

Message from the 1st Asia Parks Congress to the IUCN World Parks Congress, Sydney 2014

The 1st Asia Parks Congress (APC) was convened in Sendai, Japan from 13th to 17th November, 2013. The APC was an ambitious undertaking developed in partnership between IUCN, its World Commission on Protected Areas and the Government of Japan who provided leadership and generous financial support in staging the Congress. The APC was a hugely successful and ground-breaking event which brought together, for the first time, the protected area community from across the entire Asia Region. About 800 participants from international organisations, central and local governments, NGOs, academia and donors gathered from 22 countries across Asia to celebrate, share rich experiences and debate challenging issues across a range of common concerns for protected areas. Together the participants worked to review the status of protected areas in the region and to chart a course for the future: one which will ensure a central role for these areas as foundations of Asia's future growth and development. These aspects were reflected in the APC's aspirational statement:

“The Asia Parks Congress aims, for the first time, to connect protected area practitioners with the wider community to share experience, learn from each other and together respond to the challenges and opportunities of the 21st Century.”

The timing of the Congress creates a deliberate opportunity to feed Asia's perspectives into the IUCN World Parks Congress (WPC) being held in Sydney, Australia in November, 2014 and to other protected area gatherings on the international calendar. The Asian Development Bank forecasts that if the current trends continue Asia will see by 2050 a six-fold increase in per capita income and approximately 3 billion additional people considered affluent by today's standards¹. The APC participants hold a common view that the increasing global influence exerted by Asia across many spheres, the so called Asian Century, will also profoundly influence the future for protected areas worldwide. The challenges and opportunities for protected areas in Asia are similar to many other parts of the world and the APC participants hope that Asian perspectives can help to shape the critical deliberations and global directions that will emerge from the 2014 WPC. It is self-evident then that the crucial voice of Asia is heard at the world's seminal event for protected areas. Furthermore that this voice is heard more widely through influencing other multilateral environmental agreements like the Convention on Biological Diversity, World Heritage Convention, the Ramsar Convention and UNESCO Man and the Biosphere Programme and that Asia's priorities are reflected in the strategic directions taken by donors and key global financing instruments for biodiversity such as the Global Environment Facility.

The APC participants collectively believe that a regional approach to tackling protected area issues is the best way forward. A regionally tailored approach recognises common philosophies and cultural traits at an appropriate scale and then translates global directions and best practice in a way that does not undermine important global principles yet is meaningful to regional stakeholders and sensitive to cultural ethos and practices.

The theme of the APC was “*Parks Connect*” a flexible yet unifying concept of the connections which link protected areas at many different levels: across biophysical land and seascapes; across sectors; across social and cultural diversity; across the generations; and across many partners. The Congress was structured around six working groups each addressing specific topics:

1. Natural Disasters and Protected Areas
2. Tourism and Environmental Education in Protected Areas
3. Culture/Traditions and Protected Areas
4. Collaborative Management of Protected Areas
5. International Collaboration for Protected Areas
6. Biodiversity and Protected Areas

Each of the working groups has developed policy and management guidance centred on an issue of common relevance to Asia. The guidance derives from the Asian context and is founded on best practice approaches. As such it is a valuable resource that will benefit audiences both within and outside of the Asia Region. This message from the APC is directed specifically at the next WPC and is mindful of the thematic structure of the Congress which links well with the APC structure above, albeit in a number of integrated and cross cutting ways. The eight WPC Streams include:

1. Reaching Conservation Goals
2. Responding to Climate Change
3. Improving Health and Well Being
4. Supporting Human Life
5. Reconciling Development Challenges
6. Enhancing Quality and Diversity of Governance
7. Respecting Indigenous and Traditional Knowledge and Culture
8. Inspiring a New Generation

In light of the above, we the PARTICIPANTS of the 1st Asia Parks Congress commend the following best practice protected area policy and management guidance to the global protected area community, being those international organizations, governments, NGOs, CBOs, academic institutions, businesses and donors who influence directly and indirectly the future of protected areas. This message to the 2014 IUCN World Parks Congress seeks to:

1. Reinforce that these issues which stem from the Asian context represent a number of priority and common concerns facing protected areas across the region and indeed the world. We therefore urge WPC organizers, the Australian host and stream/cross-cutting theme leaders to factor these issues into WPC planning, deliberations and outcomes;
2. Willingly offer the Asia Region's experience, expertise and traditional knowledge to share learning, explore options and develop collaborative partnerships and solutions to address these issues;
3. Encourage the global protected area community to advocate consistent policy on these issues in order to send clear messages to protected area decision-makers and to others in positions of influence so that the values of protected areas are taken into account more fully;
4. Encourage the global protected area community to adopt the issue-specific best practice guidance, as framed by the APC Working Groups, within global and regional protected area support programmes and strategies;
5. Call upon the global and Asian regional protected area communities to mobilise the necessary technical and financial resources to address these issues thereby strengthening national and site based capacity;
6. Call upon IUCN/WCPA through its members, expert networks and partners to coordinate the roll-out of a comprehensive, regionally tailored, implementation programme on these priority issues following the WPC; and
7. Encourage international and regional donors to prioritize investment in these issues of common concern to Asia and so support the best practice policy and management guidance relevant to each.

We the protected area community of Asia pledge our commitment to work closely with the WPC organisers, Australian hosts and stream leaders in furthering these aims. Asia has much to offer in support of the above including a unique protected area philosophy which seeks to harmonize spiritual values with nature and a wide range of socio-ecological approaches to managing protected areas in different cultural settings.

¹ ADB. (2012). *Asia 2050: Realizing the Asian Century*. Asian Development Bank, Manila, Philippines.

Protected areas, natural hazards and disaster recovery

Message from WG1 on Natural Disasters and Protected Areas

The number of people affected by disasters is increasing. Almost half the world's population has lived through a disaster at some point in the past decade. Of those affected by disaster, it is now estimated that more people are affected by natural hazards than by warfare and conflict¹. Climate change and its impact on extreme weather patterns have focused much attention on the increasing frequency and severity of disaster caused by natural hazards. The number of geophysical disasters: earthquakes, tsunamis and volcanic eruptions have remained steady, however, the number of climate-related disasters: including droughts, windstorms and floods is increasing steadily. Floods, hurricanes and droughts have increased dramatically over the last 20 years. From 1987 to 1998, the average number of climate-related disasters was 195. From 2000 to 2006, the average was 365, representing an increase of 87 per cent. Today, more than 70 per cent of disasters are related to changing weather.²

UNISDR, the United Nations Office for Disaster Risk, is the focal point in the UN system for disaster risk reduction. Established as the Secretariat of the International Strategy for Disaster Reduction in 1999, UNISDR is also tasked to coordinate the implementation of the 'Hyogo Framework for Action 2005-15', the international blueprint on disaster risk reduction.³

A disaster may be defined as *"a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceeds the ability of the affected community or society to cope using its own resources"* or put more simply *"aspects of the physical world that have the potential to cause considerable harm to people."* UNISDR note that, strictly speaking there is no such thing as a natural disaster, but there are natural hazards such as cyclones and earthquakes....a disaster takes place when a community is affected by a hazard...in other words the impact of the disaster is determined by the extent of the community's vulnerability to the hazard.⁴

Natural hazards may be classified into six types: biological, geophysical, meteorological, hydrological, climatological and extra-terrestrial. For the purposes of this guidance on best practice protected area policy and management the focus is on those disasters most common in Asia and most commonly associated with protected areas: earthquakes; volcanic eruptions; land and mudslides; floods; glacial lake outbursts; tsunamis; fire; drought and desertification; storm events including typhoons and storm surges in coastal areas; and extreme weather events in high mountains.

Asia as a region has a relatively high number of developing nations. The region's densely populated lowlands, coasts and cities makes it a highly hazard prone environment. UNESCAP's 2013 report on Asia-Pacific resilience to natural disaster states that *"Asia and the Pacific is the most disaster-prone region of the world. Almost two million people were killed by disasters in the region between 1970 and 2011, representing 75 per cent of global disaster fatalities. A person living in Asia and the Pacific is four times more likely to be affected by (natural) disasters than someone living in Africa, and 25 times more likely than someone living in Europe or North America. In 2011 alone, economic damages and losses from disasters in the region totalled more than \$293 billion."*⁵ Exposure to natural hazards and the damage caused by disasters has become more serious and intense in Asia due to population growth, urbanization of river courses and coastal areas, and the concentration of land use in areas at high risk of disaster.

There has been a steadily growing awareness backed by mounting evidence that protected areas provide a very wide spectrum of values and benefits to nature and society. These values and benefits have always been there but, in the past, known only to a few and/or not well documented or widely accepted. The WWF and IUCN Arguments for Protection Series⁶ commencing in 2000, assembled a significant body of information on the benefits of protected natural ecosystems and offered compelling evidence that such protection is a justified, cost effective and efficient way of delivering many social, cultural and biological services. It is clear that protected areas play a significant role in human health, water supply, recreation, food security, climate stabilization and disaster mitigation.⁷ With respect to disaster risk reduction the UNISDR acknowledge that “*ecosystem management is a vital component of disaster risk reduction, a management regime to which protected areas can clearly contribute.*”⁸

Disaster Risk Reduction for protected areas: disaster impacts/implications for protected areas themselves

Natural hazards have a direct impact on protected areas themselves. In addition to physical damage during the disaster, degradation from post disaster operations such as debris disposal, overexploitation of services, temporary shelter establishment and spread of invasive species that may have been transferred in relief operations also threaten protected areas. Such factors affect the ecosystem services provided by protected areas which may be critical in assisting communities to recover from the event. Therefore, such areas need disaster risk reduction planning and strategizing to reduce impacts on the area during and after the disaster. Ill prepared protected areas will have less resilience to disasters and likely fail to fulfil their potential to assist in post-disaster recovery efforts.

