

**Senior Officials Meeting on the 3R Initiative**  
**March 6-8, 2006 Tokyo, Japan**  
**Chair's Summary**

**Introduction**

1. The Senior Officials Meeting on the 3R Initiative was held in Tokyo, Japan on March 6-8, 2006 hosted by the Ministry of the Environment of Japan. There were 20 participating countries (Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Malaysia, Mexico, the Philippines, the Republic of Korea, the Russian Federation, Singapore, South Africa, Thailand, the UK, the USA, and Viet Nam), the European Commission, eight participating international organizations and networks (the League of Arab States, ADB, ESCAP, OECD, the Secretariat of the Basel Convention, UNCRD, UNEP, and APFED).
2. This Chair's Summary was not negotiated and does not represent consensus texts. It highlights the discussions, taking into account participants' comments on the draft summary.

**Opening Session**

3. Mr. Yasuyuki Eda, Senior Vice-Minister of the Environment of Japan, opened the meeting by citing the critical nature of focusing on concrete implementation issues and expressing his hope that a sharing among countries about the 3Rs would help in the attainment of sustainable development globally.
4. Mr. Kazuyoshi Okazawa, Senior Advisor to the Minister, Ministry of the Environment of Japan, was elected Chair of the meeting. Dr. Helge Wendenburg of Germany and Mr. Marco Antonio Borzino of Brazil co-chaired Working Group One on "Implementation of the 3Rs within Each Country," while Mr. Jamie P. Estrada of the United States of America and Mr. Adisak Thongkaimook of Thailand co-chaired Working Group Two on "International Promotion of the 3Rs (International Flow of 3R-related Goods, Materials and Products)". The Secretariat of the SOM then explained the background and aims of the meeting, after which the proposed agenda was approved.

**Plenary Session**

5. Each national delegation made a brief presentation on domestic progress of the 3Rs. Many delegates reported new legislation and strategies for promotion of the 3Rs since the Ministerial Conference on the 3R Initiative held in April 2005. Delegates from each international organization also reported projects and programs to promote the 3Rs now being implemented in various parts of the world. Delegation presentations are summarized in the Appendix.
6. The importance of cooperation on the 3Rs at the national, regional, and international levels was emphasized. The effectiveness of bilateral, multilateral, multiregional, north-south, and south-south cooperation was also noted. In addition, collaboration/linkage with the business sector and NGOs was stressed for successful implementation of the 3Rs. Participants recognized the

need for establishing a system to exchange information on practices, policies and technologies, both good and bad.

### **Discussions in the Working Group Sessions**

7. Discussions on how to promote the 3R Initiative were held in two parallel Working Groups. Working Group 1 was attended by 25 participants, who discussed issues related to “Implementation of the 3Rs in each country.” Working Group 2 was attended by 51 participants, who discussed issues related to “International implementation of the 3Rs.” Taking up the themes above, each Working Group discussed the cross-cutting issues of: (i) promotion of international cooperation, (ii) cooperation among stakeholders, and (iii) promotion of science and technology. The co-chairs of the Working Groups prepared summaries as appearing below. (The diagrams used in the Working Group 1 is hereto annexed.)

### **Working Group 1: Co-chairs’ Summary**

#### **Implementation of the 3Rs within Each Country**

##### **Session 1: Review of major discussion points**

The key elements of good practices on the 3Rs that are transferable/replicable to other countries include (a) an electronic waste manifest system that was developed in the Republic of Korea, which provides real-time information on the monitoring of waste generation up to the final disposal stage, (b) market mechanisms for recyclables, (c) public awareness raising, (d) legislation on the 3Rs and recycling, (e) promotion of Extended Producer Responsibility (EPR), (f) promoting public-private partnerships, (g) enhancing recycle rates in partnership with waste pickers associations and NGOs, (h) information sharing systems, (i) product design standards, (j) establishing clear targets for waste reduction and recycling, (k) a step-by-step approach for banning the disposal of untreated wastes into landfills, (l) schemes for the registration of recycling units possessing capacity for environmental sound management.

Based on the examples discussed, key elements to good practices were identified as follows:

- (i) A holistic approach covering upstream (design and manufacturing) and downstream (waste management),
- (ii) A comprehensive approach to addressing material recycling and energy recovery,
- (iii) Effective/optimal cost sharing mechanisms for the 3Rs,
- (iv) Promotion of environmentally sound waste treatment (e.g., composting),
- (v) Innovative measures (making good use of by-products from waste treatment, e.g., bio-gas and Clean Development Mechanism, CDM)
- (vi) PPP (public-private partnership),
- (vii) Involvement of small and medium sized enterprises (SMEs),
- (viii) Changing business models from commodity provision to service provision,
- (ix) Decentralized/community-based approach
- (x) Linking the 3Rs to other policy goals, such as job and employment creation

Recommended policy measures and actions can be developed based on the following:

- (i) regulatory measures
- (ii) market forces
- (iii) civil society participation and awareness raising, and
- (iv) technology development and co-operation.

