the *Asia-Pacific Migratory Waterbird Conservation Strategy 2001-2005* and actively to implement the Strategy within their territories so as to realise its long-term conservation objectives for migratory waterbirds and their habitats in all Asia-Pacific countries;
14. COMMENDS the Strategy to other countries within the Asia-Pacific region which are not yet Contracting Parties to the Convention, and encourages them to participate fully in its implementation;
15. CALLS UPON international and bilateral development agencies and institutions to provide financial resources to governments and non-government organizations in the Asia-Pacific region in order to implement the *Asia-Pacific Migratory Waterbird Conservation Strategy 2001-2005*, in close cooperation with the Asia-Pacific Migratory Waterbird Conservation Committee; and

16. REQUESTS the Asia-Pacific Migratory Waterbird Conservation Committee to provide Contracting Parties and the Bureau with regular reports on the progress and outcomes of implementing the Strategy, and to seek to collaborate and share its experiences with waterbird flyway initiatives and agreements in other parts of the world, in order to maximise the capacity of all Contracting Parties and others involved in such initiatives to secure the conservation and sustainable use of the global networks of wetlands which migratory waterbirds and other wetland-dependent species require for their survival.

Resolution VIII.38

Waterbird population estimates and the identification and designation of Wetlands of International Importance

1. RECOGNIZING that the regular review and updating of estimates of waterbird population sizes is necessary to track the efficacy of measures for the conservation and wise use of waterbird populations, including the establishment of national and international networks of protected sites on migratory waterbird flyways, as called for in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11);
2. RECALLING Resolution 5.9, in which the Contracting Parties requested IWRB (now Wetlands International) to provide information on the sizes of waterbird populations as a basis for the application of the Convention's site-selection Criterion 3 (c) (now Criterion 6), and ALSO RECALLING Resolution VI.4, in which they outlined the desired timetable for such updates and requested Wetlands International to bring updated information to each future meeting of the Conference of the Parties;
3. REAFFIRMING the importance of data collected by Wetlands International through its International Waterbird Census for the assessment of wetlands against Criteria 2, 4, 5 and 6 of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Resolution VII.11);
4. NOTING AGAIN the value of regular waterbird counts at wetlands as an effective means of monitoring aspects of the ecological character of particular sites, especially for the purposes of management planning, environmental impact assessment, and the evaluation of national or regional wetland policies;
5. AWARE of the wide international consultation undertaken by Wetlands International to collate data and information for the third edition of its publication *Waterbird Population Estimates*, prepared for this meeting of the Conference of the Contracting Parties, which brings together the most recent information on the population sizes of waterbirds, as envisaged by Resolution VI.4, and which identifies 1% population thresholds for 1,138 (50%) biogeographic populations of waterbirds, but also AWARE that, despite this, there remain 1,133 populations of waterbirds for which there is no reliable population estimate from which to establish a 1% threshold for the application of Ramsar Criterion 6;
6. WELCOMING BirdLife International's publications *Important Bird Areas and potential Ramsar Sites in Europe* and *Important Bird Areas and potential Ramsar Sites in Africa*, and RECOGNIZING the value of BirdLife International's Important Bird Areas (IBA) programme in assisting Contracting Parties in their identification of potential Wetlands of International Importance;

7. NOTING the publication by BirdLife International in 2000 of the most recent assessment of the status of the world's birds in *Threatened Birds of the World*, which indicated that 158 species of waterbird were globally threatened and that for a further six species of waterbirds data were so deficient that it is not possible to assign conservation status, and RECOGNIZING that this publication provides information in support of the identification and designation of Ramsar sites under Criterion 2; and
8. RECOGNIZING the role of the international Specialist Groups of the Species Survival Commission of IUCN – The World Conservation Union as well as those of Wetlands International in collecting, analysing and interpreting waterbird population data;
9. AWARE of the need for monitoring information on alien, non-native and invasive waterbird populations and hybrid forms, as well as those waterbirds whose populations are rapidly increasing outside their native ranges, so as to inform management responses;
10. FURTHER AWARE of the development of the African/Eurasian Migratory Waterbird Flyways project by Wetlands International, which will enhance the coverage and quality of data underpinning future versions of *Waterbird Population Estimates* and will lead to identification of potential Ramsar sites, by identifying critically important wetlands along migratory waterbird flyways, as well as to an enhanced capacity to survey and monitor them; and
11. DESIRING to promote the application of a consistent global source of information on 1% thresholds for the application of Criterion 6 for designation of Wetlands of International Importance;