Disaster Risk Reduction for people, communities and livelihoods: protected areas as buffers against natural hazards

By their very nature, protected areas control land use and provide tenure stability in rapidly changing landscapes. Therefore, properly planned, established and well managed protected areas have proven to be one of the most effective tools we have to maintain natural systems that can shield communities from severe impact. The World Disasters Report, 2012 concludes that the Philippines could shield up to 20 million of its people—about a fifth of its total population—from disasters by improving the protection of its coral reefs, a primary line of defence against coastal hazards, including tsunamis.⁹

Disaster Recovery: role of protected areas in post disaster rehabilitation

As evident from the 2004 Indian Ocean Tsunami and the 2011 Great East Japan Earthquake protected areas can become an important tool in post disaster reconstruction and healing processes. The Sanriku Fukko Reconstruction National Park initiative in Japan is an example of a specific response using protected areas to aid in the post disaster healing process for both nature and humans. The initiative culminating in 2013 brings together several protected areas in the disaster affected area in cooperation with agricultural, forestry and fisheries interests. This so called “Green Reconstruction” is consistent with Japan’s interconnected forests, rivers and sea philosophy known as Satoyama¹⁰.

Therefore, PARTICIPANTS in the Working Group on Natural Disasters and Protected Areas at the 1st Asia Parks Congress, in Sendai, Japan (14- 17 November, 2013) commend to those international organizations, governments, NGOs, CBOs, academic institutions, businesses and donors who influence directly and indirectly the future of protected areas the following set of best practice protected area policy and management approaches:

Disaster risk reduction and disaster management authorities should recognise, promote and help preserve the contribution of protected areas in all phases of the disaster management cycle (such as risk assessment, risk reduction, relief and reconstruction). Furthermore, protected areas authorities need to establish sound risk management strategies that help preserve the protected area during and after a disaster, and in doing so strengthen its role in contributing to protecting lives and livelihoods. Protected area managers also need to recognise this critical role of protected areas in the planning, establishment and management of new areas.¹¹

Disaster Response: post disaster impacts/implications for PAs

1. Undertake effective and collaborative hazard assessment to identify the risks to protected areas from natural hazards present in the area.
2. Work at land and seascape scale to better understand the underlying factors that exacerbate the impacts of disasters, which can also have dramatic impacts on protected areas. Efforts should be directed at working across sectors and jurisdictions to have a truly integrated approach for risk reduction, landuse planning, development and conservation.
3. Based on the above risk assessment prepare Protected Area Disaster Response Plans¹² that:
 - a) articulate integrated spatial and policy responses to relevant disaster scenarios. Consider issues such as the location and design of park infrastructure, communication and collaboration with stakeholders, interim protection following disasters, pre-emptive area closures; asset insurance, rebuilding of park facilities, ecological restoration, post disaster revenue implications etc;
 - b) ensure that protected area response strategies are consistent with overall management plans and are feasible to implement including identifying sources of emergency support in the form of human and financial resources and equipment;
 - c) develop emergency response plans to allow for rapid responses in times of crisis. Many calamities arrive suddenly and unexpectedly and may catch protected managers unaware;
 - d) ensure that where possible post-disaster relief is planned for so that protected areas can continue to function and be managed whilst explicitly accounting for the needs of affected people. Following the 2004 Indian Ocean tsunami many park management staff were killed or injured and park management infrastructure destroyed, leaving no capacity to manage the park in the immediate recovery phase and with no back-up plans to address this gap from elsewhere;
 - e) ensure, where possible, that post-disaster recovery efforts do not irreversibly impact on key protected area values. For example following the 2004 Indian Ocean tsunami significant aid arrived to support recovery efforts in and around Laemson National park, Thailand. While this support was welcomed, an increased number of fishing boats was provided by aid relief agencies, which had a longer term negative impact on the governance and viability of fisheries in the area and their capacity to sustain livelihoods.
 - f) Allocate/invest adequate resources to consistently monitor and adapt strategies according to changing circumstances.

4. Adopt IUCN principles of good protected area governance (legitimacy and voice; direction; performance; accountability; and fairness and rights)¹³ when preparing disaster response plans and in executing these. The links between protected areas and people will be thoroughly tested during disaster response. Collaborative approaches are essential as response roles will be shared by multiple institutions.
5. Implement awareness raising, capacity building/training, educational and research programmes on disaster risk reduction in protected areas.
6. Ensure that recovery plans are in harmony with both culture and nature.
7. Involve local communities especially green NGOs in the planning of disaster recovery plans.

Disaster Risk Reduction: PAs as buffers against disasters

1. Invest in protected areas as part of disaster prevention/mitigation strategies. Whilst billions of dollars are spent on post disaster rehabilitation relatively little is spent on disaster prevention. Studies have shown that a \$1 investment in risk reduction can save between \$2 and \$10 in disaster response and recovery costs.⁷
2. Recognize and promote the fundamental role that intact forest and coastal vegetation cover plays in reducing disaster risk. Both the area and quality of forest cover are important to moderate impact.
3. Recognize and support the critical role that protected areas can play in mitigating or buffering impact from the following disasters:⁶
 - a) Flooding. Use of protected area systems to disperse floodwaters and maintain natural flooding regimes. For example floodplains act as natural overflow systems; integrated water basin management (IWBM) can restore natural catchment function. In addition the retention of natural forest cover, riparian and coastal estuarine ecosystems can mitigate against flood impacts.
 - b) Landslides, mudslides, avalanches and rock falls. Protected areas which maintain vegetated slopes can assist in stabilizing soil thereby mitigating against these types of disasters. In high mountain systems underlying natural landforms often pack snow in a more stable way that can prevent slippage. Whilst prevailing geology, soils and climatic conditions are significant factors, the protection of vegetation cover can reduce the occurrences of slips and slow them when they do happen.
 - c) Storm surges and coastal erosion defence. Protected areas which conserve reefs, seagrasses, mangrove forests, and saltmarshes can help buffer and filter sudden incursions of seawater from cyclonic, typhoon and tsunami activity. Offshore reef systems act as natural wave energy dissipaters. Undisturbed offshore sand erosion and depositional processes can moderate the impact of extreme weather events.
 - d) Drought and desertification. Protected areas can also buffer the impacts of drought and desertification through alleviating grazing pressure on land, providing a reservoir of important stocks of drought resistant species, providing refugia for species under pressure in surrounding landscapes, acting as emergency food stores and/or by maintaining natural groundwater dynamics during times of pressure.

- e) Fire. Protected areas are often seen as the source of fires, however they can also buffer fires by retaining natural vegetation mosaics which moderate fire behaviour. Natural stocks of fire adapted species will also be replenished in protected areas with natural fire regimes which do not threaten human life and property. Sizable and well-designed protected areas also limit the interface threats to human settlements.
 - f) Glacial lake outbursts floods (GLOFs). Warming processes are triggering the widespread retreat of glaciers in the region's high mountain systems which have led to the formation and rapid growth of many glacial lakes which are vulnerable to outburst flooding causing immense flooding downstream.¹⁴ This downstream threat from GLOFs can be lessened to some extent by well-sited protected areas with the capacity to absorb floodwater surges and protect vulnerable communities. Transboundary protected area cooperation is often critical in forecasting and responding to downstream impacts and to early warning systems for communities.
4. Undertake a programme to build knowledge including actions such as:
- a) documenting information on the role of protected areas in past disaster events to catalyze policy and practice change;
 - b) investing in research to quantify the value of protected areas in disaster mitigation; and
 - c) collecting local knowledge and experience in tried and tested nature-based solutions to disaster risk reduction.
5. Work to reform policy and practice with respect to protected areas and disaster risk reduction including:
- a) building protected area manager capacities in enhancing the role of protected areas in disaster mitigation (risk assessments, hazard profiling, restoration etc);
 - b) foster capacity exchange between protected area managers, disaster risk managers, all levels of government and community interests to build better awareness and response;
 - c) work to integrate planning for protected areas with disaster risk reduction planning; and
 - d) promote stronger support for investment in integrated disaster risk reduction and protected area programmes.

Disaster Recovery: Role of PAs in post disaster rehabilitation

Invest in well managed protected area systems to restore natural infrastructure following a disaster. The tendency is to create hardened defence structures, often hard engineering solutions such as sea walls etc., against future disaster events instead of soft natural measures such as raising coastal forests. Natural infrastructure can be more effective in buffering future disasters and more cost effective than hard engineering solutions, especially in terms of maintenance and considering the many other benefits (such as livelihoods and recreational values) that natural infrastructure provide.

1. Commit to considering the re-introduction of green spaces that may have been destroyed or removed due to development before the disaster. While the impacts of a disaster can be devastating, it also provides a chance to 'build back better' and greener. It would be good to adopt ecological based rehabilitation and reconstruction (Eco-RR) approaches.

2. Engage full and informed community participation in post-disaster recovery programmes. The direct dependency of many local communities on natural resources strongly requires the use of protected areas as part of the recovery process. Many people in Asia have a long tradition and perception of protected areas as a source and succour in times of disaster. Community ownership and clear negotiated rights of access and benefit during critical times can also ensure that the protected area is not over-exploited in the recovery process.
3. Integrate protected areas into strategies that make people less vulnerable and more resilient to disaster. Protected areas can help individuals and communities better appreciate natural processes, removing the fear of disaster and helping them to quickly bounce back better than ever from impacts. Protected areas can make people aware of the blessings and threats of nature, a very important asset for the Asian pursuit of a life in harmony with nature.
4. Consider the therapeutic and healing role that exposure to nature can have in helping people recover from personal tragedy. Protected areas can be places of spiritual recovery and their perpetuity offers solace to communities which have been touched by disasters. Furthermore, protected areas also help nature heal itself. These areas act as the ecological foundations for broader scale recovery of natural systems that underpin livelihoods.

