

## G8 Environment Ministers Meeting 2008 (Kobe, Japan May 24-26, 2008)

### Chair's Summary G8 Environment Ministers Meeting

1. The G8 Ministers and European Commissioner responsible for the environment met in Kobe from May 24 to 26, 2008. They were joined by ministers and senior officials from Antigua and Barbuda, Australia, Brazil, China, India, Indonesia, Mexico, Republic of Korea, Slovenia and South Africa and heads and senior officials of the Global Environment Facility (GEF), the Global Legislators Organization for a Balanced Environment (GLOBE), the International Union for Conservation of Nature and Natural Resources (IUCN), the Organisation for Economic Co-operation and Development (OECD), the United Nations Environment Programme (UNEP), the World Bank, the Secretariat of the Basel Convention, and the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). The meeting was held with a view to providing appropriate inputs to the G8 Hokkaido Toyako Summit to be held in July.
2. The meeting highlighted the global environmental issues that the international community faces at present, encouraged each country to further strengthen their efforts at all levels, including national, regional, and global levels, and underlined the importance of facilitating such efforts through international cooperation.
3. Three themes were set as the agenda of this meeting, namely biological diversity, the 3Rs, and climate change, and discussions were held on these topics accordingly. Prior to the discussions among the ministers and other participants, a dialogue with representatives of relevant stakeholders was held, generating valuable input. A summary of the G8 ministers and other participants' discussions during the meeting is as follows.

### Climate Change

#### Transition to Low-carbon Societies for the Achievement of Long-term Goals

##### *Long-term goals*

4. Noting the findings of the Intergovernmental Panel on Climate Change (IPCC), the importance of setting long-term goals towards the realization of the ultimate objective of the UNFCCC was recognized. It was recalled that at the Heiligendamm Summit in 2007, the G8 leaders agreed to seriously consider reducing global greenhouse gas (GHG) emissions by at least half by 2050. Strong political will was expressed to go beyond this agreement and reach agreement on a shared vision of long-term global goal at the G8 Hokkaido Toyako Summit. It was noted that in order to halve global GHG emissions, developed countries should take the lead in achieving a significant reduction.

#### *Transitioning to low-carbon societies and establishing an international research network on low-carbon societies*

5. To realize such long-term goals, it is necessary to change the current socio-economic structures and transition to low-carbon societies. In so doing, there was general recognition of the importance of all the countries to have a clear vision of low-carbon societies. Strong support for establishing an international research network of institutions involved in the research on low-carbon societies was shown by a number of countries, and other countries also expressed their support for the consideration of its establishment.

#### *Actions to realize low-carbon societies*

6. To achieve low-carbon societies, all countries need innovations in their lifestyle, production and consumption patterns, and social infrastructure in addition to technological innovations. It was recognized that tech-

nology transfer and capacity building are necessary to achieve low-carbon societies at the global scale. The importance of research and development, information infrastructures and institutional planning was also pointed out. It was highlighted that there is a need to promote further development of technologies such as carbon capture and storage and biofuels. Carbon offsetting was also recognized as an effective mechanism that provides a wide range of stakeholders such as citizens, companies, and governments with opportunities to contribute to mitigation actions. It was observed that in shifting toward low-carbon societies, international cooperation on carbon offsets will play an important role.

#### *Use of economic instruments for sound emission reductions*

7. The view was shared that market mechanisms such as emissions trading, tax incentives, performance-based regulations, fees or taxes, and consumer labelling could assist in setting a price for carbon, send price signals to the market, serve as vital economic incentives that offer long-term certainty to the private sector as well as further incentives to promote CDM projects, and constitute a critical set of instruments for the greater reduction of GHG emissions. Especially regarding emission trading, there were descriptions of actions taken in several countries. It was recognized that countries should further explore the possible utilization of these economic instruments according to their own national circumstances. Such instruments should be designed in a way to avoid carbon leakage.

#### *Carbon Disclosure*

8. It was noted that, in the context of financial and capital markets, it is useful to inform shareholders of significant risks and opportunities raised by climate change through carbon disclosure efforts.

### **Cooperation among Developed Countries and Developing Countries**

#### *Co-benefits and technology transfer*

9. The need for technology innovation, development and deployment as well as financial support for technology transfer to promote further mitigation actions in developing countries was recognized. In particular, it was indicated that a co-benefits approach can be an effective means to promote mitigation actions in developing countries. The importance of the following activities was pointed out: compiling best practices and developing technology maps and tools to identify projects gen-

erating significant co-benefits, especially in the area of pollution abatement, forest conservation, and the 3Rs. Also, the importance of assisting developing countries in building sufficient capacity to use these tools was emphasized. It was also acknowledged that it would be useful to consider how to mainstream policy and measures with co-benefits into development by expanding the current efforts by the OECD to mainstream adaptation into climate-related policy and development efforts. The necessity to improve the current CDM to enhance its contribution to sustainable development was highlighted.

#### *Adaptation*

10. Adaptation is an urgent issue for all, particularly for least developed countries and small island developing states. It was observed that adaptation requires immediate actions in a wide range of areas such as water resources, disaster prevention, food, public health, and coastal management and therefore, capacity building in such areas is urgently needed. As part of this, it is important to mainstream adaptation into development policies and strategies, and in this regard, the OECD's current efforts in this area were commended. For mainstreaming to succeed, it is essential to strengthen the capacity for scientific impact assessments in developing countries. In addition, it is necessary to strengthen international cooperation on observation and monitoring systems for current and future climate conditions as well as on early-warning for natural disasters. The importance of assisting developing countries with these matters was recognized.