The continued discussion of the aforementioned key pillars of successful practices regarding 3R initiatives was suggested.

## **Session 2: Promotion of international cooperation**

International cooperation is essential to promote the 3Rs in various respects. Multilateral environmental agreements such as the Basel Convention provide a useful framework and policy guidance on promoting the environmentally sound management of waste. Regional cooperation is essential for the proper application of the Basel Convention, which has 14 regional centers; some of which have regional coordination functions. Other international organizations also provide valuable assistance in the promotion of capacity development and the facilitation of pilot project implementation.

International cooperation is helpful in addressing and identifying solutions to the challenges facing the promotion of 3R implementation. Constraints are found in such respects as (i) Monitoring and data collection as basic information for promoting the 3Rs, (ii) Promoting the involvement of key players, building awareness, public participation, and synergies with other policy processes, (iii) Sorting/classifying good practices with sound logic and in a consistent manner; some good practices are not easily transferable due to their complexity or uniqueness, (iv) Mitigating the impacts of disaster on solid waste and landfills; the need for coordinated approaches between public and private sectors is often highlighted in the response to disaster.

With a view to invigorating sub-regional, regional and international cooperation on the 3Rs, the following actions, among others, were suggested:

- (i) Promoting high level policy dialogues at the sub-regional/regional/international levels,
- (ii) Fostering international collaborative activities including those facilitated by bilateral aid agencies, UN and other international and regional organizations such as the Secretariat of the Basel Convention, UNCRD, UNEP, ADB and UNESCAP,
- (iii) Supporting the OECD research on material flows and resource productivity, indicators,
- (iv) Establishing regional and international networks on the 3Rs (e.g., knowledge and technology, basic information, internet-based knowledge transfer e.g., an ADB/UNEP Knowledge Hub, training workshops),
- (v) Regional centers of international and regional organizations can play a role in promoting sub-regional/regional cooperation (e.g., Basel Convention),
- (vi) PPP within and beyond borders – supporting multi-stakeholder dialogue forums,
- (vii) Covering both upstream (design & production) and downstream (waste management) phases,
- (viii) Careful attention should be paid to the replicability of success stories/good practices bearing in mind the varying socio-economic conditions,
- (ix) Work on sustainable production and consumption patterns is to be taken into account,

and

- (x) Waste management approaches should be made in consideration of natural disaster risks.

### **Session 3: Cooperation among Stakeholders**

Multi-dimensional stakeholder cooperation was discussed with a view to promoting 3R implementation at the national level. A number of constraints and challenges were identified in this respect, including the following aspects;

Technology transfer has to be customized and localized to meet and suit the local conditions in recipient countries. On-the-ground demonstrations and pilot projects are helpful in meeting these needs.

#### *Enabling policy frameworks*

Governments may consider enabling policy frameworks for promoting public-private partnerships; some examples are (i) community-based production systems, (ii) incentive programs such as award giving and certificates for industries/corporations who are promoting clean production, (iii) community and industry cooperation on forest waste management, and (iv) multi-stakeholder partnership (government, NGOs, community, private sector, and donors) for community-based composting projects.

The 3Rs need to be mainstreamed as an integral part of the policies and programs of various governmental ministries and agencies through effective inter-ministerial coordination.

Other enabling policies should include tax benefits under the national framework for the mainstreaming and promotion of clean production to be carried out in the long term.

#### *Empowering stakeholders*

It was noted that multi-stakeholder cooperation among the public sector and civil society (private sector, NGOs and communities) on the 3Rs can be promoted mainly by (i) enabling effective policies, fiscal support and incentives, (ii) technology and investment/finance for the 3Rs, and (iii) promoting awareness-raising, education, and capacity building. It is important to consider the participation of the informal sector (for example, the waste pickers association in Brazil) in the planning process for waste management and recycling activities. This could also help the waste pickers association to effectively and formally address health, safety, and pollution issues in the informal sector, and to create job opportunities.