¹ Christian Aid (2007). *Human Tide: The Real Migration Crisis*. Christian Aid, London.

² Christian Aid: <http://www.christianaid.org.uk/emergencies/prevention/facts.aspx>. Accessed October 2013.

³ HFA (2005) UN framework supporting nations to address DRR: <http://www.unisdr.org/we/coordinate/hfa>. Accessed October 2013.

⁴ UNISDR (2004). *Living with Risk: a Global Review of Disaster Reduction Initiatives*. UNISDR, Geneva, Switzerland.

⁵ UNESCAP (2013) *Building Resilience to Natural Disasters and Major Economic Crises*. The Asia-Pacific Gateway for Disaster Risk Management and Development: <http://www.drrgateway.net/>

⁶ WWF/IUCN Arguments for Protection Series cover seven issues linking protected areas to: climate change, drinking water, food supplies, poverty reduction, disaster mitigation, faiths and human health:

http://wwf.panda.org/what_we_do/how_we_work/protected_areas/arguments_for_protection/

⁷ Stolton, S. and Dudley, N. (eds). (2010). *Arguments for protected areas: multiple benefits for conservation and use*. Earthscan London, UK

⁸ UNISDR (2009). *Global Assessment Report on Disaster Reduction*. UNISDR, Geneva, Switzerland.

⁹ IFRC (2012). *World Disasters Report 2012*. International Federation of Red Cross and Red Crescent Societies, Geneva, Switzerland
<https://www.ifrc.org/PageFiles/99703/1216800-WDR%202012-EN-LR.pdf>

¹⁰ Ministry of Environment, Japan (2012). *Green Reconstruction: Creating a new National Park*. Tokyo, Japan

¹¹ UNESCO (2007). *Strategy for Reducing Risks from Disasters at World Heritage Properties*. World Heritage Committee-07/31. COM/7.2. Paris France

¹² UNESCO, IUCN, ICOMOS, ICCROM (2010). *Managing Disaster Risks for World Heritage*. UNESCO, Paris, France.

¹³ Borrini-Feyerabend, G. et al. (2013) *Governance of Protected Areas - from understanding to action*. IUCN WCPA in press.

Tourism and Environmental Education as Drivers for Sustainable Management of Protected Areas

Message from WG2 on Tourism and Environmental Education

Tourism¹ within protected areas is inextricably linked in a global business partnership of significant economic proportions. Travel and tourism's direct contribution to world GDP and employment in 2012 was 2.1 trillion USD and 101 million jobs. These figures balloon out to 6.6 trillion USD and 260 million jobs representing 9% of global GDP when one considers the indirect economic contribution. A staggering 1 in 11 jobs worldwide are associated with the tourism sector which is forecast to grow at 4.4% p.a. over the next decade, a pace outstripping overall global economic growth.²

In percentage growth terms, Asia, Latin America and Sub-Saharan Africa were amongst the fastest growing destination markets in 2012. South East Asia (7.3%) was the fastest growing region in terms of travel and tourism's contribution to total GDP and half of the growth in total travel and tourism employment (4 million jobs) was in Asia alone. Three of the four top performing tourism economies in the world were in Asia – Korea, Indonesia and China.²

The World Travel & Tourism Council notes that *“Asia will continue to lead growth of the global Travel & Tourism industry over the next decade, with annual average growth of over 6%. Asia's growth will be driven by increasing wealth among its middle classes. This will impact on the wider global industry via increased destination competition but also create opportunities to grow outbound spending. Destinations within and outside Asia will need to be prepared to invest in infrastructure suitable for these new sources of demand to achieve the clear growth potential that exists”*².

The tourism sector is highly diversified, however, nature and culture based tourism in and around protected areas has continued to be a growth area. The above forecasts for Asian tourism growth both within and outside the region amply reflect increasing affluence, leisure time and mobility leading to greater visitor pressure on the Region's protected areas.³ Across Asia, efforts to promote tourism, especially ecotourism, have been actively made in protected areas as a means to support the livelihoods of neighboring residents.

Planning, accommodating, managing the impacts of and capturing the benefits from the use of protected areas by tourists and other visitors was a pervasive topic woven throughout virtually all discussions at the 2003 5th IUCN World Parks Congress (WPC). In acknowledging the widespread nature of the issue, tourism was treated as a cross-cutting issue at the WPC. Tourism aspects featured across all of the major WPC legacy outputs and a specific WPC Recommendation was adopted on the topic of tourism as a vehicle for conservation and support of protected areas⁴. In addition, the Convention on Biological Diversity (CBD) Programme of Work on Protected Areas notes the positive contribution that protected areas make to tourism and the opportunities that exist to enhance this.⁵

Education is the key to sustainable development and the world's citizens need to learn their way to sustainability. In response UNESCO suggested the concept of Education for Sustainable Development (ESD) which is an umbrella for many forms of education that already exist and a framework for new forms that remain to be created⁶. In the context of

ESD, Environmental Education (EE) is the main element in fostering an enabling environment for conservation in protected areas. Opportunities for authentic and experiential education increase knowledge, understanding and awareness of the importance of protected areas and the ecosystem services they provide. Effective EE promotes a sense of community pride, ownership and responsibility for natural resources and cultivates support and engagement for the conservation initiatives which are so important for shifting destructive behaviours to those that contribute to sustainability and effective management of protected areas. EE initiatives should include locally appropriate experiential ecological education for all sectors of civil society, and capacity development for protected areas managers and practitioners.

Properly planned and managed, tourism can bring a range of benefits to both conservation and local people. Well managed tourism brings direct financial benefits to protected areas and creates a supportive clientele who value and champion the worth of protected areas. There are several outstanding examples in Asia where local people are indeed deriving huge benefits from tourism in protected areas.

Poorly coordinated tourism can have disastrous consequences for protected areas with uncontrolled use pressures, unregulated tourism infrastructure development, poor marketing and poor visitor experiences all leading to a culture of exploitation rather than stewardship. In some cases opportunistic tourism activities may appear to be superficially benefiting local communities, however, without careful management these activities can deplete resources, adversely affect the cultural sensibilities of local communities and ultimately deliver only short lived benefits.

Many protected area site managers are suspicious of the tourism industry and understandably adopt defensive positions regarding the sector. Furthermore provincial and local tourism development aspirations can often ignore or override conservation considerations and the capacity of protected areas to deal with tourism use. These are familiar concerns in many areas of the world but nowhere more so than in Asia. The growth in protected area coverage across Asia has been impressive, however, many countries are struggling to find the resources to effectively manage these areas in the midst of competing priorities such as health, education, security and poverty alleviation. Increasingly governments are looking to tourism as a means to supplement or even replace scarce government funding. In Asia most protected areas are still heavily reliant on government funding and, with a few notable exceptions, tourism development has either not been optimised or benefits are not returned to the protected areas themselves.

Contemporary protected area practice calls for client focused protected area institutions and staff with new skill sets which allow them to engage with the tourism sector on an equal footing. Protected area policies, management and staff capacities need to improve to address issues such as:

- strategic policy and planning for tourism including park business planning;
- improved visitor management;
- improved interpretation, communication and awareness raising;
- better planned and environmentally sympathetic tourism infrastructure development;
- building stronger relationships with the tourism industry to establish healthy productive partnerships; and

- deepening the understanding of tourism benefits and how these can be equitably distributed to support *inter-alia* the welfare of local communities and so augment livelihoods.

In light of this, PARTICIPANTS in the Working Group on Tourism and Environmental Education in Protected Areas at the 1st Asia Parks Congress, in Sendai, Japan (14- 17 November, 2013) commend to those international organizations, governments, NGOs, CBOs, academic institutions, businesses and donors who influence directly and indirectly the future of protected areas the following set of best practice protected area policy and management approaches:

1. Respect that the paramount role of protected areas is to conserve nature with associated ecosystem service and cultural values as enshrined in the IUCN definition of a protected area⁷ and ensure that any tourism use is compatible with this role. Tourism strategies and programmes within and adjacent to protected areas should foster a culture of resource stewardship rather than exploitation.
2. Develop tourism strategies and business plans for protected areas in collaboration with relevant rightsholders and stakeholders and in the context of national, provincial and local development plans. Strategies and plans should recognize the wider spectrum of tourism opportunities outside of the protected areas themselves.
3. Seek to minimize the negative impacts and optimize the positive benefits of tourism in protected areas. This should include:
 - a) respecting the precautionary principle⁸ when considering the impacts of tourism development and use;
 - b) strictly adhering to environmental impact assessment processes (EIA), both the letter of the law and in spirit, to mitigate negative impacts and optimize positive impacts;
 - c) ensuring tourism infrastructure is designed and developed to be environmentally and culturally sensitive and where possible located outside of protected areas and/or environmentally sensitive core zones.
 - d) managing visitor demand and access particularly in heavily used protected areas using a combination of mechanisms such as carrying capacity or other tools to regulate visitor impact, physical access restrictions and zonings, market based tools, booking systems and innovative transport solutions; and
 - e) promoting conservation awareness through an array of park interpretation services.
4. Plan and manage carefully for access to and within protected areas. Evidence suggests that opening up remote areas and their resident communities to increased access can have profound impacts on protected areas.⁹
5. Promote the development and use of tourism industry guidelines, codes of conduct and charters to raise industry standards and compliance with environmental safeguards. This would promote a culture of stewardship as well as helping to regulate high visitation impacts. In highly sensitive areas visitor access should be only allowed if accompanied by a guide certified by the protected area authority.