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12. WELCOMES the publication of the third edition of *Waterbird Population Estimates* prepared for this meeting of the Conference of the Parties, and CONGRATULATES Wetlands International on the work undertaken to further develop this global and consistent source of data and information of importance for wetland and waterbird conservation and wise use, and for increasing the number of biogeographic populations for which population estimates and 1% thresholds are now available;
13. URGES all Contracting Parties to use appropriate 1% thresholds contained in the third edition of *Waterbird Population Estimates* as the official and consistent basis for their application of Criterion 6 of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* for the designation of Ramsar sites during the 2003-2005 triennium;
14. ALSO URGES Contracting Parties to work together to identify and designate coherent flyway-scale networks of Ramsar sites for migratory waterbirds, in line with Action 12.2.2 of the Convention's Strategic Plan 2003-2008, including working cooperatively with the Convention on Migratory Species (CMS) and African-Eurasian Migratory Waterbird Agreement (AEWA) through the Joint Work Plan between the Ramsar Convention, CMS and AEWA;

15. FURTHER URGES Contracting Parties to select Ramsar sites for globally threatened waterbirds in implementation of Action 12.2.1 of the Convention's Strategic Plan 2003-2008, noting also the value of selecting Ramsar sites to support conservation strategies for nationally or regionally threatened waterbirds;
16. REQUESTS Wetlands International, with the assistance of the Ramsar Bureau, to make widely available, including in electronic formats, the 3rd edition of *Waterbird Population Estimates* to all Contracting Parties, non-Parties and other organizations involved in the identification and designation of Ramsar sites;
17. REQUESTS Wetlands International to continue to bring an updated edition of *Waterbird Population Estimates* to each future Conference of the Parties, having first undertaken international scientific consultation on its contents, so that the population estimates and 1% thresholds it contains may be used as the basis for the application of Criterion 6 in the succeeding triennium;
18. WELCOMES the intention of Wetlands International to enhance the scope and coverage of future editions of *Waterbird Population Estimates* so as to include all waterbird taxa listed in the glossary to the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*;
19. ALSO WELCOMES the proposed establishment by Wetlands International of a Global Waterbird Monitoring Steering Committee as a means of focusing the future development of the International Waterbird Census, and in particular its contribution to the strategic development of the Ramsar List, and REQUESTS this Committee, once established, to identify ways and means of increasing the availability of data and information from the IWC to Contracting Parties and others in support of their identification and designation of Ramsar sites;
20. ENCOURAGES Contracting Parties and others with relevant data and information to assist Wetlands International and BirdLife International through the continued collection and supply of population data on waterbirds, including globally threatened species and those species identified by BirdLife International in *Threatened Birds of the World* as being data deficient;
21. ENCOURAGES the Species Survival Commission of IUCN and Wetlands International to facilitate the establishment of further Specialist Groups for waterbird taxa where no such expert networks currently exist, so as to assist in the collation and critical interpretation of waterbird population data of value for the application of Criterion 6;
22. ENCOURAGES BirdLife International to make available to Contracting Parties and others information from its Important Bird Areas (IBAs) programme, including its analyses of IBAs and potential Ramsar sites for Europe and Africa, and to consider the preparation of such analyses for other regions;
23. REQUESTS the support of the Global Environment Facility to assist eligible countries in the implementation of the African/Eurasian Migratory Waterbird Flyways project; and

24. URGES Contracting Parties to apply waterbird monitoring data, and analyses drawn from them, when appropriate, as a means of providing objective information for site management planning and the evaluation of national or regional wetland policies.

"Wetlands: water, life and culture"

**8th Meeting of the Conference of the Contracting Parties to the
Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.39

High Andean wetlands as strategic ecosystems

1. TAKING INTO ACCOUNT the Resolutions adopted by this meeting of the Conference on *Guidelines for global action on peatlands* (Resolution VIII.17), *Additional guidance for identifying and designating under-represented wetland types as Wetlands of International Importance* (Resolution VIII.11), *Partnerships and synergies with Multilateral Environmental Agreements and other institutions* (Resolution VIII.5), *Climate change and wetlands: impacts, adaptation and mitigation* (Resolution VIII.3), and *Enhancing the wise use and conservation of mountain wetlands* (Resolution VIII.12), all of which are relevant to the conservation and wise use of high Andean wetlands;
2. CONSCIOUS of the fact that the High Andean ecosystems located in paramo formations, including Central American páramos puna and *jalca*, among others, contain important wetland systems such as glaciers, lagoons, wet grasslands, *bofedales*, high-altitude *vegas*, salt pans and peat bogs, which have high ecological, social and cultural value;
3. FURTHER CONSCIOUS of the strategic value of High Andean wetlands as regulators and sources of water for consumption, irrigation, and generation of electricity, and as ecosystems of high biodiversity, habitat for species of endangered fauna and flora, centres of endemism, space for tourism activities, and living space for several peasant communities, local populations and indigenous peoples, among others;
4. RECOGNIZING that most cities and a large part of farm production in Andean countries and other countries of the subregion benefit from the High Andean river basins, including their wetland systems, as their main source of water for several purposes;
5. AWARE of the vulnerability and fragility of High Andean wetlands to climate change and pressure generated by productive activities such as intensive agriculture and livestock grazing, uncontrolled burning, mining, forest activities, over-extraction of water from endorheic basins, introduction of exotic and invasive species, and unregulated tourism;
6. RECOGNIZING that the conservation of High Andean wetlands makes it possible to regulate water systems at different scales, and to improve the quality of life for both the human communities associated with these ecosystems and the urban areas benefiting from their environmental services;
7. FURTHER RECOGNIZING that High Andean wetlands are not receiving adequate attention at local, national, regional and international levels, so as to facilitate their conservation and sustainable use as a benefit of the Andean population and for maintenance of the integrity of these fragile ecosystems;
8. RECALLING that the high-mountain ecosystems and their associated wetlands also form part of the area of activities of other multilateral environmental agreements, such as the