#### *Finance to assist developing countries*

11. The gap between the need for sufficient flow of financial resources, both public and private, and current funding levels needs to be acknowledged. The ways and means to bridge such a gap should be elaborated. To support mitigation measures in developing countries, in addition to public funding, private sector investments are essential. The active use of carbon markets and public-private partnerships (PPP), as well as innovative funding mechanisms should be considered for these purposes. The World Bank presented its work to establish a comprehensive financial framework to address climate change and development. Mexico elaborated its proposal for a Multilateral Fund and Climate Change. Furthermore, it was explained that Japan, US and the UK are inviting other donors to join their efforts in establishing a new multilateral fund.

### ***Capacity building and Education for Sustainable Development***

12. It was pointed out that the UN Decade of Education for Sustainable Development (DESD) is important in order to promote capacity building for realizing a sustainable society and the World Conference on Education for Sustainable Development (ESD) to convene in Germany in March 2009 was welcomed. In order to further promote ESD, it may be helpful to share best practices such as partnership projects by related stakeholders and to assist capacity building in developing countries through networks among higher educational institution in developing and developed countries and international organizations.

### **Post-2012 Framework**

#### ***Contribution to UN negotiations***

13. The importance of concluding negotiations on a post-2012 framework in line with the Bali Action Plan no later than December 2009 was emphasized.

#### ***Mid-term targets***

14. The need was expressed for effective mid-term targets which take into account the findings of the IPCC.

#### ***Commitment and actions by developed countries and actions by developing countries***

15. It was recognized that there is considerable work already being undertaken by both developed and developing countries. At the same time, the need to strengthen our efforts to make a shift to low-carbon societies was emphasized. For the total global GHG emissions to peak and then decrease within the next 10-20 years, bearing in mind the principle of common but differentiated responsibilities and respective capabilities, developed countries must commit to quantified national emission targets, actively adopting measures to reduce GHG emissions, while further mitigation actions by developing countries are also necessary. Incentives for such actions by developing countries are also necessary. For countries with rapidly increasing GHG emissions, it is especially critical to strive to curb the rate of increase. Elaborating on such commitments and actions is an important element of implementing the Bali Action Plan, and providing support to the process is necessary.

#### ***Effectiveness of sectoral approach***

16. Bottom-up analyses of GHG emissions reduction potentials can be useful tools for setting national reduction targets. In this context, a gap that might occur

between reduction potentials based on a bottom-up approach on one hand and required emissions reductions levels calculated by a top-down approach on the other must be bridged to ensure environmental integrity. These gaps can be bridged by exploring further emission reductions using policies and measures, innovative technologies, and changes in lifestyles through national campaigns. It was clarified by a proponent of the sectoral approaches that sectoral approaches would be used to set national targets, not as a substitute for them. Analyses of the mitigation potentials can provide scientific and objective knowledge that contribute to the formulation of an effective future regime. It was pointed out that reduction potentials in developing countries are likely to be large and relatively inexpensive, and the cooperative sectoral approach backed by assistances from developed countries could contribute to realizing these potentials.

#### ***Assistance towards mitigation actions in developing countries***

17. It was recognized that mitigation actions in developing countries require support and incentives from developed countries.

#### ***Measurability, reportability, and verifiability***

18. It is essential to develop methodologies to enable the measuring, reporting, and verifying of countries' commitments and actions based on the Bali Action Plan. It is also important to collect methodologies to formulate and promote environmental policies, and to provide them to the UNFCCC process. It was noted that setting up and running GHG inventories in developing countries is of fundamental importance and G8 countries should consider supporting capacity building in developing countries for the collection and provision of data.

#### ***Importance of dialogues among major economies and the "Kobe Initiative"***

19. A continuation of dialogues among major economies would be a valuable input for confidence-building towards the establishment of an effective post-2012 framework. There was wide support to follow up on the outcome of this meeting as the "Kobe Initiative". Appreciation was expressed to the UK and Italy for hosting meetings focusing on an international research network on low-carbon societies for later this year (UK), and next spring (Italy).

#### **The Kobe Initiative involves:**

- i. International research network on low-carbon soci-

- eties
- ii. Analysis on bottom-up sectoral mitigation potentials
- iii. Promotion of co-benefits among relevant policies

- iv. Capacity building support for developing countries on inventories and data collection (measurability, reportability, and verifiability [MRV])

## Biodiversity

### *Significance of biodiversity*

20. It is underlined that a high proportion of ecosystems have been degraded and that many species are threatened with extinction by human activities. It is recognized that biodiversity is the basis of human security and that the loss of biodiversity exacerbates inequality and instability in human society. The three objectives of the Convention on Biological Diversity are reaffirmed, namely the conservation of biological diversity, the sustainable use of its components, and the access to and fair and equitable sharing of benefits arising from the utilization of genetic resources.

### *Achieving the 2010 Biodiversity Target and effective follow-up*

21. It is recognized that further efforts, including the development and implementation of National Biodiversity Strategies and Action Plans, are necessary to achieve the 2010 Biodiversity Target, which was reaffirmed at the G8 Environment Ministers Meeting in Potsdam, Germany in 2007, and to develop effective follow-up.

### *Scientific approach to biodiversity*

22. The significance is recognised of scientific monitoring, assessment, information provision and the strengthening of research activities. It is noted that some countries expressed their determination to provide leadership in improving the interface between these activities and the public and policy makers, building upon the Millennium Ecosystem Assessment and the outcome of IMoSEB consultations. It is also noted that some countries called for actions to engage with the UNEP-sponsored process, including a dedicated conference, to address operational steps relating to the above mentioned activities.