6. Work with the tourism industry, relevant rightsholders and stakeholders to ensure that tourism benefits are equitably and appropriately distributed. In particular to ensure that:
 - a) tourism invests directly in the protection and management of protected areas which are the foundation assets of tourism businesses; and
 - b) tourism contributes to local economies and the livelihoods of local people through support to local businesses, local employment, local procurement of goods and services and fair and equitable partnerships with local people.
7. Build cooperative partnerships within communities and among stakeholders and bestow pride in their region and their identity through participatory tourism development. Support EE, especially for youth, in partnership with local people to develop authentic and creative tourism products/experiences which respect the natural and cultural values of the protected area.
8. Utilize more innovative use of Information Communication Technology (ICT) to enhance tourism experiences and EE. Efforts should concentrate on converting satisfied park visitors to become more informed supporters of protected areas.
9. Consider the quality of visitor experiences when planning protected areas and monitor their responses with appropriate indicator.
10. Invest in enhanced institutional and individual capacity to create client-focused and business-aware protected area institutions, staff, rightsholders and stakeholders thereby improving understanding between protected area and tourism sectors. Conversely sensitize the tourism sector to conservation issues to place the relationship on a more equal footing. Capacity investment should also target local communities who may not have the know-how and resources to develop quality tourism products and services in and around protected areas.
11. Ensure Governments not lose sight of their obligations to adequately staff and fund protected areas despite the increasing reliance on revenue generated from tourism and visitor use. Protected areas are established first and foremost for conservation and not as tourist attractions. It is imperative that governments continue to invest in protected areas for the benefit of society at large.
12. Invest in collaborative research and development on environmentally sustainable and ethical tourism including development of green infrastructure within and surrounding protected areas. Such research should focus on better understanding the links between tourism and conservation with findings appropriately integrated back into protected area and tourism policy and management.

¹ Tourism and park visitation are used interchangeably here to cover all visitors to protected areas.

² World Travel & Tourism Council. (2013) *Economic Impact of Travel & Tourism 2013 Annual Update: Summary*. http://www.wttc.org/site_media/uploads/downloads/Economic_Impact_of_TT_2013_Annual_Update_-_Summary.pdf. Accessed October 2013.

³ Bushell, R. & Eagles, P. (eds) (2007). *Tourism and Protected Areas: Benefits Beyond Boundaries*. CAB International, UK

⁴ IUCN. (2005). *Benefits Beyond Boundaries. Proceedings of the Vth IUCN World Parks Congress: WPC Recommendation 5.12*. IUCN, Gland, Switzerland and Cambridge, UK.

⁵ CBD. (2013) *CBD Programme of Work on Protected Areas*: - <http://www.cbd.int/protected/pow/learnmore/intro/>. Accessed October 2013.

⁶ UNESCO, (2013). *Education for Sustainable Development* - <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development/education-for-sustainable-development/>

⁷ Dudley, N. (ed.) (2008). *Guidelines for Applying IUCN Protected Area Categories*. Gland, Switzerland: IUCN.

⁸ *Precautionary Principle*: http://en.wikipedia.org/wiki/Precautionary_principle

⁹ Thomas, F. Kapoor, A., Marshall, P. (2012). *Tourism Development and behavioural changes: evidences from Ratanakiri Province, Kingdom of Cambodia*. *Journal of Tourism and Cultural Change*. Volume 11, Issue 3, 2013.¹ Borrini-Feyerabend, G. et al. (2013) *Governance of Protected Areas - from understanding to action*. IUCN Gland, Switzerland.

Recognizing the importance and role of traditional protected area systems

Message from WG3 on Culture / Traditions and Protected Areas

Long before governments institutionalised national parks or policies in defining areas worth protecting, societies including those in Asia were already conserving their natural resources and landscapes, based on the identification and protection of sacred natural sites and indigenous and communal territories. Communal and indigenous territories have been maintained through local rule making and governance system. Sacred Natural Sites were believed to be of spiritual and religious significance, based on the common belief that the physical and spiritual worlds were intersected by “spiritual landscapes”. These spiritual and physical landscapes have co-evolved traditionally and are considered to be the fundamental pre-conditions that led to the conservation of biodiversity in Sacred Natural Sites and indigenous territories. In many countries, sacred natural sites have been shown to have a major effect on conservation, ecology and environment due to the special precautions and restrictions associated with them.

In the Asian setting, nature and culture have been woven together naturally like a single tapestry which today embodied into the concept of cultural landscape. Essentially it endogenously features an eternal relationship between the natural environment, humans and their culture. More often than not, Asian traditions and beliefs have been shaped by indigenous and folk faiths such as animism and ancestor worship, and mainstream religions such as Hinduism, Buddhism, Islam and Christianity which are evident in Thailand, India, Indonesia and the Philippines.

Just like sacred natural sites, communities in Asia had ancient practices of conserving landscapes and seascapes for various purposes, including livelihoods, cultural importance, water security, ethical reasons, political security, and so on; these Indigenous Peoples’ and Community Conserved Territories and Areas (ICCAs) are still extremely widespread and represent a crucial contribution to the conservation of biodiversity and the livelihood security of tens of millions of people.

Communities across Asia have ancient traditions, and newer practices, of governing and managing landscapes and seascapes, ecosystems and biodiversity, in ways that help conserve them over a long term. Such ICCAs include community forests, locally managed marine areas, sustainable fishing sites, wildlife nesting and roosting sites, sustainable agroforestry landscapes, and many others. There are a variety of motivations and reasons for ICCAs, including securing waters suppliers, maintaining the sustainable supply of forest and aquatic resources crucial for livelihoods, food and other needs, maintaining links with cultural aspects of their lives, sustaining an ethical sense of responsibility towards other elements of nature, and securing territories and areas as part of political industry. Many of these sites are age-old, many are more recent as communities rediscover the importance of conservation. Across Asia also there is a renewed interest in securing rights to and responsibilities over such sites, to tackle the various threats they face.

We can recognise both of sacred natural sites and Traditional Ecological Knowledge (TEK) regardless of the legal status of the land. It means that these two are topic oriented sub themes. Each country, however, has legally-designated protected areas such as national park. Then we should consider legal status oriented sub themes: management of inside and outside the protected areas.

Sacred Natural Sites

In traditional societies, oral stories and myths, especially in relation to their surrounding natural environment, are handed down from generation to generation, which created the awareness and

recognition of the presence of sacred natural sites. These sacred natural sites are believed to contain 'numina' or spirits, deities or holy presence, which are highly respected and protected by the community even when they may not have legal jurisdiction over these site.

In the physical form, sacred natural sites may include forests, water bodies, caves, and vegetation within and its proximities. In addition, sacred natural sites have spiritual attributes according to a particular religion or belief system, or set aside for spiritual purposes which were arguably established by indigenous people, ethnic folk religions and spiritualities or mainstream religion co-optation. In essence, sacred natural places and spiritual landscapes have been created through traditional beliefs and taboos, and traditional societies in Asia believed that bad things would happen to them if such places are violated. Therefore, making the ecological richness of sacred areas worth conserving and protecting.

Utilization of Traditional Ecological Knowledge (TEK) in protected area management

Asia's traditional approaches or TEK are now considered as being compatible with contemporary (and scientific) approaches to resource management such as Adaptive Management. TEK is 'local knowledge' that is based on the endemic traditions, cultures or beliefs of a particular local community or residents. Traditional Ecological Knowledge is often seen as being local and holistic which integrates both the physical and spiritual worldviews with emphasis on the practical application of skills and knowledge.

Essentially, Asia's traditional systems and landscapes such as Satoyama (Japan), Tagal (Sabah, Malaysia), Subak (Bali, Indonesia), Tana' Ulen (Kalimantan, Indonesia) and Kattudel (Sri Lanka) resonate well with progress in other parts of the world in relation to complementing mainstream approaches with traditional ecological knowledge in essence, there is "extraordinary similarity of basic designs shared by different cultures in comparable ecosystems worldwide, coupled with remarkable diversity in practice even in adjacent areas".

Protected areas management and the livelihood of local people

The designation of protected areas affects various stakeholders, especially the local inhabitants who depend on the natural resources and land for their livelihood. Depending on the planning process adopted by a particular country (top down or bottom up/participatory), the local community may or may not be involved in the process of determining the geographical boundary of PAs or the scope as well as the extent of the protection measures including other effective area-based conservation measures.

In the case of a top down approach, there is always a lack of integration with traditional land uses and activities within and surrounding PAs, which could lead to conflicts in terms of management effectiveness. As demonstrated in many cases of PAs in Asia, the encroachment by local communities into legally established PAs is a common occurrence, which is often due to necessity forced upon local people by poverty but may also come from an unsustainable demand for traditional products by the newly rich. Various stakeholders are involved in areas designated as protected areas. In particular, their livelihood of local inhabitants who hunt and carry out various forms of agriculture has come into conflict with protected areas management. Besides this, various stakeholders such as people involved in illegal logging, development enterprises, and government agencies have often caused conflicts.

Customary management of Socio-Ecological Production Landscape and Seascape such as Satoyama-Satoumi

Areas that are not designated as protected areas also maintain natural environments that are used and managed customarily by local communities. Rural communities conserve through the use and management of the natural resources in a sustainable manner, based on certain rules such as

customary law. As a result, a rich natural environment equivalent to that in protected areas has often been maintained.