Convention on Biological Diversity, the United Nations Framework Convention on Climate Change, the Convention to Combat Desertification, and the Convention on Migratory Species;

9. RECOGNIZING that there are initiatives underway related to the High Andean ecosystems and their associated wetlands, such as those of the International Working Group on Páramos (Grupo Páramo) involving governmental and non-governmental organizations, research centres, and representatives of the private sector in the countries with páramos and other countries with similar ecosystems, as well as the High Andes Flamingos Conservation Group (GCFA), an initiative of Argentina, Bolivia, Chile and Peru made up of governmental institutions, non-governmental organizations, the private sector and universities of the four countries, which carry out joint activities that incorporate the relevant aspects for the conservation of flamingos, within the framework of the Ramsar Convention and the Convention on Migratory Species;
10. RECOGNIZING ALSO the interest of the Ramsar International Organization Partners in the conservation of these wetlands, considering them as ecosystems that are strategic and the habitat of threatened or endangered species;
11. TAKING NOTE that the Ramsar Bureau supported the World Congress of Páramos, held in Paipa, Colombia, in May 2002, which adopted the Declaration of Paipa, defining the guiding approach for international work regarding páramos;
12. ALSO TAKING NOTE that the United Nations declared 2002 as the International Year of Mountains and 2003 as the International Year of Freshwater; and
13. RECALLING the importance given to mountain ecosystems in the Plan of Implementation adopted by the World Summit on Sustainable Development (Johannesburg, 2002), in COP6 of the Convention on Biological Diversity (The Hague, 2002), and in the preparations for the 2003 World Water Forum;

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14. INVITES the Contracting Parties concerned to establish specific work programmes for High Andean wetlands and the basins fed by them, in order to preserve their valuable biodiversity, their function as regulators of water, and as living space of many local and peasant communities and indigenous peoples; and ENCOURAGES them to give priority to reviewing their legislation, policies and incentives directly or indirectly related to High Andean wetlands and to prepare additional national strategies designed to ensure their wise use and conservation, duly integrated into their National Wetland Policies, National Biodiversity Strategies, National Development Plans, and other similar instruments;
15. REQUESTS the Ramsar Bureau, with the support of the Standing Committee, to propose a joint strategy for the conservation and sustainable use of High Andean ecosystems involving the Ramsar Convention and other related conventions and initiatives;
16. ALSO REQUESTS the Ramsar Bureau, in cooperation with the concerned Parties, to seek the support of already-established working groups related to these ecosystems, such as the International Working Group on Páramos (Grupo Páramo) and the High Andes

Flamingos Conservation Group (GCFA), as agents for coordination and technical support for promoting the synergies sought in the previous paragraph;

17. INVITES the Ramsar International Organization Partners – BirdLife International, IUCN, Wetlands International, and WWF – as well as other partners and collaborators of the Ramsar Convention, to support the Contracting Parties in the design and implementation of joint activities for the conservation and sustainable management of the High Andean wetlands;
18. INVITES those Contracting Parties from other continents with mountain ecosystems similar to those of the High Andean region to share information and experiences on the management, conservation and sustainable use of these important ecosystems;
19. ALSO INVITES the Contracting Parties to develop planning mechanisms to improve the practices related to the wise use of water in high altitude environments;
20. REQUESTS the Contracting Parties to undertake the necessary measures to get to know, assess and recover for present use all ancestral practices of indigenous peoples that are compatible with environment protection; and
21. URGES the Contracting Parties concerned to identify additional High Andean wetlands in their countries for inclusion in the List of Wetlands of International Importance.