### *Sustainable use of biodiversity*

23. In addition to the conservation of pristine nature, the importance is recognized of realizing biodiversity conservation and sustainable natural resource management in secondary nature such as satoyama in Japan, including agricultural lands and their surrounding ecosystems,

where people utilize natural resources through such activities as agriculture and forestry, in order to realize conservation and sustainable use of biodiversity.

### *Tackling illegal logging*

24. It is reaffirmed that deforestation leads to the loss of biodiversity and high GHG emission and the international community is urged to tackle illegal logging which is a contributing factor to deforestation. Recognition is shared on the effectiveness of actions by both importing and exporting countries to exclude illegally logged timber from the market as well as on the improvement of forest governance. The G8 Forest Experts' Report on Illegal Logging is welcomed and it is agreed to forward the report to the Chair of the G8 in 2008. Some concrete proposals on illegal logging presented by participants including GLOBE International are taken into consideration.

### *Access and benefit sharing*

25. Concerns expressed by some outreach countries regarding access to and benefit sharing (ABS) of genetic resources are taken note of. The need to elaborate an appropriate international regime was emphasized by some countries. Attention was drawn to the fact that discussion on an international regime is being held at COP 9 of the CBD in Bonn right now.

### *Technology transfer and finance*

26. The issue regarding technology transfer and financing raised by outreach countries is recognized. To promote conservation and sustainable use of biodiversity in developing countries, it is recognized that appropriate technologies and funding provided by the international community are necessary. In addition to the maximum utilization of existing financial mechanisms, further discussions are considered necessary to address this issue more sufficiently.

### *Promotion of private sector involvement*

27. The importance is reaffirmed of promoting involvement of all social actors including actors from the private sector in facilitating conservation and sustainable

use of biodiversity.

### ***Linkage to climate change***

28. It is emphasized that climate change is expected to have serious impacts on biodiversity, even threatening the very basis of human survival. The need to pay sufficient attention to the linkage between climate change and biodiversity was pointed out.

### ***Biodiversity and protected areas***

29. The importance of protected areas is reconfirmed and emphasis is given to the significance of developing eco-

logical networks of protected areas that carry significance in maintaining global biodiversity.

### ***Call for action***

30. The urgent need to engage in further efforts to tackle the aforementioned challenges on biodiversity is reaffirmed and G8 members agree on the “Kobe Call for Action for Biodiversity” proposed by the Chair. Japan, the Chair country, announced its “Commitments for the Implementation of the ‘Kobe Call for Action for Biodiversity’” for the implementation of the “Call for Action,” including the SATOYAMA Initiative.

## The 3Rs

### ***Progress of the 3R Initiative***

31. The contributions of the 3R Initiative in advancing 3Rs activities in each G8 member country and other countries since its proposal at the G8 Sea Island Summit in 2004 were recognized. It was also recognized that the 3R Initiative has provided a platform for sharing information and exchanging views and experiences on 3Rs-related policies among the G8 and other countries. It was noted that the 3R Initiative has demonstrated the G8 countries’ determination to contribute to the establishment of a sustainable society.

### ***Prioritized implementation of 3Rs policies and increases in resource productivity***

32. It was observed that the promotion of the 3Rs and increases in resource productivity are important for achieving sustainable development in both the G8 and other countries. Towards that end it was also observed that comprehensive policies comprising both regulatory and market-based tools, and addressing the full life-cycles of products are needed. Furthermore, the need for policies to further stimulate technological development and innovation and to create markets for resource-efficient products was acknowledged. However, it was also recognized that governments alone cannot produce the necessary changes and that the contribution of all actors and sectors of society is crucial.

33. In addition to environmentally sound waste treatment and recycling, high priority was placed on waste reduction. Several efforts to reduce the use of disposable plastic bags and other single-use consumer products were described. Japan observed that China, Japan, and

the Republic of Korea will jointly call for other countries to follow suit. It was noted that substantial reductions of waste generation and resource utilization require fundamental changes in awareness and lifestyle.

34. It was noted that both G8 and non-G8 countries recognize that strong linkages and the co-benefits exist between the promotion of environmentally sound waste management and the 3Rs, and the reduction of greenhouse gas emissions. In addition, the views from non-G8 countries emphasizing the importance of developing and disseminating technologies for the promotion of the 3Rs in accordance with national circumstances were also noted.

35. The progress and achievements of the work by the OECD on material flow analysis and resource productivity and the contributions on sustainable resource management by UNEP were welcomed.

### ***Establishment of an international sound material-cycle society***

36. The occurrence of severe health and environmental problems related with improper recycling of end-of-life products, such as e-waste, as well as with improper ship dismantling, in developing countries were considered. However, the potential resource value of such materials was also recognised. The hope was expressed that further collaboration between the 3R Initiative and the Basel Convention<sup>1</sup> will both promote capacity building for environmentally sound waste management in developing countries and facilitate sound international resource circulation.

<sup>1</sup> The United States is not a party to the Basel Convention.

***Confirmation of the significance of collaboration for capacity development in developing countries***

37. The importance of technical and financial support toward capacity development for the 3Rs in developing countries, building on existing frameworks, was observed. It was also observed that there is a need for improved coordination of international assistance related with the 3Rs and better synchronization of development agencies' activities in this field were called for. Furthermore, it was noted that effective capacity devel-

opment requires a multi-stakeholder approach, involving the private sector, local governments and NGOs.

***Agreement on Kobe 3R Action Plan***

38. G8 Ministers agreed on the Kobe 3R Action Plan and to report the progress in 2011. Finally, Japan observed that it has launched its "New Action Plan towards a Global Zero Waste Society," which it hopes will stimulate further international co-operation in the spirit of the Kobe 3R Action Plan.