Satoyama is a Japanese traditional landscape resulting from effective and sustainable use of land and resources. Satoyama has been used to support the livelihood and well-being of local people through agricultural practices and other production activities that provide diverse goods and services, while conserving biodiversity. Human interaction with Satoyama has enhanced its productivity for food, compost, and wood and fuel wood.

There are many types of Socio-Ecological Production Landscapes and Seascapes (SEPLS) around Asia including Satoyama in Japan. The Satoyama Initiative aims to maintain and revitalize SEPLS for human well-being and conserving biodiversity. The concept of Satoyama Initiative has been gaining international and broader recognition for nature and biodiversity conservation. The International Partnership for Satoyama Initiative was established for promoting and realizing the the Satoyama Initiative at CBD COP10. The Satoyama Initiative can be best described as a community-based model of sustainable and efficient use of natural resources which promotes the sustainable use of biodiversity as a model of an alternative and complementary approach to the conventional designation and management of protected areas.

Therefore, PARTICIPANTS in the Working Group on Cultures/Traditions and Protected Areas at the 1st Asia Parks Congress, in Sendai, Japan (14- 17 November, 2013) commend to those international organizations, governments, NGOs, CBOs, academic institutions, businesses and donors who influence directly and indirectly the future of protected areas the following set of best practice protected area policy and management approaches:

- To recognise local praxis such as customary forest management and the contribution of TEK (traditional ecological knowledge) in complementing mainstream approaches in biodiversity conservation towards achieving the Aichi Targets. Adaptive management of Community Use Zone (CUZ) is a good example.
- To recognise the importance of traditional governance institutions and local solutions to address biodiversity loss and wise use of natural resources on the ground.
- To adopt a more participatory approach by having an institutional and governance framework which recognize self-determination of indigenous people and local communities, FPIC (free prior and informed consent) and clear channels of communication that include all stakeholders in the governance and decision making process in the protected areas such as Sacred Natural Sites and ICCAs. The participatory approach can include, for instance, (i) involvement of stakeholders in decision-making, implementation and monitoring, (ii) decentralization and delegation of management authority, (iii) promotion of public access and disclosure of information, (iv) benefit sharing at the local level and (v) micro-financing and financial management at local level
- To recognise the value of local beliefs (including animism and mainstream religion), knowledge, skill, wisdom, oral tradition and culture of care of Sacred Natural Sites and ICCAs and conservation both inside and outside formal protected area
- To enhance the capacity and recognize the efforts of the local and indigenous communities to be effective joint custodians of protected areas on their own ICCAs, or jointly with other agencies as co-management by generating income (e.g. tourism) and providing sustainable, innovative and alternative financing as PES (Payment for Ecosystem Services), along with providing suitable training to equip local and indigenous communities in managing protected areas and contributing to the conservation of biodiversity

- To apply appropriate local/site level access and benefit sharing measures from the utilisation of biological resources (ABS) to enable research and the potential of generation of new source of wealth in line with the Nagoya Protocol.
- To apply flexible management by allowing the local people to practise less-intensive production activities inside protected areas under a new paradigm in which conservation value of SEPLS including Human Modified Forests (HMFs) is considered to be important for underpinning the livelihood of local community while conserving biodiversity.
- To maintain various types of land use and landscape, including agroforests, to ensure that a bundle of ecosystem services provided to secure the livelihood and other critical bases of the life of local communities
- To document Traditional Ecological Knowledge with the full participation and consent of indigenous and local communities to ensure the preservation and protection of this knowledge which will allow it to be used for new innovations from the sustainable use of biodiversity and also application of traditional practices in enhancing protected area management.
- To recognise TEK, which is based on praxis of the local people who has their own ontology and epistemology.
- To support the activities of International Partnership for the Satoyama Initiatives (IPSI) and similar schemes in the future for the purpose of promoting collaboration and information sharing among relevant organizations.
- To educate the youths in Asia to be aware, appreciate, rediscover and revive the region's ancient wisdom and traditional ecological knowledge in tackling contemporary environmental issues such as global warming, climate change, natural disasters, health and human well-being, etc.
- To recognize the value of animism, knowledge, skills, wisdom, oral tradition and sentimental vision related to Sacred Natural Sites for conservation in and outside protected areas.
- To recognize and support a range of communities and indigenous people in governing and managing their ICCAs inside and outside protected areas, through appropriate legal and non-legal instruments.

Conclusion

In Asia, there are various models of protected area management that it may not be possible to declare that there is a Pan Asian model of protected areas management.

Policy makers in Asia should rediscover and emphasis Asia's ancient wisdom and traditional knowledge by realigning the governance, strategies and mechanisms for PA management in their own countries to be more inclusive and effective. In this respect, the Protected Areas Management Effectiveness Review revealed that conservation is more effective if it is integrated with local norms, values and community rights. This could be achieved by formal recognition of sacred natural sites and ICCAs which will assist in empowering the local and indigenous communities as joint-custodians of protected areas. Subsequently this approach could be scaled up once governments and policy makers in Asia fully embrace ICCAs and co-management as effective approaches towards conservation as an effective approach towards co-management.

Achieving effective and equitable protected area governance

Message from WG4 on Collaborative Management of Protected Areas

Governance is about the “interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken and how citizens or other stakeholders have their say”.¹ Governance is different from management wherein management is about what is done in the pursuit of objectives and the means and activities to achieve this, and governance is about who decides what those objectives are and what will be done to achieve them. Governance concerns the exercise of power, authority and accountability.

Governance has been an issue central to the international dialogue on protected areas in the past 10 years. The 2003 Vth IUCN World Parks Congress dedicated a major workshop stream to governance as well as a cross cutting theme on Indigenous/Local Communities, Equity, and Protected Areas. Several WPC Recommendations were adopted on protected area governance, local communities, rights and new types of protected area governance models.² The Convention on Biological Diversity’s (CBD) Programme of Work on Protected Areas (PoWPA) has one of its four core elements dedicated to governance, participation, equity and benefit sharing with 13 actions centred on goals that promote equity, benefit-sharing and the engagement of relevant stakeholders, indigenous and local communities. The 193 Parties to the CBD have, through their adoption of the PoWPA, committed to these principles in planning, establishing and managing protected areas, however this remains one of the least developed of the four PoWPA elements in terms of implementation.

IUCN encourages its members and partners to think about both protected area governance type and quality. Along with familiar State-governed protected areas, managed by government employees, there are now increasing numbers of areas being recognized as equivalent to protected areas but managed by indigenous peoples, local communities, ecotourism companies, non-profit trusts, private individuals, commercial companies and religious groups. Many government managed protected areas are also increasingly bringing rightsholders and stakeholders into decision-making processes¹. Four protected area governance types have been formally recognized by IUCN, WCPA and UNEP’s World Conservation Monitoring Centre (UNEP-WCMC).³ The Parties to the CBD have also agreed to report about governance of protected areas as part of their obligations.¹ The voluntary conservation of areas and territories by private landholders, religious groups, indigenous peoples and local communities (ICCAs⁴) reflect this increasing diversity of governance types.⁵ In terms of governance quality IUCN recognize principles of good governance for protected areas as including: legitimacy and voice; direction; performance; accountability; and fairness and rights.¹

Why then is protected area governance such a central issue in Asia? Most protected area systems in Asia have been established as classical Government centric systems, many modelled on western and/or colonial park systems. Outside of formal protected areas, there have been a number of notably successful programmes focused on community-based conservation and stewardship of natural resources (an example being Nepal’s successful Community Forest Programme⁶), and a growing number of privately-managed protected areas owned and/or managed by NGOs, individuals, faith groups and corporations. In addition there are many more ICCAs which exist, and have existed for hundreds of years, outside of formal programmes. In Asia there is an increasing trend to see protected areas used for purposes which go beyond the protection of the natural environment to include the improvement of social cohesion, livelihoods and economic benefits. IUCN and the CBD advocate for a diverse set of governance types to build flexibility and resilience into national protected area systems.

Much of Asia's protected area legislation is also outdated and in need of reform. Laws and regulations which are often quite legally powerful have a strong regulatory tone, however, they are often weak, inflexible or even silent on recognising community interests and/or initiatives in protected area management. Customary law and, sometimes, even the very existence of communities is often not recognized. Compounding this is the fact that many protected area systems have large numbers of people either living inside the protected areas or in adjacent buffer zones with these communities heavily dependent on these areas for their livelihoods. In addition protected area laws are commonly not harmonized with, or may contradict, other laws relevant to communities and natural resource management.

Asia has a proud record of establishing protected areas (7,043 protected areas covering an average of 15.97% of land area⁷) and several national protected area systems were created using best practice ecological gap filling processes (for example PDR Lao's system of National Biodiversity Conservation Areas and India's mid 1980s biogeographical classification system to enhance ecological representation in the protected area network⁸). Nevertheless many areas, whilst well designed and ecologically representative, were regrettably created without due consideration to the needs of local people. In many countries support for protected areas has dwindled and reforms are underway to create more robust and flexible systems of protection that embrace different types of governance and are cognizant of the needs of local people. Again in Laos a process has been working to re-categorise the national protected area system to accommodate a diversity of IUCN Protected Area categories reflecting more flexible management objectives⁹.

Asia is a region with an enormous diversity of religions, ethnic minorities¹⁰, languages, cultures and indigenous groups with deep-rooted traditional associations to the land. Asian cultures display a long-held and strong tradition of religions that place emphasis on human duties of custodianship and on the sacred nature of certain landscapes, species and features. Again the model of Government centric, often top-down protected area planning establishment and management has not always served well the rights of these groups. There have in the past, and continue to be, cases where local people have been moved out of protected areas, with the consequent impact on traditional social structures and/or the disenfranchisement of communities from the natural resources on which they depend.