"Wetlands: water, life and culture"

**8th Meeting of the Conference of the Contracting Parties to
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Valencia, Spain, 18-26 November 2002

Resolution VIII.40

Guidelines for rendering the use of groundwater compatible with the conservation of wetlands

1. RECOGNIZING the importance of the whole water cycle and the link existing between ground and surface water for their use and management, not only in arid and semi-arid regions but also in humid regions;
2. TAKING INTO ACCOUNT the urgent need to decrease the loss and degradation of aquatic ecosystems through policies of sustainable development and conservation of biodiversity;
3. ALSO TAKING INTO ACCOUNT that maintenance of the ecological integrity of most wetlands, especially those located in arid and semi-arid zones, is closely linked to the supply of groundwater;
4. AWARE of the importance that the use of groundwater has had for the economic development and improvement of welfare in many regions (mainly because of irrigated agriculture);
5. EQUALLY AWARE of the negative impact that can be caused to wetlands because of uncontrolled development and lack of planning for groundwater; and RECOGNIZING the value of the *Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands*, adopted in Resolution VIII.1;
6. EMPHASIZING that examples of the solution of conflicts between the use of groundwater and conservation of wetlands (for example, in the Mediterranean basin) can serve as exportable models for other areas facing the same problems;
7. RECALLING that the Strategic Plan 1997-2002 of the Convention (Operative Objective 2.2) stresses the conservation of water and the need to protect wetlands dependent upon groundwater;
8. TAKING INTO ACCOUNT that on occasions some regions suffer from inefficient management and regulation in the use of groundwater;
9. AWARE of the difficulties of rendering the interests of the users (primarily farmers) compatible with conservation criteria for those areas, due to the fact that environmental problems are not taken into account;
10. RECOGNIZING that many of these conflicts may be stimulated by certain subsidies for agriculture and other types of economic incentives, including for tourism; and

11. STRESSING that the analysis of these issues and the solution of conflicts require a completely transparent environment, scientific rigour and, above all, participation of all actors involved in the management and use of water resources;

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12. URGES the Contracting Parties to study the impact of the use of groundwater on the conservation of their wetlands in those territories where these conflicts exist;
13. RECOMMENDS that this analysis be carried out from an interdisciplinary point of view and with the participation of civil society;
14. INVITES Contracting Parties to review their respective programmes of subsidies in order to ensure that they do not have negative consequences for the conservation of wetlands;
15. ENCOURAGES Contracting Parties to continue their efforts aimed at implementing existing provisions in this field; REQUESTS the Ramsar Bureau to support these efforts as much as possible; and PROPOSES that the Scientific and Technical Review Panel advance in the study of the interaction between groundwater and wetlands, as requested in Resolution VIII.1, paragraph 19, and to develop guidance on the sustainable use of groundwater resources to maintain wetland ecosystem functions for discussion at COP9, in line with Action 3.4.7 of the Convention's Strategic Plan 2003-2008;
16. URGES the promotion of initiatives, supported by both the public and private sectors, for the participation of civil society in the management of groundwater, within the framework of integrated management of water resources;
17. ALSO ENCOURAGES recognition of the importance of the associations of users for the management of groundwater, and the creation of such associations where they do not exist, and the dedication of efforts towards the objective that these associations contribute to the sustainable development of this resource in order to make possible the efficient use of groundwater and the conservation of wetlands;
18. URGES public institutions to ensure that a more decisive effort is made, within the framework of wetland-related education, communication and public awareness (CEPA) activities, with regard to groundwater, placing emphasis on its hydro-geological, social, economic and environmental aspects; and
19. INVITES Parties to give more attention to the role of groundwater in maintaining the ecological functions of wetlands, in line with Operational Objective 3.4 of the Convention's Strategic Plan 2003-2008.

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Resolution VIII.41

Establishment of a Regional Ramsar Centre for Training and Research on Wetlands in Western and Central Asia

1. AWARE of the importance of training and research as a means of increasing the capacity of Contracting Parties to improve their implementation of the Convention;
2. RECALLING that the Convention was agreed on 2 February 1971 in the city of Ramsar, in the Islamic Republic of Iran;
3. ALSO RECALLING that through Article 4.5 of the Convention, the Contracting Parties “shall promote the training of personnel competent in the fields of wetland research, management and wardening”;
4. FURTHER RECALLING that Recommendation 6.5 urged Contracting Parties to establish wetland manager training programmes, that Recommendation 6.6 called for the establishment of regionally-based Ramsar liaison officers, and that Actions 4.2.3 and 4.2.4 of the Convention’s Strategic Plan 1997-2002 called for the development of new training activities and provision of opportunities for manager training;
5. NOTING that Wetlands International is developing a “Ramsar Wetland Training Service” designed to provide support to Contracting Parties in their implementation of Operational Objective 20.1 of the Convention’s Strategic Plan 2003-2008 adopted by this meeting; and
6. AWARE that the Ramsar Subregional Meeting for West and Central Asia, hosted by the Islamic Republic of Iran on 2-5 February 2002, recognized the special needs of the countries in the region in terms of training and research to meet the major challenges, including drought and other natural disasters, which have caused serious adverse impacts on wetlands and their dependent species, including waterbirds, as acknowledged in Resolution VIII.35 adopted by this meeting, and that establishing mechanisms for cooperation and coordination will play a significant role in assisting Contracting Parties in West and Central Asia to fulfil the objectives of the Strategic Plan 2003-2008 of the Convention;