# Kobe Call for Action for Biodiversity

We, the Environment Ministers of the G8, based upon our discussions in Kobe on biodiversity, 24-26 May 2008,

**Emphasizing** that biological diversity constitutes the indispensable foundation of our lives and of global economic development,

**Recognizing** the fundamental importance of biodiversity for human livelihoods, the eradication of poverty and achievement of the Millennium Development Goals,

**Deeply concerned** by the continued loss of biological diversity despite the significant actions already taken by a wide range of stakeholders, and acknowledging that unprecedented efforts will still be needed to achieve by 2010 a significant reduction of the current rate of biodiversity loss,

**Recognizing** the importance of following up on the Millennium Ecosystem Assessment,

**Reaffirming** our support for the three objectives of the Convention on Biological Diversity, namely the conservation of biological diversity, the sustainable use of its components and the access to and fair and equitable sharing of the benefits arising out of the utilization of genetic resources,

**Noting** the on-going work on access to and benefit sharing (ABS) of genetic resources under the Convention on Biological Diversity,

**Recognizing** the importance of the ecosystem approach as a framework for addressing the three objectives of the Convention in a balanced way,

**Stressing** that biodiversity and climate change are closely intertwined and that efforts are urgently needed to consider these important linkages in addressing biodiversity and climate change issues,

**Reiterating** our commitment to increase our efforts to achieve the globally-agreed target to significantly reduce the rate of biodiversity loss by 2010,

**Adopt** the “Kobe Call for Action for Biodiversity” to call upon all countries to work together to promote the following actions:

## *Achieving the 2010 Biodiversity Target and follow up actions*

1. Further encourage implementation of the ten Activities included in the “Potsdam Initiative-Biological Diversity 2010.”
2. Promote international collaboration for sharing technology and knowledge which is essential for developing, improving and implementing the National Biodiversity Strategies and Action Plans (NBSAPs) in accordance with the particular conditions and capabilities of the parties in order to achieve the 2010 Biodiversity Target.
3. Promote international collaboration for preparation and publication of the 3rd Global Biodiversity Outlook.
4. Encourage the provision of science-based information on biodiversity and ecosystem services to the public and to policy-makers, informed by discussions under the auspices of UNEP.
5. Initiate a dialogue process to consider options for following up the 2010 Target, including, for example, the development and adoption of a post-2010 target under the aegis of the Convention on Biological Diversity.

## *Sustainable use of biodiversity*

6. Enhance the conservation and sustainable use of biodiversity taking into account international achievements in this area and considering models of sustainable natural resource management based on the benefits of living in harmony with nature as recognized in satoyama in Japan (SATOYAMA Initiative).
7. Promote sustainable forest management, including the conservation of forest biodiversity, by improving forest governance and by addressing illegal logging and related trade collectively and individually, as stated in the G8 Forest Experts Report on Illegal Logging, and reduce emissions from deforestation and forest degradation in developing countries (REDD).

## *Biodiversity and protected areas*

8. Strengthen collaboration for identifying gaps in the

designation and management of protected areas, taking into account the situation of respective countries and existing international designations such as UNESCO's Man and the Biosphere Programme, the Ramsar Convention and the World Heritage Convention and integrate into networks of globally important ecosystems for biodiversity conservation, including forests, wetlands and marine and coastal areas, such as coral reefs.

9. Enhance the implementation of the Programme of Work on Protected Areas under the Convention on Biological Diversity by, where appropriate, supporting initiatives such as Germany's voluntary Life Web Initiative.
10. Welcome the International Year of the Reef: 2008 in this context as a means to raise awareness of the vital environmental and economic importance of coral reef ecosystems to people worldwide and to promote improved coral reef conservation.

#### ***Private sector engagement***

11. Strengthen global initiatives and fora promoting dialogue, cooperation and joint activities among various stakeholders including the business sector, NGOs and

researchers, such as the World Business Council for Sustainable Development and the Global Biodiversity Forum.

12. Work to mainstream the concept of biodiversity in society through, where appropriate, developing partnership with the private sector and extending exchanges of information about successful experiences and practice.
13. Encourage corporate social responsibility, with a view to making the private sector a full partner in biodiversity conservation, and promote enabling environments for private investment in sustainable management of biodiversity.

#### ***Strengthening scientific capabilities for monitoring of biodiversity***

14. Further promote international collaboration in research, monitoring, assessment and information sharing of biodiversity in particular by strengthening cooperation among existing organizations focused on research and monitoring of natural systems, including through the use of remote sensing and ground observation so that impacts of climate change can also be monitored.

## Kobe 3R Action Plan

We, the G8 Environment Ministers, based on our discussion in Kobe of the 3R Initiative, 24-26 May 2008,

**Recognizing** that the increase in waste generation and waste not treated in an environmentally sound manner is contributing to worsening environmental pollution worldwide including air, soil and water pollution as well as greenhouse gas emissions,

**Recognizing**, at the same time, that the quantity of raw materials wasted as a result of inefficient resource and waste management worldwide is immense,

**Noting** that the 3Rs, through initiatives to “reduce,” “reuse” and “recycle” materials and waste, aim to promote efficient resource use and harmonization of the environment and the economy,

**Acknowledging** that, by promoting sustainable consumption and production, the 3Rs activities can contribute to increases in resource productivity and decoupling resource consumption and environmental degradation associated with economic activities,