As with the international dialogue on governance so too rights and duty-based approaches to conservation have increasingly become central to debates on protected areas. Nearly all the international conservation organizations have embraced conservation practice that respects human rights. For example the Conservation Initiative on Human Rights (CIHR) is a consortium of international conservation organizations that seek to improve the practice of conservation by promoting integration of human rights in conservation policy and practice¹¹. IUCN's vision encompasses the concept of justice and its mission and policies fundamentally reinforce rights-based approaches to conservation. IUCN Resolution 4.056 adopted in 2008 speaks to rights-based approaches to conservation¹² and reinforces the Union's overall objective to "work towards ensuring the protection of rights and biodiversity conservation become mutually reinforcing."¹³ When speaking of rightsholders in Asian cultures one must also speak of duty-bearers reflecting the custodial philosophies toward nature which pervade many Asian cultures. Here rights are often inseparable from duties.

In summary then there is a need to foster diversity in governance including co-management and ICCAs which empowers communities in a way that sustainably accommodates their needs with the conservation of biodiversity. Where the needs and rights of local people are sensitively accommodated the mutual benefits to both protected areas and people become evident. Protected areas become relevant and valued and so enjoy greater long-term security.

Therefore, PARTICIPANTS in the Working Group on Collaborative Management of Protected Areas at the 1st Asia Parks Congress, in Sendai, Japan (14- 17 November, 2013) commend to

those international organizations, governments, NGOs, CBOs, academic institutions, businesses and donors who influence directly and indirectly the future of protected areas the following set of best practice protected area policy, governance and management approaches:

1. Actively work to broaden governance types to include an appropriately balanced mixture of the four types of governance recognized by IUCN.¹ These include:
 - a) governance by government (at various levels);
 - b) governance by various rightsholders and stakeholders together (shared governance);
 - c) governance by private individuals and organizations; and
 - d) governance by indigenous peoples and/or local communities.

2. Recognize that rightsholders, duty-bearers and stakeholders are different with differing entitlements and interests and may require tailored policies and strategies of respect, engagement and empowerment. IUCN have defined the difference between rightsholders and stakeholders in the context of protected areas¹⁴.

3. Recognize that each governance regime is unique. The specific ecological, historical and political contexts and the variety of worldviews, values, knowledge, skills, policies and practices that contribute to conservation should be reflected in different governance regimes in different regions and countries, and even among different protected areas in the same country.¹ The hierarchy that exists in many Asian communities requires special consideration in engaging with the socially vulnerable and issues of equity need to be considered in order to ensure that collaborative management and ICCA regimes are genuinely equitable.

4. Adopt and commit to IUCN's principles of good governance (equitable governance) for protected areas¹ which include legitimacy and voice; direction; performance; accountability; and fairness and rights. Specifically consideration should be given to the principles of:
 - a) Legitimacy and voice: recognizing entitlements; keeping rightsholders, duty-bearers and stakeholders informed and empowering them to have a say.
 - b) Direction: setting a clear, appropriate and achievable vision (broad, long-term perspective) that is shared by all rightsholders, duty-bearers and stakeholders; direction should be inspiring and open to innovation.
 - c) Performance: ensuring protected areas are effectively and efficiently managed consistent with their objectives and in a way that builds resilience to change and impact; building the necessary capacity among rightsholders, duty-bearers, stakeholders and staff to achieve this.
 - d) Accountability: applying the principles of integrity and transparency to decision making; ensuring independent oversight and review; ensuring clear lines of responsibility and reporting.
 - e) Fairness and rights: operating in a way that does not discriminate; avoiding unfair shouldering of the cost burdens of protected areas; promoting equitable access to benefits; respecting human rights and the principles of free prior and informed consent (FPIC) with respect to protected area interventions.

See Table 8 of the Governance of Protected Areas¹ for more information

5. Consistent with the CBD Programme of Work on Protected Areas and other CBD decisions countries should develop a forward looking plan to improve governance for their systems of protected areas or for specific sites¹. Such a plan should adopt a process for assessing,

evaluating and planning for action on improving governance with the ultimate objective of effective biodiversity conservation. The process comprises:

- a) a preparatory workshop to raise awareness and scope out the planning process;
 - b) a process of gathering information to systematically assess the diversity, quality and effectiveness of protected area governance
 - c) develop a framework outlining the determinants of effective collaborative management and identify measurable indicators for social, economic and biological outcomes,
 - d) identifying needed expertise, and supporting the self-organisation of participants;
 - e) a core event (or series of events) pulling together information, expertise and concerned actors and institutions to assess, evaluate and plan for action; and
 - f) a follow-up period, where appropriate action is taken to improve governance in concrete ways.
6. Recognize the need for diverse governance regimes to conserve biological diversity consistent with the Aichi Targets. Diversely governed protected areas have an important role to play in achieving the area-based conservation goals of Aichi Target 11 and could do so effectively through measurable conservation outcomes.
 7. Foster a rights or duty-based approach to the conservation of nature whilst respecting the overall IUCN principles of good protected area governance¹. Such approaches should be consistent with international rights frameworks such as the 2007 UN Declaration on the Rights of Indigenous Peoples (UNDRIP): a universal framework for the survival, dignity, well-being and rights of the world's indigenous peoples¹⁵ and the International Labour Organization's ILO Convention 169 on the rights of indigenous and tribal people¹⁶. For instance, good governance principles should safeguard public rights in cases where voluntary conservation practices, driven by economic incentives, are formally recognised by the State and consequently impact rights and freedoms. These include the right to know about policies and expenditures related to the conservation of nature, and the right to demand clear management objectives and equitable and effective performance in protected areas.¹ The UNDRIP enshrines the principle of free prior and informed consent (FPIC) which should be appropriately applied in the context of protected areas.
 8. Systematically assess, at system and/or individual protected area level, the social costs and benefits of protected areas on surrounding and wider communities. IUCN through its expert networks has recently developed methodologies to undertake such Social Assessments of Protected Areas.¹⁷ Processes of this type can quantify how costs are borne and the benefits derived from protected areas are distributed leading to strategies to address these issues in a more equitable fashion.
 9. Recognize the need to develop sustainable approaches to enrich livelihoods for communities inside and around outside of protected areas, helping generate economic benefits while maintaining biodiversity resources.
 10. Encourage to build capacity of institutions and actors for collaborative management of protected areas. Strong communication skills are essential for local government officials, NGOs and representatives of local communities to work collaboratively to achieve good governance.
 11. Recognize the need for governance to work at a scale appropriate to protected area management. Managing protected areas requires an understanding of the wider ecological-social landscape for biodiversity conservation necessitating partnership approaches with relevant actors and a diversity of governance approaches¹⁸. Connectivity

conservation which seeks to build land and seascape scale interconnectedness also has a clear social dimension requiring social cohesion, a set of shared values and intentions.¹⁹ Scales may vary from a single forest grove up to transboundary landscapes and connectivity corridors under international treaties²⁰.

12. Actively seek out and incorporate the use of traditional knowledge from indigenous peoples and local communities in the establishment, planning and management of protected areas.
13. Actively encourage the understanding and integration of privately-managed protected areas within national conservation strategies and ensure private protected areas are recorded.
14. Report all protected areas, whatever their management category or governance type, to the World Database on Protected Areas as a contribution to the CBD Aichi targets.

¹ Borrini-Feyerabend, G. et al. (2013) *Governance of Protected Areas - from understanding to action*. IUCN Gland, Switzerland.

² IUCN. (2005). *Benefits Beyond Boundaries. Proceedings of the Vth IUCN World Parks Congress*. IUCN, Gland, Switzerland and Cambridge, UK. (Vth IUCN WPC Recommendations 5.16 "Good Governance of Protected Areas"; 5.17 "Recognising and Supporting a Diversity of Governance Types for Protected Areas"; 5.24 "Indigenous Peoples and Protected Areas"; 5.25 "Co-management of Protected Areas" 5.26 "Community Conserved Areas" and 5.27 "Mobile Indigenous Peoples and Conservation")

³ Dudley, N. (ed.) (2008). *Guidelines for Applying IUCN Protected Area Categories*. IUCN Gland, Switzerland.

⁴ ICCA: Indigenous peoples' or community conserved territory or area

⁵ Kothari, A., Corrigan, C., Jonas, H., Neumann, A. and Shrumm, H. (eds). (2012). *Recognising and Supporting Territories and Areas Conserved By Indigenous Peoples and Local Communities: Global Overview and National Case Studies*. Secretariat of the Convention on Biological Diversity, ICCA Consortium, Kalpavriksh, and Natural Justice, Montreal, Canada. Technical Series no. 64

⁶ Community Forest Programme, Nepal: <http://www.forestrynepal.org/wiki/137>. Accessed October 2013.

⁷ UNEP-WCMC. (2013). *World Database on Protected Areas*. Data extracted October, 2013.

⁸ Rodger, W.A., Panwar, H.S. and V.B. Mathur (2002). *Protected area network in India: A review*. Wildlife Institute of India, Dehradun. (<http://www2.wii.gov.in/envvis/panetworks/panetwork.pdf>)

⁹ Shadie, P., Kim, H. Tsechalicha, X. (2008). *Review of Lao PDR National Protected Areas: tools for applying the IUCN protected area categories*. IUCN Lao, Vientiane, Lao PDR.

¹⁰ Wikipedia. *Ethnic Groups in Asia*. http://en.wikipedia.org/wiki/Ethnic_groups_in_Asia. Accessed October 2013.