It was suggested to promote multi-stakeholder cooperation particularly through the following actions:

- (i) Promoting capacity development is a basis for stakeholder cooperation,
- (ii) Stable and enabling policies by the government are essential,
- (iii) Development of self-financing schemes is a key to enhancing the durability of the 3Rs,
- (iv) Decentralized and community-based approaches, including SME involvement,
- (v) Addressing multi-dimensional and/or local needs, capturing multiple benefits, providing

- incentives and integrating the 3Rs into community and business development (e.g., income generation, providing alternative livelihood, other environmental benefits),
- (vi) Supporting key stakeholders in taking a lead on 3R initiatives,
  - (vii) Sharing generic elements of stakeholder collaboration on the 3Rs among countries (including between developed and developing countries).

#### **Session 4: Promotion of science and technology**

Science and technology play a crucial part in advancing the 3Rs. Within this field, however, there are a number of challenges in promoting activities and cooperation.

##### *Community-based approach*

The economic viability of 3R-related technologies is important as levels of development and socio-economic conditions vary depending on the particular country or community. Technologies to prevent open burning of agricultural wastes are one of the key areas. Waste collection fees need to properly reflect the cost of such services and must reflect the financial capability and willingness to pay of the households. The “waste per volume charge” scheme has been successful. However, it needs to be combined with other schemes such as EPR.

##### *Information sharing*

Regarding access to 3R-related technological information, the problem is not that there is a lack of technology or information thereon, but it may be difficult to determine an appropriate technology out of many technology options. A database on 3R technologies with a proper search engine would therefore be useful. The cyber network could also include a feature of interactive information exchange. It was noted that the purpose of the database should be to provide information and not to impose one-sided standards.

In exploring the establishment of such a database, the formation of a small design team was suggested. Such a team could work to clarify some of the questions raised on the development of the database such as the feasibility and cost to be involved.

Through the discussions highlighted above, the following suggestions were made:

- (i) Governments should play a role in incubating capacities for developing and applying technologies,
- (ii) Technology transfer should be promoted step by step keeping in mind its suitability and economic viability,
- (iii) Social systems need to be developed to enhance the impact of technology,
- (iv) Virtual knowledge transfer should be promoted with a network hub and an information clearing house,
- (v) Good practice on technology transfer at the national level can be replicated at regional/international levels, and
- (vi) Other means of knowledge/technology sharing should be promoted - such as pilot

projects, business/technology exhibition and expert group meetings.

## **Working Group 2: Co-chairs' Summary**

### **International Promotion of the 3Rs (International Flow of 3R-related Goods, Materials and Products)**

#### **Session 1: General Discussions**

##### *General Points for Introduction*

Japan's experience in promoting the 3Rs indicates that: (i) proper waste management is a prerequisite for the promotion of the 3Rs, (ii) a few pieces of legislation to promote the 3Rs have reduced pollution levels associated with waste management, (iii) collaboration among the central government, local governments, the business sector and NGOs, is essential, (iv) technology development is a key to promoting the 3Rs and solid waste management (e.g., management system for PCBs), and (v) measures are needed to prevent illegal trade.

The questionnaire survey revealed there are problems associated with the international flow of 3R-related goods, materials and products. They include difficulty in distinguishing regulated materials from non-regulated materials (e.g., hazardous from non-hazardous materials). There are positive and negative impacts of the transboundary movement of recyclables. Various measures can be taken to maximize the positive effects and mitigate the negative effects of transboundary movement by participating countries such as licensing schemes and reducing trade barriers.

##### *Major Points Raised during Open Discussion*

Several developing countries stressed that recipient countries of remanufactured / refurbished / reused products must dispose of them as wastes once past usable life, and many developing countries have limited capacity and infrastructure to do so in an environmentally sound manner. A licensing system for regulating imports could be useful, as well as other ways to make use of components. Measures for internal promotion of the 3Rs could contribute to securing necessary resources.

Promotion of an adequate recycling industry is considered important for economic development and job creation both for developed and developing countries.

It was noted that the 3R initiative needs to focus not only on wastes already generated, but reduce energy and resource consumption by promoting clean production activities. International cooperation is necessary to promote the 3Rs. Developing countries can learn from the experiences of other countries, especially developed countries.

Some countries expressed concern that trade in recyclables / remanufactured / refurbished / reused products could be used to disguise the dumping of unwanted materials in developing countries.

Several countries stressed that wastes, remanufactured goods, and used products are different and should be distinguished. Remanufacturing is an important industry and offers certified products. Some participants mentioned that there were barriers to trade in remanufactured goods

and used products. It was also mentioned that there is no international definition of remanufactured products.

## **Session 2: International Cooperation**

### *Policy and Rules*

Some participants noted that the 3Rs should not be considered as a single issue. 3Rs should be looked at in a much broader policy context, which includes production processes, natural resources management, products policy and waste management. It is also important to link the 3Rs to sustainable production and consumption. A few countries emphasized that the 3Rs should be closely associated with Sustainable Consumption and Production (SCP) Task Forces. The link to EPR and product design was also mentioned.