**Understanding** that, in order to construct a sound material-cycle society by increasing resource productivity and decoupling, it is necessary to ensure efficient resource use and minimization of environmental impact along the entire product life cycle, starting with resource inputs and including the production process, consumer choices, and product use, reuse and recycling (sustainable consumption and production),

**Emphasizing** that, in order to reduce greenhouse gas emissions, it is necessary to further the promotion of energy recovery, material and chemical recycling, and biological and thermal waste treatment, taking into account the environmental benefits and costs across all waste management processes,

**Emphasizing** that an international point of view for efficient use of resources through the promotion of the 3Rs is required to respond to the advancing interdependence of the world economy, expansion of trade in materials and products, and resource constraints due to increasing

demands,

**Recognizing** that, with limited technical capacity and knowledge of environmentally sound waste management and the 3Rs, many developing countries face health and environmental risks associated with the improper management of waste,

**Noting** that, in this context, 3Rs policy can contribute to the promotion of environmentally sound management of waste by supporting the implementation of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,

**Realizing** that while the transfer of efficient technologies and knowledge to developing countries may help address these issues, such technologies and knowledge must be suitable for local circumstances, cost-effective, environmentally-sound and socially appropriate,

**Noting** that, in the context of poverty reduction in developing countries, 3Rs policy can contribute to the UN Millennium Development Goals by opening up new markets and creating employment opportunities, taking into account the role of the informal sector while at the same time protecting the environment and human health,

**Recognizing** that resource and waste management policy is a potential driver of innovation and jobs in industrialized and newly industrializing countries,

**Recognizing** that the consistent application of regulatory, economic and other instruments results in the development of a wide range of technologies, organizations and applications in all areas of the 3Rs as well as in waste management, and that at the same time, it gives rise to new job opportunities with higher skills requirements,

**Recognizing** the value of the work done by OECD to develop tools for the 3Rs, including tools for environmentally sound waste management, Extended Producer Responsibility, Material Flows Analysis, resource productivity, and sustainable materials management,

**Reconfirming** that the G8 countries need to show active

leadership by promoting sound waste management and effective resource utilization both domestically and at the international level through collaboration with other countries as well as international organizations,

**Acknowledging** the significant progress of the 3R

Initiative in G8 countries and by the European Commission thus far as summarized in the Annex to this Action Plan,

**Agree** to take the following actions, as appropriate to circumstances in individual countries:

## I

## Goal 1: Prioritize 3Rs Policies and Improve Resource Productivity

### Action 1-1: Prioritize Implementation of 3Rs Policy

- \* Share the importance of the spirit of *mottainai*<sup>1</sup>, prioritize the actions to curb unsustainable consumption of natural resources, and minimize associated life cycle environmental impacts.
- \* Give high priority to waste reduction and take concrete actions such as reducing the use of disposable plastic bags and other single-use consumer products, thereby calling for other countries to follow suit.
- \* Contribute to integrating the concept of the 3Rs in all relevant policy areas.
- \* Strive for the utilization and management of the inputs, materials and energy which are contained in waste in an environmentally sound manner and ensure that waste management processes, including separation and pre-treatment of waste, maintain high standards of protection of the environment and human health such as those developed under the Basel Convention.
- \* Recognize the importance of internalizing external costs so that the final price reflects environmental impacts and create incentives for more sustainable patterns of consumption and production.
- \* Work towards the improvement of the ability of national governments to measure the environmental and economic effects of 3Rs-related activities from a life cycle approach.

### Action 1-2: Improve Resource Productivity and Set Targets

- \* Welcome the adoption of the OECD Council

Recommendation on Resource Productivity and take the lead in implementing the recommendation in each country. Also, support international collaborative work that analyzes material flows and associated environmental/economic impacts towards sustainable resource management through agencies and initiatives such as OECD and UNEP<sup>2</sup>.

- \* As agreed at the St. Petersburg Summit in 2006 by the G8 leaders<sup>3</sup>, set targets<sup>4</sup> as appropriate taking account of resource productivity in furthering efforts to optimize resource cycles.

### Action 1-3: Pursue Co-benefits between the 3Rs and Greenhouse Gas Emission Reductions

- \* Seek co-benefits between waste management and 3Rs-related activities and reducing greenhouse gas emissions and thus contribute to global climate protection by effective implementation of 3Rs practices.
- \* Encourage effective utilization of waste as one of the alternative sources of energy to fossil fuel resources, for example, by developing and utilizing technologies that generate heat and power from organic and other wastes.
- \* Encourage the use of organic materials contained in waste and its safe and lawful utilization for a variety of purposes, such as animal feed, composting, fermentation, and energy recovery. Promote reduced land-filling of organic matter for preventing emission of greenhouse gases, particularly methane.
- \* Together with individual businesses, promote the development of technologies and identify potential opportu-

1 *Mottainai* is a long-established Japanese concept meaning that it is a shame for something to go to waste without having made use of its potential in full. This expression incorporates a respect for the environment that has been handed down from ages past.

2 UNEP is host for the International Panel for Sustainable Resource Management which was established in 2007 with the overall objective to provide independent scientific assessment of the environmental impacts due to the use of resources over the full life cycle, and advise governments and organisations on ways to reduce these impacts. The panel members participate in their capacity of internationally recognized experts.

3 St. Petersburg Plan of Action on Global Energy Security, June 2006, paragraph 19: "As part of an integrated approach to the entire resource cycle we reaffirm our commitment to comprehensive measures to optimize the resource cycle within the 3R Initiative (Reduce, Reuse, Recycle). In furthering these efforts, we will set targets as appropriate taking account of resource productivity. We will also raise awareness of the importance of energy efficiency and environmental protection through national as well as international efforts."