¹¹ Conservation Initiative on Human Rights (CIHR) includes 8 International NGOS: Birdlife, CI, IUCN, WWF, FFI, TNC, Wetlands International and WCS: <https://community.iucn.org/cihr/Pages/default.aspx>. Accessed October 2013.

¹² IUCN Resolutions & Recommendations: http://www.iucn.org/about/work/programmes/global_policy/gpu_resources/gpu_res_recs/ IUCN Policy Statements: http://www.iucn.org/about/work/programmes/global_policy/gpu_resources/statements_gpu/. Accessed October 2013.

¹³ Larsen, P. (2012). *IUCN World Heritage and Evaluation Processes related to Communities and Rights*. IUCN Gland, Switzerland

¹⁴ "In the context of protected areas, we refer to "rightsholders" as actors socially endowed with legal or customary rights with respect to the land, water and natural resources under consideration. "Stakeholders" possess direct or indirect interests and concerns about those, but do not necessarily enjoy a legally or socially recognised entitlement to them." Extracted from Borrini-Feyerabend, G. et al. (2013) *Governance of Protected Areas - from understanding to action*. IUCN Gland, Switzerland.

¹⁵ UNDRIP: http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf. Accessed October 2013.

¹⁶ ILO Convention 169: <http://www.ilo.org/indigenous/Conventions/no169/lang-en/index.htm>. Accessed October 2013.

¹⁷ Schreckenber, K., Camargo, I., Withnall, K. et al. (2010) *Social Assessment of Conservation Initiatives: a review of rapid methodologies*. Natural Resource Issues No 22. International institute for Environment & Development. London K.

¹⁸ Parr, J. et al. (2013) *Multi-level Co-management in Government-designated Protected Areas – opportunities to learn from models in Mainland Southeast Asia*. Submitted to PARKS Journal as yet unpublished. IUCN Gland Switzerland.

¹⁹ Worboys, G., Francis, W. and Lockwood, M. (2010). *Connectivity Conservation Management: a global guide*. Earthscan, London UK

²⁰ Nigel Crawhall pers comm. *Theme on Indigenous Peoples & Local Communities, Equity and Protected Areas (TILCEPA)*. IUCN.

International collaboration for protected areas in Asia

Message from WG5 on International Collaboration for Protected Areas

As Asia continues to grow its global influence into the 21st Century the imperative for greater cooperation between nation states is strengthening across almost every field of endeavour¹. Asian countries are building stronger collaboration between themselves and with the world at large in matters of trade and economic development; on mutual security concerns; on human welfare; and on information technology to name but a few areas. Enhanced collaboration on the environment and natural resource utilization is also rapidly growing, along with the increasing threats to biodiversity and ecosystem services, such as habitat loss and fragmentation.

Protected areas have an important role in the conservation of biodiversity and the sustainability of the ecosystems that underpin development. In order to properly fulfil these functions, Asia's protected areas need enhanced regional collaboration and international cooperation including with neighbouring countries. Asia's diversity of environments from boreal to tropical zones coupled with the fact that the region supports a majority of the world's major river systems adds weight to the arguments for greater transboundary action, regional collaboration and international support².

Collaboration for protected areas is a means to an end not the end in itself. Working across national boundaries, sharing experience, transferring capacity and jointly tackling issues is vital to the end goal of establishing effective protected area systems for Asia. An end goal that is best expressed within the Convention on Biological Diversity (CBD's) Aichi Biodiversity Target 11.

“By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascapes³.”

Significant differences exist from country to country, however, many common protected area issues exist and addressing them calls for greater supra-national exchange of experience, learning and approaches. As the numbers and extent of protected areas continues to grow in Asia it is self-evident that greater regional collaboration will become more important than ever.

Asia already possesses an impressive portfolio of internationally and regionally significant protected areas. These amount to some 429 World Heritage Sites (natural and mixed); Biosphere Reserves; Ramsar Sites; Geoparks; and ASEAN Heritage Parks across the Region's 24 countries. This wealth of natural assets demands greater collaboration to promote and better manage them at an Asian scale.

The call for improved collaboration between protected areas in Asia has come over many years and from numerous quarters, some internal and some external to the region. All of the multilateral environmental agreements by definition enshrine principles of collaboration with the CBD acting as the principle convention dealing with protected areas. IUCN's World Commission on Protected Areas has had a long history in Asia and has consistently worked toward supporting national efforts for protected areas through regional approaches. ASEAN's Heritage Parks network, Transboundary Manas Conservation Area (TraMCA), Yellow Sea Ecoregion Support Project (YSESP), ASEAN Mangrove Network (AMNet), Coral

Triangle Marine Protected Areas System (CTMPAS), East Asian-Australasian Flyway Partnership (EAAFP), Heart of Borneo initiative (HOB) and Greater Mekong Sub-region Core Environment Program and Biodiversity Corridors (GMS CFP-BCI) are good practices of regional collaboration.

An analysis of regional protected area collaborative networks from around the world has drawn lessons for Asia and suggested steps to further the creation of Asian protected area collaboration.

The first Asia Parks Congress in Sendai, Japan leading one year later to the IUCN 6th World Parks Congress (WPC) in Australia offers an opportunity to move forward regional collaboration for Asia.

In light of this, PARTICIPANTS in the Working Group on International Collaboration for Protected Areas at the 1st Asia Parks Congress, in Sendai, Japan (14- 17 November, 2013) commend to those international organizations, governments, NGOs, CBOs, academic institutions, businesses and donors who influence directly and indirectly the future of protected areas the following set of approaches to direct international collaboration for protected areas:

1. Asian countries need to enhance collaboration across various fields of work including protected areas. The regional level is an appropriate scale to focus international collaboration and support as it allows responses to be tailored to regional differences whilst recognising the issues faced by protected areas. Regional interventions also complement rather than compete with national efforts on protected areas which are now, more than ever, being driven through the CBD Programme of Work on Protected Areas;
2. Reinforcing the importance of regional perspectives in various aspects of collaboration on protected areas is critical. Global protected area gatherings such as the upcoming WPC should always incorporate regional perspectives into planning, deliberations and outcomes. Whilst the WPC is structured thematically it should accommodate regional differences and needs in developing solutions to the protected area challenges and opportunities that lay ahead;
3. Recognizing the need for comprehensive and sustainable approaches to conservation of biodiversity and ecosystems. Concrete examples are the Conservation Assured | Tiger Standards (CA|TS) and IUCN Green List of Protected Areas;
4. An analysis of regional collaborative networks for protected areas from around the world has identified following lessons for Asia:
 - a) Embrace diversity. Recognize that Asia is extremely diverse and different approaches to addressing protected area issues will be legitimate in different contexts. The natural sub-regions of Asia (South Asia, East Asia and Southeast Asia) should be accommodated whilst embracing Asian perspective on protected area issues. Regional collaboration should accommodate diverse membership including the institutions, sites and individuals who make up the protected area community in Asia. It should also consider commonalities among often very diverse members.
 - b) Ensure a site level focus. Experience shows that building a network around protected areas themselves has a galvanizing effect. Sites become emblematic symbols of collaboration and protected area stakeholders are reassured that efforts are directed at conservation on the ground, including engagement of indigenous and local communities. Integration of protected

areas into planning and management at the landscape and seascape levels is also needed.

- c) Ensure an added value. Regional collaboration should foster cooperation which adds value to what is already underway. Functions such as facilitating, convening, brokering and fostering innovation are known to be valued. In addition it should advocate for protected areas across the region, including transboundary collaboration.
 - d) Create light effective governance. Successful networks have a governance structure that is responsive to the needs of the network, including capacity development, without being overly complex and bureaucratic.
 - e) Face up to the financial sustainability challenge. Most protected area collaborative networks struggle to achieve financial security, however, the pursuit of this goal is paramount. The development of shared commitments supported by specific national commitments should be pursued. Business models which are based on diverse funding sources and income streams, such as public private partnership for protected areas (PPP), are desirable.
5. Call upon interested stakeholders relevant to protected areas in Asia to further development of an appropriate Asian protected area collaboration.

¹ ADB. (2012). *Asia 2050: Realizing the Asian Century*. Asian Development Bank, Manila, Philippines.

² Ministry of Environment, Japan (2013). Adapted from *1st Asia Parks Congress. Outline of Working Groups*.

³ CBD (2013). *Aichi Biodiversity Targets* <http://www.cbd.int/sp/targets/>, Accessed October 2013.

Using the Aichi Biodiversity Targets to reconcile development challenges

Message from WG6 on Biodiversity and Protected Areas

The Asian Region continues to experience a sustained period of economic growth which is forecast to continue into the foreseeable future. The Asian Development Bank concluded in 2012 that *“Asia is in the middle of a historic transformation. If it continues to follow its recent trajectories, by 2050 its per capita income could rise six-fold in purchasing power parity terms to reach Europe’s levels today. It would make nearly 3 billion additional Asians affluent by current standards”*¹

It is in Asia that 3.8 billion people live, some 60% of the world’s population, and some 70% of the world’s poorest people. Asia has some of the world’s richest countries and some of the world’s poorest and it is here that a disproportionate concentration of the world’s biodiversity resides. The cocktail of large human populations, rapid economic development and high levels of biodiversity is at the heart of reconciling the challenges of development and conservation.

As one of the proposed Streams at the upcoming 2014 IUCN World Parks Congress notes *“Governments are focused on maintaining food and water security, ensuring jobs and sustainable livelihoods, maintaining the productivity of fisheries, forestry and agricultural sectors, and making trade-offs with sectors such as mining, energy and infrastructure development all in the face of rapid climate change”* It is the *“intersection between protected areas and these many development goals and challenges facing national governments”*² that presents some of the greatest challenges to protected area policy makers, planners, managers and researchers. Nowhere is this more so the case than in Asia.