Questions were raised about the nature of trade barriers in products under discussion. There are rules on transboundary movement of hazardous wastes (e.g., the Basel Convention) approved by the international community. Some suggest that additional rules are necessary to regulate the transboundary movement of recyclable products, while others see regulation as inefficient, and suggest mandatory rules should be left to individual countries. It was stated that in the short run, technical and practical guidelines seem more appropriate so that practical experiences are accumulated and potential problems are clearly identified by countries concerned.

The importance of defining wastes and what constitute resources was raised.

In this respect, the EU is developing a process under which wastes are defined not by economic value but by environmental risks. In addition, Indonesia mentioned a testing requirement of all wastes to determine their toxicity.

### *Information and technology*

Information sharing is one of the most useful approaches to achieve the 3Rs across countries. Life cycle assessment can be useful to understand the implications of the international flow of wastes and 3R-related goods and materials. Some countries pointed out that product design and production processes are crucial in certain products, since at these stages most of the environmental impacts are determined.

Participants emphasized that data and information regarding international trade and recycling goods need to be strengthened, so that proper environmental assessment can be conducted.

It is noted that, while used and remanufactured goods exist in developing countries, information regarding associated environmental impacts should be communicated by producers. In this respect, government-to-government as well as business-to-business communications should be encouraged.

Some countries pointed out that most technology transfer is associated with costs. How this issue is addressed is crucial. Some 3R related technologies are very good, but too costly. Such technologies may not be appropriate for developing countries. Technologies that appropriately meet the needs of developing countries should be promoted. Also mechanisms to meet financial

needs of developing countries have to be strengthened.

Some countries emphasized that private companies can be major driving force to technology transfer. Business to business technology transfer is considered important. Industry should be more encouraged in this respect. However, business environment in some developing countries is not conducive to having private companies make necessary investment.

It was stressed that countries needed to know more about the movement of wastes, both legal and illegal. More international research is necessary to understand the whole flow of materials, from generation to disposal, and to clarify what kind of environmental issues have actually taken place in developing countries. The result of the research could alert policy makers to the need to take appropriate action. It was noted that the OECD works on material flows and resource productivity, including accounts, indicators, and sustainable material management, and could also conduct research on the impact of trade in 3R products.

Many mentioned that databases are useful and should be shared to help developing countries identify what are hazardous wastes and what are not. In this regard, more detailed characteristics of wastes need to be presented, and information regarding processing technologies, costs, and environmental risk assessment should be provided. It was pointed out that processing and treatment technologies commonly used in developed countries tend to be high tech and high cost, and therefore may not be appropriate for developing countries.

### *Capacity building*

It is noted that specific capacity is necessary to promote the 3Rs in most developing countries. In this respect, capacity is built through actual engagement in all 3Rs. It was pointed out that ban on international trade of wastes containing recyclable resources may prevent capacity transfer. It should be noted that some developing countries have enough capacity in place (with safeguards such as licensing) to handle wastes and recyclable materials properly.

Some countries pointed out that international trade of wastes is not limited to North-to-South, but increasing volumes of trade are taking place between developing countries. Therefore, appropriate capacity of developing countries has to be developed in this context as well.

In order to accumulate practical lessons, bilateral cooperation is considered effective. There have been many cases where technology and capacity transfers have taken place from developed to developing countries. Trade related agreements such as FTAs have also provided valuable opportunities for such bilateral collaboration.

Some countries emphasized that regional collaboration is considered necessary to properly deal with wastes. Small island countries do not have capacity to deal with increasing wastes generated. Some advanced technologies are only available in developed countries but have to be adapted to local conditions, and in such cases developed countries must assist developing countries to manage waste properly. This may include exportation to developed countries.



### **Session 3: Collaboration among Stakeholders**

#### *Intergovernmental Collaboration*

A need has been identified for stronger coordination and communication between environmental/health authorities and Customs Agencies in order to raise awareness among customs officers about waste trade.

Also pointed out was a need to have day to day communications among Customs, Port, and Maritime Authorities, to monitor transboundary movement of wastes in particular and to prevent illegal movements.

Training for Customs officers especially in developing countries is emphasized, so that they can identify hazardous materials and products. In this respect, UNESCAP has started training programs for Customs officials in selected developing countries in Asia. The Secretariat of the Basel Convention has conducted a series of regional and national workshops for the training of Customs and enforcement officers in cooperation with other MEAs and developed a manual on the control of illegal traffic. UNEP informed the group about the Green Customs Programme, involving MEAs, the World Customs Organization, and INTERPOL.

