

CONCEPT NOTE

Third Regional 3R Forum in Asia

Singapore, 5-7 October 2011

**Theme: “Technology Transfer for promoting the 3Rs –
Adapting, implementing, and scaling up appropriate technologies”**

1. BACKGROUND

Regional Context

The Asian-Pacific region is facing severe challenges in coping with the rapidly increasing volume and changing characteristics of urban and industrial wastes. The quantum of waste is increasing significantly due to rising population, and increasing consumption and per capita waste generation. Apart from municipal solid waste (MSW), emerging waste streams such as electronic waste (E-waste), health-care waste, plastic waste, construction and demolition waste, and household hazardous waste have become matters of concern. These wastes, if not managed properly, will have a significant adverse impact on human health, ecosystems, and resources, which will then threaten the sustainability of the region and its economies. Alternate models of growth that decouples economic growth from excessive use of resources and minimizes generation and disposal of wastes should be the strategy adopted. Promotion of Reduce, Reuse, and Recycle (3Rs) should form the key element of such a strategy.

The Regional 3R Forum in Asia was established in November 2009, with the objective of becoming a knowledge networking platform for disseminating and sharing best practices, technologies and tools on various aspects of the 3Rs. This platform was also expected to facilitate a high-level policy dialogue to address the linkages of 3R with concepts such as Integrated Solid Waste Management (ISWM), Sustainable Consumption and Production (SCP), and Sound Material-Cycle (SMC) on a regular basis. At the Inaugural Meeting held on 11-12 November 2009, the *Tokyo 3R Statement* was endorsed by the participants, which provided the overall direction and priorities for Asian countries in the promotion of 3Rs (http://www.uncrd.or.jp/env/spc/docs/tokyo_3r_statement.pdf). Building on the Inaugural Meeting, the Second Meeting of the Regional 3R Forum was organized on 4-6 October 2010 in Kuala Lumpur, Malaysia, with the overall theme of “3Rs for Green Economy and Sound Material-Cycle Society.” The Chair’s Summary of this meeting responded to the major findings of CSD-18 (see below) and provided key inputs to CSD-19 in the waste management sector, and also provided regional views relevant to the UNCSD/Rio+20 in terms of how 3Rs could contribute in the context of Green Economy.

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Global Context

The **CSD-18** Chair's Summary highlighted a number of key concepts and issues. These included:

- a) **A need to move towards a zero waste economy:** Importance of recognizing waste as a resource, and of managing wastes in an integrated manner. Development of policy instruments that encourage waste prevention and minimization based on PPP and Extended Producer Responsibility (EPR) should be fostered.
- b) **Special attention required for particular types of wastes:** Wider ratification and implementation of the relevant instruments and protocols related to the transport of hazardous waste is called for. There is a need to assist developing countries in the full implementation of such instruments. Emerging new waste streams such as electronic waste, plastics in the marine environment, and oil and lubricants require special international and national action aimed at a high rate of recovery worldwide. There is a need to build local capacity in the developing countries to address the flow of e-wastes.
- c) **Finance:** New and additional financial resources are needed that are dedicated to sustainable waste management in developing countries. Investments are needed in low-cost options for waste management, recycling and reuse and disposal, as well as energy recovery from waste.
- d) **Partnership and International Cooperation:** A global platform on waste management to disseminate and exchange information, upscale good practices, and advance partnerships should be developed. Regional initiatives are also important in promoting 3Rs, and regional platforms such as the 3R Forum in Asia should be enhanced. International cooperation to promote capacity-building is required for all relevant stakeholders, including local policymakers.
- e) **Awareness:** Education and public awareness campaigns are vital for changing behavioral attitudes and promoting waste minimization and safe, environmentally-sound disposal.