4 Possible targets are, for example, resource productivity, abiotic raw materials used, total waste, hazardous waste generation, municipal waste generation, waste per capita, recycling rates, final disposal, energy intensity.

nities to contribute to the reduction of greenhouse gas emissions through the promotion of 3Rs.

#### **Action 1-4: Promote Science and Technology and Create a Market for 3Rs-related Products**

\* Promote technological innovations in 3Rs-related technologies and environmentally conscious design by

encouraging research and development, certification and standards, and collecting and disseminating information to the public.

\* Encourage the market for 3Rs-related technologies and promote the development of more eco-efficient products through green public procurement and other policy measures.

## **II Goal 2: Establishment of an International Sound Material-Cycle Society**

### **Action 2-1: Collaborate to Promote Sound International Resource Circulation**

\* To achieve sustainable resource circulation on a global scale, place high priority on the promotion of environmentally sound management of re-usable and recyclable resources within each country, in compliance with associated domestic regulations and applicable international agreements. In this context, encourage and support such environmentally sound management in developing countries.

\* At the same time, work to prevent illegal transboundary movements of re-usable and recyclable resources (as wastes or non-wastes) and agree to respect the provisions of the Basel Convention.

\* In cases where the above two safeguards are in place, facilitate the international trade of 3Rs-related goods, materials, products and services, including re-usable and recyclable resources and remanufactured products, which contribute to the reduction of environmental impacts and the effective use of resources without discouraging domestic efforts to improve re-use and recycling.

\* As major world economies, support and collaborate with developing countries to establish an international sound material-cycle society.

### **Action 2-2: Promote International Trade of 3Rs-related Materials, Goods and Products**

\* Seek joint solutions to issues concerning the distinctions between waste and non-waste within the framework of international activities and agreements, notably the Basel Convention; in this context, the work undertaken by the OECD is especially important.

\* Encourage the enhancement of multilateral trade in clean technologies, environmental services and sustainable products by promoting environmentally conscious design and the trade of remanufactured goods.

\* Recognize the significance of reducing barriers to trade in remanufactured goods and support the recently submitted proposal<sup>5</sup> to liberalize trade in remanufactured goods under the WTO<sup>6</sup> Doha Round.

\* Share information and cooperate internationally on mechanisms to support proper international resource circulation such as eco-labelling, certification schemes, or traceability technologies.

\* Facilitate the import of materials, including hazardous and other wastes, for recycling, recovery or treatment from developing countries to G8 and other developed countries with appropriate and adequate technological capacities, in order to mitigate the environmental burden in such exporting countries that do not have environmentally sound management capacities.

## **III Goal 3: Collaborate for 3Rs Capacity Development in Developing Countries**

### **Action 3-1: Promote Collaboration with Developing Countries**

\* Request that bilateral and multilateral aid agencies reflect the concept of the 3Rs in development projects and that private investors promote 3Rs in developing

countries. Prioritizing the 3Rs in national development strategies in developing countries can facilitate the G8's support for endeavours to promote the 3Rs.

\* Collaborate to improve 3Rs capacity in developing countries by helping to develop databases, information

<sup>5</sup> Ministerial Decision on Trade in Remanufactured Goods (TN/MA/W/18/Add.16/Rev.1, 20 December 2007)

<sup>6</sup> Russian Federation is not a member of WTO.

sharing and monitoring mechanisms, 3Rs-related institutional design and policy planning, and supporting the formation of development projects, by utilizing frameworks and initiatives of multilateral cooperation in an effective manner and capacity and expert knowledge of international organizations.

- \* Support the work programs related to capacity building in developing countries under the Basel Convention and assist the activities of Basel Convention Regional Centres.
- \* Seek co-benefits between 3Rs activities and the reduction of greenhouse gas emissions in developing countries, by identifying the environmental impacts of the waste and material management systems, potential opportunities for reducing GHGs from waste and material management systems, and utilizing multilateral collaboration mechanisms. For those who are Parties to the Kyoto Protocol such mechanisms include Joint Implementation and the Clean Development Mechanism.
- \* Work to ensure that waste is treated and disposed of or recycled in facilities which comply with high environmental and health standards, taking into account local social and economic circumstances.

### Action 3-2: Promote Technology Transfer, Information Sharing and Environmental Education

- \* Promote the transfer of environmentally compatible

technologies, management, and know-how for the 3Rs and low-waste generation processes including remanufacturing and efficient industrial technology, to developing countries, in order to initiate innovative reforms.

- \* Enhance knowledge and research networks for the 3R Initiative.
- \* Inform industries, NGOs and citizens about 3Rs-related activities at the national and international levels.
- \* Disseminate information on the effectiveness of 3Rs policies and actions and the potential negative environmental impacts of waste (on climate, air, water including ocean, soil, and biodiversity) through public awareness campaigns and environmental education programs

### Action 3-3: Promote Partnership between Stakeholders

- \* Promote dialogue and collaboration with all stakeholders involved in the 3R Initiative at the national and international levels.
- \* Develop strategies to increase the involvement of the business community, including small and medium-sized enterprises, such as supporting technological development of innovative 3Rs processes, especially with a view to improving resource efficiency and state-of-the-art waste treatment.
- \* Welcome all efforts aimed at promoting international cooperation with other governments, international organizations, NGOs and the scientific community to achieve further progress in the 3Rs.

## IV

### Follow-up on G8 Activities Based on the Action Plan

- \* We will report on the progress of activities, policies and measures implemented based on this Action Plan at the G8 Environment Ministers Meeting in 2011 or whenever

such reporting is appropriate, and at appropriate intervals thereafter. We request the OECD to follow up on the progress of work related to resource productivity.

