

## **G8 Environment Ministers Meeting 2008**

### **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

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<sup>1</sup> *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.

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.

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<sup>2</sup> 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.

<sup>3</sup> 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."

<sup>4</sup> 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.

- 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 opportunities 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.

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<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.

- 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 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*

Canada	<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>
European Commission	<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>
France	<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>
Germany	<ul style="list-style-type: none"> <li>➤ Started introduction of extended producer responsibility in 1988 and later</li> </ul>

	<p>included it in the Act for Promoting Closed Substance Cycle Waste Management and Ensuring Environmentally Compatible Waste Disposal.</p> <ul style="list-style-type: none"> <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>
Italy	<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 oils batteries, under industrial management &amp; responsibility (CONAI system).</li> </ul>
Japan	<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 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).</li> <li>➤ Japan achieved a 70% reduction in its final disposal amount between 1990 and 2005.</li> <li>➤ 3Rs activities were in 2007 incorporated as part of an important environmental strategy called "Becoming a Leading Environmental Nation in the 21<sup>st</sup> Century: Japan's Strategy for a Sustainable Society".</li> <li>➤ 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.</li> <li>➤ 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</li> </ul>
Russia	<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. <ul style="list-style-type: none"> <li>- Decree of the Government of the Russian Federation of August 29<sup>th</sup> 2007 No. 545 "On Amendments made to RF Governmental Decree of June 16<sup>th</sup> 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> </li> </ul>
United Kingdom	<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</li> </ul>

	<p>composted – by 29% of 2000 totals by 2010 and by 45% by 2020.</p> <ul style="list-style-type: none"> <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>
United States of America	<ul style="list-style-type: none"> <li>➤ The US promotes 3Rs principles through 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 2<sup>nd</sup> Senior Officials Meeting on the 3R Initiative (4-6 October 2007, Bonn, Germany)*