Building on the above, **CSD-19** aimed to address a number of critical directions and actions in the waste management theme. These included, among others, the use of national goals, targets and indicators, and the establishment of waste inventories; development and use of plans, policies and strategies for waste management and infrastructure; proper consideration of social and poverty issues related to informal waste management; reduction of the amounts of waste disposed in landfills; strengthening the implementation of relevant international conventions and agreements on waste management; strengthening regional mechanisms to support multilateral agreements on waste; carrying out waste management with a lifecycle perspective; the use of EPR; the use of economic instruments; waste minimization, reuse and recycling as part of corporate social and environmental responsibility; consideration on approaches for identifying and managing specific waste streams; increase efforts to collect, treat and increase safe recycling of e-wastes; and the development of guidelines and other policies and strategies to address biodegradable wastes.

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Building on the consensus of CSD-18 on the need for Partnership and International Cooperation, which was further elaborated in the two CSD inter-sessional events co-organized by UNCRD/UN DESA and MoE-Japan in March 2010 and February 2011¹, **International Partnership for Expanding Waste Management Services of Local Authorities (IPLA)** was launched during the CSD19 Side Event on 12 May 2011. IPLA is a new international partnership, and is expected to become a world-wide knowledge network and a dynamic platform to address various needs of the local authorities/ municipalities in waste management, by promoting and facilitating collaboration with a wide range of partners such as cities, private sector, professionals and research institutions, international financial institutions, as well as UN and donor organizations. Mainstreaming of the 3R concept as well as the application and scaling up of 3R technologies could be further addressed through IPLA.

In June 2012, the UN Conference on Sustainable Development (UNCSD) will be held in Rio de Janeiro, Brazil. The main objectives of this global summit, referred to as **'Rio+20'**, is to secure renewed political commitment for sustainable development, to assess the progress to date and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development, and to address new and emerging challenges. The UN General Assembly Resolution (A/RES/64/236) endorsing the Rio+20 has identified *'A Green Economy in the context of Sustainable Development and Poverty Eradication (GESDPE)'* as one of the two main themes of the Summit.

The Report of the Secretary-General on the Objective and Themes of the UNCSD (A/CONF.216/7) acknowledges that aggregate consumption of raw materials has continuously increased; regular improvements in resource efficiency and pollution control technologies have not been large enough to offset the effect of the increase in the size of the global economy. A system of production and consumption that imposes significantly lower pressures on natural resource stocks and the environment is needed, and the GESDPE provides a framework for moving towards this direction. The 3Rs are very much in line with the GESDPE concept, as it calls for reduction (waste minimization) in the first place, and then for reuse and recycle thereby establishing a global circular economy (or a sound material-cycle society) in which the use of new virgin material as well as generation of waste are minimized.

Moving Forward: Promoting Policies with focus on Technology Transfer in the 3Rs

The significance of the 3Rs has gradually gained recognition in Asian countries over the years, and now several countries have adopted national 3R strategies and related laws and

¹ "Consultative Meeting on Expanding Waste Management Services in Developing Countries" held in Tokyo on 18-19 March 2010, and the "CSD Intersessional Conference on Building Partnerships for moving towards Zero Waste" held in Tokyo on 16-18 February 2011.

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regulations (for example, in Bangladesh and Viet Nam)². In fact, the concept of the 3Rs is now becoming global, having noted in the Chair's Summary of the Intersessional Meeting on Solid Waste Management in Africa held in November 2010³, as well as in the Chair's Summary of the CSD18⁴.

While the 3Rs have gained grounds as valuable concept/policy for improving resource efficiency and sustainable waste management, *3R technologies* have not yet been as widely utilized, particularly in developing countries, while technologies in the context of the 3Rs have been discussed a number of times in the past regional and global forums, such as the Ministerial Conference on the 3R Initiative (2005), and the Senior Officials Meetings on the 3R Initiative (2006, 2007).

There are a number of reasons why technology transfer as well as the application of the 3R technologies have been slow and somewhat limited in developing countries; for example there is a general perception that such technologies involve high costs; they are highly advanced/sophisticated; and are difficult to develop, apply or use in developing countries where small and medium size enterprises (SMEs) dominate the private sector. Often private sector companies face a wide range of obstacles to invest and operate in developing countries where related laws and regulations are not enforced effectively.