## Annex Progress of the 3R Initiative

Based on the spirit of *mottainai*, the 3R Initiative aims to establish a sound material-cycle society which values limited resources and does not waste valuable goods or materials by promoting the capacity development of each country and endorsing the development of 3Rs-related science and technology through collaboration among countries, stakeholders and international organizations.

To promote international activities based on the 3Rs concepts, the 3R Initiative was proposed at the G8 Sea Island Summit in 2004 and was officially launched at the

Ministerial Conference on the 3R Initiative in Tokyo in 2005. The importance of increasing resource efficiency through environmentally sound management in each country and establishment of the international sound material-cycle society through the 3R Initiative was reiterated at the succeeding G8 Summits.

The directions of the 3R Initiative have been discussed at the Ministerial Conference on the 3R Initiative in 2005, the First Senior Officials Meeting on the 3R Initiative in 2006, and the Second Senior Officials Meeting in 2007.

More specifically, these meetings addressed five major issues: (1) promotion of the 3Rs; (2) reduction of barriers to the international flow of 3Rs-related goods and materials; (3) cooperation between developed and developing countries; (4) cooperation among stakeholders; and (5) science and technological development for the 3Rs.

Through this process, a good deal of common understanding has been built up among G8 and non-G8 countries and international organizations as to the need for the prioritization of 3Rs-related policies in each country, capacity development in developing countries and concerted efforts at international/regional levels towards building an international sound material-cycle society, improvements in the infrastructure for information sharing and research, and the pursuit of co-benefits with actions to respond to climate change.

At the 2006 St. Petersburg Summit in particular, the G8 leaders agreed to “set targets as appropriate taking account of resource productivity” in furthering their efforts to optimize resource cycles within the 3R Initiative.

Over the three years since the 3R Initiative was launched, the G8 countries have found it to serve a number of important purposes and recognized its significance as follows:

- \* The 3R Initiative has provided countries with a platform for sharing information and exchanging opinions and experience on 3Rs-related policies. Some examples of such policies and activities are shown in Table 1 below. As a result, the Initiative has facilitated the realization of concrete cases of domestic activities and bilateral and multilateral collaboration. For example, in Asia, the 3R Initiative is functioning to generate momentum by setting timelines and suggesting an agenda to multilateral and bilateral collaboration towards 3R National Strategy Making and the creation and operations of the 3R Knowledge Hub. The 3R initiative can help to prioritize the 3Rs and waste management within each country’s policy.
- \* The 3R Initiative can demonstrate the G8 countries’ determination to establish a sustainable society through 3Rs-related activities, in light of the connections between 3Rs-related practices and other various pressing environmental issues including climate change as discussed at the G8 Environment Ministers Meeting in 2008.
- \* The 3R Initiative presents opportunities to discuss the challenges of the 3Rs and waste and material management in association with international, inter-regional and macro issues such as world economic growth and resource scarcity. The 3R Initiative helps to develop shared understanding of significant challenges to be overcome in attaining sustainability, such as international movement in reusable and recyclable resources, an issue which has both potentially positive and negative impacts on the environment as discussed in the First and Second Senior Officials Meeting on the 3R Initiative in 2006 and 2007.
- \* The 3R Initiative has started to function to facilitate environmentally sound practices by stakeholders, in particular the private sector’s initiatives towards efficient use of resources and minimization of environmental impacts, such as the improvement of environmental management technologies and design for the environment, and active utilization of by-products and recycled resources in international supply and production networks.
- \* In addition, the 3R Initiative has facilitated close collaboration between the member countries and the 3Rs activities of OECD, UNEP, UNCRD, the Secretariat the Basel Convention and other international organizations and thereby strengthened these efforts.
- \* Furthermore, as the 3R Initiative progresses, it becomes more recognized for facilitating environmentally sound management of waste and promoting efficient resource use in developing countries. The 3R Initiative is expected to facilitate concerted efforts and role sharing among the G8 countries in the realm of international cooperation aimed at effective capacity building and assistance for non-G8/non-OECD countries towards environmentally sound international resource circulation, taking into account existing international agreements, such as the Basel Convention.

Along with the advancement of the 3R Initiative, each G8 country has shown leadership by initiating a number of 3Rs-related activities, both domestically and at the international level. Examples of such efforts are given in Table 1 below.

Table 1 Examples of progress in 3Rs-related efforts in the G8 member countries and by the European Commission