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7. WELCOMES the offer of the Government of the Islamic Republic of Iran to establish a Regional Centre for Training and Research on Wetlands in Western and Central Asia, in the city of Ramsar, and its intention to develop this Regional Centre, and EXPRESSES its approval for this initiative;

8. ENCOURAGES the Government of the Islamic Republic of Iran to continue the process of planning and establishing the Regional Centre, and FURTHER ENCOURAGES Contracting Parties in West and Central Asia, other interested Contracting Parties, as well as the relevant intergovernmental and non-governmental organizations, to advise and contribute to its further development;
9. REQUESTS the Ramsar Bureau, the Convention's International Organization Partners (IOPs), and others to assist and advise the Government of the Islamic Republic of Iran in the technical and operational aspects of the development and establishment of the Regional Centre, and in its management once established;
10. URGES the Islamic Republic of Iran to ensure that the programme of training and research developed for the Regional Centre focuses, in particular, on addressing the major challenges for wetland conservation and wise use in Western and Central Asia, including drought and other natural disasters, which have caused serious adverse impacts on wetlands and their dependent species, including waterbirds; and
11. ENCOURAGES the Contracting Parties, particularly the Parties in the region, donor countries, and relevant interested NGOs to contribute financial support for the establishment of the Regional Centre, in recognition of its potential for acting as a locus for training and exchange of expertise, cooperation, and other related activities in the region.

“Wetlands: water, life, and culture”

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Valencia, Spain, 18-26 November 2002

Resolution VIII.42

Small Island Developing States in the Oceania Region

1. RECALLING Recommendation 6.18 relating to the conservation and wise use of wetlands in the Pacific Islands region, and in particular its reference to the need for increased assistance for countries within this region;
2. ALSO RECALLING Recommendation 7.2, in which the Contracting Parties requested the Ramsar Bureau to “investigate and develop, as appropriate, Memoranda of Cooperation and joint plans of actions with the established programmes and organizations that are facilitating integrated environment management in the Small Island Developing States” and strongly urged Contracting Parties, International Organization Partners, and the Ramsar Bureau to strengthen their efforts to establish and maintain regional Ramsar liaison officers;
3. FURTHER RECALLING Recommendation 7.2, in which the Parties instructed the Ramsar Bureau to continue to promote the harmonised implementation of international environment conventions in order to assist in addressing resource constraints faced by Small Island Developing States;
4. APPLAUDING the establishment of a Memorandum of Cooperation (MOC) between the Ramsar Bureau and the South Pacific Regional Environment Program (SPREP) in May 2002 as a basis for continuing support by SPREP and increased support from the Bureau to the countries and territories in the region, and also the development of a Joint Work Plan to give early and practical effect to the MOC;
5. ACKNOWLEDGING the progress made since the first Ramsar Oceania Regional Meeting (1998) in the implementation of the Ramsar Convention and the conservation and sustainable use of wetlands in the region and, in particular, APPLAUDING the appointment of a Regional Wetlands Management Officer in SPREP; the appointment of a Ramsar Support Officer in the Department of Environment and Conservation in Papua New Guinea; and the establishment of the Asia-Pacific Wetland Managers Training Programme by Australia;
6. NOTING General Objective 1 of the Strategic Plan 1997-2002, which states that “a special effort will be made to encourage Small Island Developing States to join [the Convention] in recognition of their special needs and significant wetlands, including coral reefs, sea-grass beds and mangroves”, and AWARE of the particular importance of these wetland types in the Oceania Region;
7. ALSO AWARE that within Oceania there are currently three Contracting Parties to the Convention (Australia, New Zealand, and Papua New Guinea); two countries that are in

the process of depositing their instruments of accession (Republic of Palau and the Independent State of Samoa); six dependent territories of Contracting Parties from other Ramsar regions; and 19 non-Contracting Parties; and ALSO AWARE that a number of non-Parties in the region are actively preparing for accession to the Convention;