The Convention on Biological Diversity (CBD) remains at the forefront of international efforts to halt the loss of biodiversity. The CBD Strategic Plan for Biodiversity 2011-2020 adopted by the 10th Conference of Parties in Nagoya 2010 represents the global community’s aspirations and commitment to action with respect to biodiversity conservation. The Plan includes a shared vision, mission, strategic goals and some 20 targets to drive action. Protected areas have a significant role to play across all of the Aichi Biodiversity Targets, as they are known. Target 11, however, specifically deals with protected areas:

*“By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascapes”*³.

Protected areas have proven to be an effective tool in the fight to save biodiversity. Whilst CBD Target 11 sets the strategic direction for protected areas detailed actions are articulated in the Programme of Work on Protected Areas (PoWPA). Asia’s impressive drive to establish protected areas has been a central feature of national strategies to combat the loss of biodiversity. Asia currently has 7,043 protected areas covering an average of 15.97% of land area⁴. Target 11 *“addresses multiple facets of*

*protected areas including increased coverage, connectivity, management, governance and equity*⁵ The Target is then an aspirational and all-inclusive statement which elegantly captures quantitative and qualitative aspects of an effective protected system operating in a complex biophysical and socio-economic landscape. It is clear that moving toward Target 11 warrants a holistic and integrated approach by governments and their partners together with all rights holders and stakeholders.

Balancing the needs of protected areas with those of development one can identify several aspects that benefit from best practice guidance. These include:

- how to articulate the overall national vision for protected areas and a strategy for achieving this;
- how to practice effective land use planning based on best available science and resource assessment thus ensuring that decisions to establish protected areas are sound;
- how to identify and design robust, representative protected area systems that encompass all of the aspects inherent in Target 11. In other words how to unpack what it takes to achieve Target 11;
- how to safeguard the established protected area system against on-going development pressure; and
- how to recover damaged ecosystems to strengthen conservation and bolster protected area systems against change.

In light of this, PARTICIPANTS in the Working Group on Biodiversity and Protected Areas at the 1st Asia Parks Congress, in Sendai, Japan (14- 17 November, 2013) commend to those international organizations, governments, NGOs, CBOs, academic institutions, businesses and donors who influence directly and indirectly the future of protected areas the following:

1. Protected areas should contribute to the conservation of biological diversity, and we have to ensure that the protected areas are large enough and located in the right places to cover the important biodiversity areas. Biodiversity is not equitably distributed across countries therefore achievement of Aichi Biodiversity Target 11 is a shared responsibility.
 - a) Update the National Biodiversity Strategy and Action Plans (NBSAPs), and as appropriate, develop national protected area master plans that articulate the why, what, where, when and how (including funding) of national protected area systems. In particular, the master plans should be consistent with the CBD PoWPA and Aichi Biodiversity Target 11.
 - b) Establish comprehensive, adequate and representative national protected area systems that are based on sound scientific analysis to ensure ecological representativeness and/or cover species/genetic diversity and/or conserve threatened species rather than being based on political or economic rationales.
 - c) Incorporate a diverse range of IUCN protected area categories and recognize different protected area governance types as these contribute to a more equitable, flexible system that is more likely to enjoy long-term support;⁶
 - d) Develop institutional arrangements that allow protected area agencies platforms for wider engagement of other sectoral agencies and stakeholders.
 - e) Build constructive relationships and improved understanding between protected area institutions and jurisdictions responsible for development at local, provincial and national levels. It is critical that protected areas are factored into development planning strategies at an early stage, at all scales and that

conservation as a land or sea-use is afforded equal status to other forms of use and thus respected.

2. Protected areas should contribute to the sustainable livelihood and poverty alleviation of communities in and around the protected areas, thereby preventing unsustainable resource use including illegal fishing, logging, poaching, mining, etc.
 - a) Recognize other effective area-based conservation measures that conserve biodiversity and promote traditional knowledge, customary rights and enhance local livelihood opportunities, such as Satoyama and other similar approaches.
 - b) When conserving and re-introducing keystone species including large mammals to the protected areas, we have to consider the potential human-wildlife conflict and develop a program to address this. The necessity of establishing wildlife corridors to prevent isolation of populations should be considered as well.

3. Protected areas contribute to climate change adaptation and resilience to natural disasters. Ecological restoration, ensuring connectivity of protected areas, and integration to the wider land and seascape is essential.
 - a) Recognise that the maintenance and restoration of ecosystem integrity requires land and seascape scale conservation and so work to incorporate connectivity between protected areas at appropriate scales including transnational and/or transboundary protected areas; and
 - b) Build capacity and new skills on connectivity conservation to engage new stakeholders and rights-holders in appropriate governance structures, work across multiple tenures, explore innovative conservation mechanisms and ensure just and equitable distribution of benefits. Comprehensive guidance on establishing and managing connectivity conservation is available through IUCN and the CBD.^{7, 8, 9}
 - c) Adopt ecological restoration strategies where needed to recover ecological function, restore habitat and/or species. Restoration may assist in filling gaps in protected area systems, enhancing connectivity and building more resilient protected area systems against climate change. Restoration strategies may include allowing natural recovery to take place; actively restoring ecological processes through interventions; actively recovering species; and/or undertaking alien invasive species control programmes. Principles and best practice guidelines for ecological restoration for protected areas has been produced by IUCN.¹⁰
 - d) Ensure that protected area management plans are prepared taking into account surrounding land and seascape contexts, wider legal, institutional and planning frameworks such that protected area plans are harmonized with the hierarchy of planning at scale. Too often protected area management plans have conflicting objectives with development plans in the surrounding land and seascape;
 - e) Ensure that the conservation objectives of protected areas are respected and that incompatible development such as land conversion or overexploitation/illegal harvesting is not permitted within or adjacent to protected areas. Mechanisms such as buffer zones or eco-sensitive zones (ESAs) should be used to promote sympathetic development in areas adjacent to protected areas. Ensure that any developments are subject to rigorous environmental impact assessment (EIA) to assess both positive and negative impacts on park values and on surrounding local communities.
 - f) Adopt Strategic Environmental Assessments (SEAs) to assess cumulative

- impacts at larger scales than individual development EIAs. SEAs have the advantage of forecasting progressive development pressure at a land or seascape scale and evaluating the potential impacts of this on protected area systems or sites. Advice on EIA and SEA best practice is available from the International Association for Impact Assessment (IAIA).¹¹
- g) Ensure that established protected area systems are not eroded through reductions in size, weakening of protection status, trade-offs to accommodate other resource use and/or extraction, or de-gazettal as protected areas.
4. Improve capacity to identify the important biodiversity areas and potential protected areas, and capacity to manage effectively.
 - a) Provide technical and financial support for identification of important biodiversity areas based on ecological representativeness and/or species diversity and conducting gap analysis especially in developing countries
 - b) Complete protected area management effectiveness evaluations (MEEs) using the internationally accepted IUCN framework and range of assessment tools on offer. Evaluations should cover both the conservation and social outcomes of protected area management at system and site level. Policies and procedures for the good governance of protected areas should also be adopted at both national and site level. Progressively benchmark management performance against recognized standards such as those being developed through IUCN Green List of Protected Areas¹² and other appropriate methods.
 - c) Apply recommendations from management effectiveness evaluations at systems and site levels.
 5. Improve public awareness, enhance education, and secure sustainable financing for protected areas by assessing and promoting the value of biodiversity and ecosystem services of protected areas.

¹ ADB. (2012). *Asia 2050: Realizing the Asian Century*. Asian Development Bank, Manila, Philippines.

² IUCN. (2013) *IUCN World Parks Congress, Sydney, 2014. Stream Reconciling Development Challenges*: http://www.worldparkscongress.org/stream_reconciling_development_challenges.html. Accessed October 2013.

³ CBD. (2013). *Aichi Targets*: www.cbd.int/sp/targets/. Accessed October 2013.

⁴ UNEP-WCMC. (2013). *World Database on Protected Areas*. Data extracted October, 2013.

⁵ Woodley, S., Bertzy, B., Crawhall, N. et al. (2012) *Meeting Aichi Target 11: What does success look like for protected area systems?* PARKS Vol 18.1, September 2012. IUCN, Gland Switzerland.

⁶ Dudley, N. (ed.) (2008). *Guidelines for Applying IUCN Protected Area Categories*. Gland, Switzerland: IUCN.

⁷ Bennett, G. (2004). *Integrating Biodiversity Conservation and Sustainable Use. Lessons Learned from Ecological Networks*. IUCN, Gland, Switzerland.

⁸ Worboys, G., Francis, W. and Lockwood, M. (2010). *Connectivity Conservation Management: a global guide*. Earthscan, London UK

⁹ Ervin, J. et al. (2010) *Making Protected Areas Relevant: A guide to integrating protected areas into wider landscapes, seascapes and sectoral plans and strategies*. CBD Technical Series No. 44. Montreal, Canada.

¹⁰ Keenleyside, K., Dudley, N., Cairns, S. et al. (2012). *Ecological Restoration for Protected Areas: principles, guidelines and best practices*. IUCN Gland, Switzerland.

¹¹ IAIA (2013) International Association For Impact Assessment: <http://www.iaia.org>. Accessed October 2013.

¹² IUCN (2013). *IUCN Green List of Well-Managed Protected Areas*: http://www.iucn.org/about/work/programmes/gpap_home/gpap_quality/gpap_greenlist/. Accessed October 2013.