<b>Canada</b>	<ul style="list-style-type: none"> <li>• Waste diversion (recycling and composting) per capita has improved by 24% from 2000 to 2004.</li> <li>• Implementing Green Procurement at Federal and Provincial levels and Extended Producers Responsibility programs for specific waste streams.</li> <li>• Contributed internationally to the development of guidelines for environmentally sound waste management under OECD.</li> <li>• The link between recycling, energy efficiency and reduced GHG emissions has been established and work in this area continues.</li> </ul>
<b>European Commission</b>	<ul style="list-style-type: none"> <li>• Thematic strategy on the prevention and recycling of waste (2005), Thematic strategy on the sustainable use of natural resources (2005)</li> <li>• Revision of the WEEE and RoHS directives (2008) and a target setting for the ELV directive.</li> <li>• Established an international panel on sustainable resource management together with UNEP.</li> <li>• Proposal for a revised Waste Framework Directive.</li> <li>• Proposal for an Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy.</li> </ul>
<b>France</b>	<ul style="list-style-type: none"> <li>• National plan for waste prevention (2004).</li> <li>• Implemented various awareness campaigns.</li> <li>• In addition to the implementation of recycling related regulations of EU, France applied EPR to waste tires (2004) and Unsolicited Flyer (2007).</li> <li>• “Grenelle de l’Environnement”: <ul style="list-style-type: none"> <li>• reduction of waste production of 5 kg/inhabitant/year each year during five years;</li> <li>• increase of recycling rates (e.g. organic matter recovery).</li> </ul> </li> <li>• Development of sustainable production and consumption (through economic tools such as bonus/malus) and enhanced producer’s responsibility (on households hazardous waste, on pieces of furniture).</li> </ul>
<b>Germany</b>	<ul style="list-style-type: none"> <li>• Started introduction of extended producer responsibility in 1988 and later included it in the Act for Promoting Closed Substance Cycle Waste Management and Ensuring Environmentally Compatible Waste Disposal.</li> <li>• Through the introduction of various recycling laws, the utilisation of municipal waste as resources increased from 13 % in 1990 to 58% in 2006.</li> <li>• Banned landfilling of waste without intermediate treatment.</li> <li>• Developed successful incentives for recycling and recycling through internalization of external costs by implementation of high environmental and technical standards.</li> <li>• Reduction of GHGs from the waste management sector would account for 10 % of Germany’s Kyoto Protocol target.</li> <li>• Set a target to double resource productivity by 2020 compared to 1994</li> </ul>
<b>Italy</b>	<ul style="list-style-type: none"> <li>• Set national targets for separated collection of urban solid waste of 50% by the end of 2009 and 60% by the end of 2011.</li> <li>• Achieve 25% reduction of Total Material Requirement (TMR) by 2020, 50% by 2030, and 90% by 2050.</li> <li>• Actively introducing various market instruments under a new financial law in 2007. Also, Italy is utilising environmental indicators and targets including those of waste generation and management for distribution of a part of EU structural funds.</li> <li>• Created new markets for materials through the Recycling Consortia for packaging (glass, plastic, wood, paper, steel, aluminium), exhausted oilbatteries, under industrial management &amp; responsibility (CONAI system).</li> </ul>
<b>Japan</b>	<ul style="list-style-type: none"> <li>• Japan has a fundamental law (framework) and plan (implementation plan) for establishing a sound material-cycle society. In the fundamental plan, Japan sets targets to be achieved by 2015 for resource productivity [JPY 420,000/ton, GDP/Direct Material Input (DMI)], the cyclical use</li> </ul>

rate [14-15%, cyclical use amount/ (cyclical use amount + DMI)], and final disposal amount (23 million tons, as the amount of waste brought to landfill).

- Japan achieved a 70% reduction in its final disposal amount between 1990 and 2005.
- 3Rs activities were in 2007 incorporated as part of an important environmental strategy called “Becoming a Leading Environmental Nation in the 21st Century: Japan’s Strategy for a Sustainable Society”.
- Recycling-related laws have recently been amended to further promote recycling of wastes, such as the recycling of packaging and container waste and food waste.
- Japan has promoted the 3Rs in Asia through various activities such as policy dialogues and capacity building as well as by closely collaborating with international organisations

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<b>Russia</b>	<ul style="list-style-type: none"> <li>• Various laws for the promotion of the 3Rs are being drafted, including a federal law on recoverable resources. Also there are regulations licensing activities related to hazardous waste treatment.</li> <li>- Decree of the Government of the Russian Federation of August 29th 2007 No. 545 “On Amendments made to RF Governmental Decree of June 16th 2007 No. 461 “On Rules of Development and Approval of Standards of Waste Creation and Limits on it’s Disposal.”</li> <li>- 40% of consumer and industrial waste is being recovered for reuse or subject to waste treatment.</li> </ul>
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<b>United Kingdom</b>	<ul style="list-style-type: none"> <li>• Revised Waste Strategy for England published in 2007 includes tougher targets on recycling and composting household waste: 40% by 2010, 45% by 2015 and 50% by 2020.</li> <li>• New target to reduce amount of household waste not re-used, recycled or composted – by 29% of 2000 totals by 2010 and by 45% by 2020.</li> <li>• Implementing economic incentives such as a landfill tax which will escalate from £32/te now to £48/te in 2010.</li> <li>• Targeting action on key waste materials: paper, food, glass, aluminum, wood, plastics and textiles as well as actions on products in order to achieve sustainable consumption and production.</li> <li>• More effort being place on prevention of illegal transboundary movement under the framework of the Basel Convention.</li> </ul>
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<b>United States of America</b>	<ul style="list-style-type: none"> <li>• The US promotes 3Rs principles though a wide range of measures and programs, including Green Buildings, the Electronic Product Environmental Assessment Tool (stimulating the purchase of environmentally sound electronics and development of electronics take-back programs), Green Suppliers network, and similar standards and product stewardship programs; focus is on source reduction, toxics reduction, recycling and reuse of materials, and remanufacturing.</li> <li>• The US promotes the safe use of industrial materials like coal combustion residue, foundry sands, and construction and demolition debris, with a target of 50% of coal combustion residue beneficially used by 2011; the current rate is 43%.</li> <li>• The national municipal solid waste recycling goal is 35%, with a focus on containers, paper, and food wastes; through the efforts of a stakeholder partnership, paper recycling reached 56% in 2007.</li> <li>• The US issued an Executive Order in January 2007 to strengthen federal environmental, energy, and transportation management by reflecting the concept of 3Rs.</li> </ul>

Source : Compiled by the Ministry of the Environment Japan and the WMR Project, Institute for the Global Environmental Strategies, based on materials for the 2nd Senior Officials Meeting on the 3R Initiative (4-6 October 2007, Bonn, Germany)