8. CONGRATULATING the Government of Australia, Wetlands International-Oceania, and WWF International for their efforts in mobilising donor support to promote accession to the Ramsar Convention and in providing technical and training support to Small Island Developing States of Oceania;
9. CONSCIOUS of the interdependence of people, their cultures and their livelihoods with the wetlands in the region, and RECOGNIZING the importance of customary and other relevant land tenure systems affecting wetlands and their resources in the region;
10. ACKNOWLEDGING the continuing support and assistance provided to the Small Island Developing States in the region by bilateral and multilateral donors for integrated environmental management, and the important role which regional organizations such as SPREP play in facilitating these activities; and
11. THANKING the Government of the Independent State of Samoa and SPREP for hosting the second Ramsar Oceania Regional Meeting in May 2002, the Government of Australia for financing the meeting, and the Government of the United States of America for assisting delegates from its territories to attend the meeting;

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12. CALLS UPON the Ramsar Bureau, Contracting Parties, and International Organization Partners to note the key challenges and priority issues particular to the countries and territories of the Oceania region as expressed in the *Report of the Second Oceania Regional Meeting of the Ramsar Convention on Wetlands*, May 2002, which include:
 - degradation, loss and rehabilitation of particular wetland types such as mangroves, coral reefs, and coastal systems generally;
 - sustainable use of wetlands to meet the needs and aspirations of the Pacific island countries and territories;
 - the impacts of climate change and invasive species;
 - human pressures, especially those driven by the significant economic and social transformations occurring across the region, including pollution and development pressure;
 - the need for efforts at all levels of governments in the region to improve the attitude of people towards wetlands; and
 - threats to endangered species caused by wetlands habitat loss;
13. ENCOURAGES the Ramsar Bureau to take these issues into consideration in its dealings with the countries and territories of the Oceania region;
14. REQUESTS the Ramsar Bureau to be mindful of the small size and limited human and financial resources available to Pacific island countries and territories, to seek ways of simplifying and harmonising the activities and requirements of the Ramsar Convention,

and to continue actively to seek to harmonise the requirements of the Convention with all other environment-related international instruments;

15. URGES the Ramsar Bureau as a matter of priority, and as resources allow, to continue to work cooperatively with SPREP to implement the actions identified in their Joint Work Plan developed under their Memorandum of Cooperation;
16. STRONGLY URGES the Ramsar Bureau to recognize the need for a Regional Coordinator to be assigned to the Oceania Region and to review its working arrangements in order to formally assign this role to an officer of the Bureau by the time of the COP9, and, as an interim arrangement, to identify the resources to support a position of intern for the Oceania Region;
17. REQUESTS the Ramsar Bureau to publish and disseminate the recently prepared accession kit to assist countries in the Oceania region (and Small Island Developing States more generally) through their accession process;
18. CALLS UPON the bilateral and multilateral development assistance agencies to continue their support, and, as appropriate, to increase this support, for wetland-related projects in the Oceania region and to extend it to include capacity building activities; and
19. URGES the Governments of Australia and New Zealand, in cooperation with the Governments of France and the United States of America, to give careful consideration to supporting capacity building activities in the Oceania region, and in particular to working with the Ramsar Bureau, SPREP and other interested parties to develop a co-financing strategy to establish a regionally-based Coordinator post to provide support and help mobilise development assistance funds for developing states and dependent territories of Oceania to implement the Joint Work Program of the Ramsar Bureau and SPREP.

"Wetlands: water, life and culture"

**8th Meeting of the Conference of the Contracting Parties to
the Convention on Wetlands (Ramsar, Iran, 1971)**

Valencia, Spain, 18-26 November 2002

Resolution VIII.43

A subregional strategy of the Ramsar Convention for South America

1. RECALLING that Article 5 of the Convention stipulates that the Contracting Parties "shall endeavour to coordinate and support present and future policies and regulations concerning the conservation of wetlands";
2. TAKING INTO ACCOUNT General Objective 3 of the Strategic Plan 2003-2008 urges promotion of international cooperation and implementation of the *Guidelines for international cooperation under the Ramsar Convention*;
3. ALSO TAKING INTO ACCOUNT the conclusions of the first South American Regional Meeting (Buenos Aires, September 2001), at which the participating Contracting Parties decided to develop a subregional strategy for conservation and wise use of wetlands within the framework of the Convention for the countries in South America;
4. KEEPING IN MIND the support expressed for this proposal by the Contracting Parties at the second Pan-American Ramsar Meeting (Guayaquil, July 2002);
5. RECOGNIZING the importance of establishing practical initiatives that support effective implementation of the Convention and its instruments, such as the Strategic Plan and the various guidelines adopted by the Conference of the Parties; and
6. IN ACCORDANCE with the contents of Resolution VIII.30 on *Regional initiatives for the further implementation of the Convention*;

THE CONFERENCE OF THE CONTRACTING PARTIES

7. APPROVES the initiative of the Contracting Parties interested in developing a subregional strategy for the Ramsar Convention for South America;
8. URGES the Contracting Parties of that subregion to continue striving to develop this strategy, involving the participation of Ramsar National Committees or equivalent bodies in each country in both the design and implementation phases, within the spirit of Resolution VIII.30 on *Regional initiatives for the further implementation of the Convention* and following the guidelines annexed to that resolution;
9. REQUESTS the Ramsar Bureau and the Scientific and Technical Review Panel (STRP) to provide their support for implementation of this initiative; and

10. ENCOURAGES the Contracting Parties and the International Organization Partners of the Convention and international cooperation agencies to provide support for implementation of this subregional strategy.