Some countries pointed out that regional Customs networks have been already set up in North America and Europe (North American Commission for Environmental Cooperation, IMPEL-EU Network). The network in North America has been very effective in monitoring the movements of hazardous wastes within the region. Experiences and lessons gained will be shared with other regions. It was reported that a similar network was initiated in Asia as well.

#### *Multi-stakeholder involvement*

It was noted that NGOs can play an important role in promoting the 3Rs, particularly in relation to creating public awareness. Therefore, NGOs should participate more in regional and international policy dialogues as well as in future meetings on the 3Rs to make useful contributions.

Business can be an important partner to promote the 3Rs. It is proposed that representatives of business should be involved in future meetings on the 3Rs. Exchange of information and experiences should be promoted more among private companies concerned, both domestic and international. It was noted that multinational corporations can be effective propagators of the 3Rs and may be a resource for best practices and the transfer of technology and knowledge. Additionally, some countries emphasized that industry should be encouraged to promote 3R-related products and technologies in the marketplace and participate in ongoing public-private partnerships, such as the mobile phone partnership initiative under the auspices of the Basel Convention.

### **Session 4: Science and Technology**

Participants emphasized that international collaboration is essential to promote 3R-related technologies particularly for developing countries. The important role of the development

assistance was highlighted. There should be concerted efforts among countries, international organizations, and businesses so that synergies are created. Also pointed out was the need to create an international network of experts and researchers.

It was noted that there are already many technologies available to promote the 3Rs. However, they are not necessarily appropriate in developing countries' context. In some cases, no effort is made to adapt technologies to local conditions, which result in worsening the situation. Indigenous and locally-developed technologies are often useful; thus, such technologies should be promoted.

Important for the 3Rs is, as pointed out by a few participants, a system such as eco-towns and eco-industrial parks to combine industries so that wastes generated by one industry are used by other industries. This could be considered at local, national, and regional levels. This kind of system will reduce costs and environmental impact for producers and consumers.

Some countries pointed out that assessment of individual technologies is necessary to see if they are cost effective. This is particularly important to developing countries, because financial resources are limited. UNEP is developing a sustainability assessment tool to assist in the selection of appropriate technologies. The United States has submitted a formal proposal to the OECD Committee on Business Environment to study the economic benefits of sustainable manufacturing and to establish a system of indicators to measure the success by which industry achieves sustainable production.

It was pointed out that in some developing countries, CDM and EU Emission Trading Scheme have been utilized to get additional funds to support projects related to solid waste management, particularly recovery of land fill gases.

It was proposed to develop an international waste observatory to compile and analyze information regarding transboundary movements of recyclables, markets for recyclables, and appropriate technologies for treatment and recycling. This is partially met by the Basel Convention, which has set up knowledge hubs on hazardous wastes in China and Indonesia.

### **Further Steps for 3R Implementation**

8. The SOM helped to facilitate the exchange of information and experiences for the promotion of the 3Rs and also served as the driving force for each county to take appropriate measures as well as implement environmentally-sound management. The delegates supported the continuance of this process and welcomed the proposal of Japan to initiate regional activities in Asia, including the organization of a regional meeting in Autumn 2006 which should be open to other countries and partners. A few international organizations, such as UNEP, ADB, UNCRD, ESCAP, Secretariat of the Basel Convention and OECD, announced activities to promote the 3Rs jointly with the Japanese proposal. These activities include organization of subregional policy dialogues, creation of a knowledge hub on the 3Rs, and support for several countries in Asia to develop national 3R strategies.

9. It was pointed out that the 3Rs could be integrated with environmentally sound waste management. Also important is the integration with circular economy, sound material cycle economy, cleaner production and technologies, material flows and resource productivity, sustainable materials management, zero-waste economy, waste management hierarchy, product design, life cycle assessment, sustainable production and consumption models, extended producer responsibility, green growth, green procurement and overcoming trade barriers taking into account the existing rules of transboundary movement of hazardous wastes. It was emphasized that commonalities clearly exist among countries at the regional level, and continued work on the 3Rs, particularly in a well-structured forum, would prove valuable. Delegates emphasized that regional cooperative efforts are one of the areas where further efforts are clearly needed.
10. Russian Federation is intended to discuss the 3R Initiative at the forthcoming summit of the G8 in St. Petersburg in July 2006 in the context of topics which will be under consideration at the summit. Germany stated its interest in considering how to promote the 3R Initiative during its presidency of the G8 in 2007. Japan expressed its intention to continue its leading role in promoting the 3R Initiative, leading up to its presidency of the G8 in 2008.