Wetlands: water, life, and culture"
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Resolution VIII.44

New Partnership for Africa's Development (NEPAD) and implementation of the Ramsar Convention in Africa

1. ACKNOWLEDGING the adoption of the New Partnership for Africa's Development (NEPAD) by the African Union in 2002 as the programme for sustainable social and economic development in Africa;
2. RECALLING that the international community, in the Plan of Implementation of the World Summit on Sustainable Development (WSSD) (September 2002), welcomed and supported the implementation of NEPAD as a regional programme for advancing sustainable development in Africa;
3. APPRECIATING the inclusion of wetland conservation and wise use as a thematic area under the Environment Initiative of NEPAD;
4. WELCOMING the workshop convened in Valencia on 17 November 2002 prior to the 8th Meeting of the Conference of the Parties by the Ramsar Bureau and the United Nations Environment Programme (UNEP) on further developing the Plan of Action to implement Africa's Wetland Management Strategy under the Environment Initiative of NEPAD;
5. NOTING the decisions of the African subregional preparatory meetings for COP8 on the need to strengthen the regional implementation of the Ramsar Convention in Africa; and
6. RECOGNIZING the convergence of the objectives of the Convention and NEPAD with respect to the conservation and wise use of wetlands as a means to achieving sustainable development, and the potential of the two to be mutually reinforcing;

THE CONFERENCE OF THE CONTRACTING PARTIES

7. URGES Contracting Parties to provide support for the implementation of actions undertaken through the Environment Initiative of NEPAD;
8. URGES Contracting Parties in the African region to use NEPAD, AMCEN (African Ministerial Conference on Environment) and AMCOW (African Ministerial Conference on Water) to advance the objectives of the Ramsar Convention, mindful of the need to adopt a multi-sectoral approach to the conservation and wise use of wetlands;
9. FURTHER URGES Contracting Parties to pay specific attention to the development and implementation of initiatives with transboundary elements, particularly where these refer to shared river and lake basins, shared wetlands, migratory species and technology transfer;

10. CALLS upon the NEPAD development partners to provide support to African Contracting Parties in the implementation of the Ramsar Strategic Plan, including its communication, education and public awareness (CEPA) component, which is considered an important tool for realising the goals of NEPAD; and
11. DIRECTS the Ramsar Bureau to develop synergies between the implementation of the Convention and NEPAD in Africa.

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Resolution VIII.45

Operation of the Conference of the Contracting Parties and the effectiveness of Ramsar Convention Resolutions and Recommendations

1. RECALLING General Objective 8 of the Strategic Plan 1997-2002 of the Convention, which states that “the operation of the Conference of the Parties and of Ramsar subsidiary bodies and mechanisms . . . will be kept under review to ensure that they function as effectively as possible”, that “resources will be sought to guarantee the efficient operation of these mechanisms”, and that “new mechanisms may be required at international and at national level to promote more effective implementation of the Convention”;
2. ALSO MINDFUL of Action 8.1.1 of the Strategic Plan 1997-2002, which directs the following: “Reorganise, as of the 7th COP (1999), the meeting into a business session, focusing upon administrative matters, and a technical session, focusing upon wetland conservation and wise use priorities, with smaller working groups as required”;
3. AWARE that the growth in the number of Contracting Parties, expansion of the issues addressed by the Scientific and Technical Review Panel (STRP), and the mainstreaming of wetland conservation and wise use into a range of sectors has re-emphasized the need to streamline the operations of the Conference of the Parties;
4. RECOGNIZING that 121 Resolutions and Recommendations have been adopted by COPs 6, 7 and 8;
5. CONSCIOUS AND CONCERNED that the efforts of drafting, considering and adopting these Resolutions and Recommendations require deliberate and differing actions, time and significant cost to the Contracting Parties, the STRP, Standing Committee and the Ramsar Bureau;
6. RECOGNIZING the importance of the regional networks and regional debate fora in the Ramsar context, prior to the hosting of meetings of Conference of the Contracting Parties, in advancing discussions and, thus, facilitating consensus;
7. AWARE that Resolutions deal with different subjects, which can be broadly categorised as technical, administrative, or concerning interpretation of the Convention;
8. ALSO CONSCIOUS that to date there has been no global review to ascertain the utility and effectiveness of these COP decisions; and

9. AWARE of the need to optimise the use of time during COPs, and CONSCIOUS of the relevance that procedural aspects have in this regard;

THE CONFERENCE OF CONTRACTING PARTIES

10. DIRECTS the Standing Committee to undertake, as one of its highest priorities, a general review of the effectiveness of the process of drafting, considering, adopting and implementing Resolutions and Recommendations adopted by the Sixth, Seventh, and Eighth Meetings of the Conference of the Parties;
11. DIRECTS that this review focus on the effectiveness and efficiency of the Convention, from a broad perspective rather than on a country by country basis;
12. DIRECTS the Standing Committee, based upon this review of the effectiveness and efficiency of the process of drafting, considering, adopting and implementing Resolutions and Recommendations, to prepare and circulate to Parties in a timely manner a report and recommendations on this matter, including possible amendments to the Rules of Procedure, to be considered at COP9;
13. AGREES that for COP9, draft Resolutions should be considered for division by the Standing Committee into two categories, including:
 - a) draft technical resolutions, providing technical guidance for the implementation of the Convention; and
 - b) other draft resolutions, including on, *inter alia*, administrative, procedural, and policy issues.
14. DIRECTS the Standing Committee to identify, as a high priority, those technical tasks included in the Work Plan of the STRP which could lead to draft technical resolutions to be considered at the next COP;
15. AGREES that those draft technical resolutions should be:
 - a) drafted by the STRP;
 - b) provided to STRP national focal points with a minimum of 60 days to comment;
 - c) developed to allow time for networking among Parties during consideration;
 - d) reviewed by the STRP for endorsement by the Standing Committee after preparation; and
 - e) sent to COP for endorsement and final approval.
16. ENCOURAGES the Contracting Parties to submit draft technical resolutions and other draft resolutions to the Standing Committee before their consideration at the COP;
17. ALSO ENCOURAGES Contracting Parties to submit proposals for draft technical resolutions, as referred to in paragraph 15 above, to the Bureau at least 120 days before the commencement of the COP, noting that nothing in this Resolution will prejudice the right of any Contracting Party to submit any proposals according to the Rules of Procedure;
18. REQUESTS the Standing Committee to analyse, report and provide recommendations on possibilities to improve the efficiency of the meetings of the Conference of the Parties; and

19. RECOMMENDS that in preparing the agenda and programme for future COPs the Standing Committee, host country and Bureau endeavour to maximise the wise use of time on the agreed agenda for Convention business, including reports previously circulated as conference documents.

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Resolution VIII.46

Thanks to the people and governments of Spain

1. AWARE the generous support provided by the Spanish authorities at all levels for the 8th Meeting of the Conference of the Contracting Parties;
2. GRATEFUL for the thorough and comprehensive preparations that they have made, in the physical facilities, the reliable and modern services provided to the secretariat and the participants, and the other events which have so enriched the experience of the delegates;
3. PAYING PARTICULAR TRIBUTE to the Autonomous Community of Valencia and the Municipality of Valencia for their extraordinary hospitality and the warmth with which they and the people of the city have welcomed the participants;
4. MINDFUL of the enormous amount of work that has been done by the Spanish staff and volunteers, who have made the events of the largest and most complicated of all the meetings of the Ramsar COP proceed with efficiency, speed, reliability, warmth and good humor; and
5. REGRETTING the accident involving the *Prestige* oil tanker and the resultant oil spill that has recently occurred off the northwest coast of Spain and EXPRESSING concern at the negative effects on marine and coastal ecosystems as well as the local populations dependent upon them for their livelihood;

THE CONFERENCE OF THE CONTRACTING PARTIES

6. RECORDS its thanks and appreciation to its Spanish hosts, in particular the Ministry of Environment, the Autonomous Community of Valencia, the Municipality of Valencia, the authorities of the Museo de la Ciencias Príncipe Felipe, and the Spanish non-governmental organizations;
7. ACKNOWLEDGES the significance of the financial contributions made by the Government of Spain towards the organization of the 8th Meeting of the Conference of the Parties;
8. RECORDS its appreciation to the other Contracting Parties and organizations which have contributed materially to assisting delegates from developing countries and countries in transition to participate in COP8;
9. EXPRESSES its solidarity with the Kingdom of Spain and its deep concern over the serious consequences of the accident of the *Prestige* oil tanker, especially the potential damage to the ecological character of the Ramsar sites and wetlands of the Atlantic coast;

particularly the coast of Galicia, as well as the severe repercussions on local populations whose livelihood depends on the sustainable use of its natural resources;

10. ENCOURAGES the actions currently being undertaken on an urgent basis by the different administrations, countries of the area, NGOs and volunteers to control the spill and its effects on the area; and
11. EXPRESSES the expectation that competent International Organizations and States will adopt the relevant measures to avoid the repetition of this type of disaster in the future.