The perceptions mentioned above about 3R technologies do not always reflect the reality; in fact, innovations in environmentally friendly technologies, including 3R technologies, are now being made not only in industrialized countries but also in developing countries (e.g., Brazil is leading the research and production of biofuels; China is at the forefront of R&D of clean coal technologies). In renewable energy, for example, the distribution of patents between developed and developing countries illustrates a changing picture where some developing countries are becoming important innovators (UN, 2011). 3R technologies are also not always costly, neither they are always highly complex; in fact in some cases, significant changes can be achieved by introducing resource and energy saving technologies in manufacturing processes, by changing raw materials, and introducing resource saving and long-life design of products, etc.

What is lacking, among others, is the required policy and institutional framework to promote such technologies. Governments' role is critical in this respect. Government policies could drive transfers and diffusion of 3R technologies by, for example:

- Setting strict environmental policies, standards, and regulatory frameworks;

² National 3R Strategy of Bangladesh was officiated in December 2010 (Ref. http://www.wasteconcern.org/Publication/National_3r_Strategy.pdf). In Viet Nam, the "National Strategy for Integrated Management of Solid Waste up to 2025 and vision towards 2050," fully integrating the 3R concept, was officially approved by the Prime Minister under the Decision No: 2149/QD-TTg date 17 December 2009 (Ref. <http://isponre.gov.vn/home/xmedia/docs/dicision%20of%20integrated%20swm-25%207%2010%20in.pdf>).

³ http://www.un.org/esa/dsd/csd/csd_pdfs/csd-19/sg-reports/SG-Report-on-IM-on-Solid-Waste-Management-in-Africa-final-single-spaced.pdf

⁴ http://www.un.org/esa/dsd/resources/res_docucsd_18.shtml

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- Reducing barriers on trade and foreign direct investment aimed at creating conducive environment for technology transfer through north-south and south-south cooperation;
- Creating markets which play important role in technology transfer;
- Supporting research and development of 3R technologies;
- Bridging information gaps, mainly among SMEs, which often have limited access to information on 3R technologies and often face constraints in terms of capacity and financial resources; and
- Promoting green procurement.

Interagency coordination involving all key line ministries and agencies is needed (e.g., Ministry of Industry, Ministry of Agriculture, Ministry of Water Resources, Ministry of Commerce and Trade), as the policies to promote 3R technologies often tend to remain confined or compartmentalized in few departments and agencies, mainly in the Environment department/agencies.

Developing countries have great opportunities in front of them, for leapfrogging and adopting technologies with greater resource and energy efficiency. To maximize such opportunities, it is crucial for policy makers to understand what kind of 3R technologies are available, how adaptable they are, and how governments can promote technology transfer in the area of the 3Rs. Industrialized countries with more advanced environmental regulations, among others, have resulted with more utilization and diffusion of 3R technologies. Developing countries could consider strengthening environmental policies and enforcements, as well as establishing relevant institutional frameworks, to promote transfer as well as wider diffusion of all technologies, including 3R technologies. Challenges, such as lack of financial resources, barriers to trade and foreign direct investment (as technology transfer takes place through market channels), and lack of local and institutional capacities for selecting, diffusing and adapting appropriate technologies must also be addressed through various types of partnerships and collaboration, including international collaboration, public-private partnership, and south-to-south cooperation, among others.

2. OBJECTIVES

The Tokyo 3R Statement, endorsed at the Inaugural Meeting of the Regional 3R Forum in Asia on 12 November 2009, identified “Developing and ***transferring environmentally sound technologies***, including cost effective and feasible technologies that meet the needs of the developing countries, for the waste management and the 3Rs” as one of the key priorities to be addressed.

Building on the increased awareness/understanding on the significance of the 3Rs at the policy level, and to foster the development, adaptation, and scaling up of environmentally friendly 3R technologies, the main objectives of the Third Regional 3R Forum in Asia will be to:

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- Address 3R technologies (including technologies that reduce virgin material input as well as technologies that encourage use of recycled resources);
- Address and identify policies and institutional frameworks for the promotion of the 3Rs technologies, including those that contribute to attracting investment and promoting business to business technology transfer;
- Address and identify opportunities for collaborative actions and partnerships including bilateral, multilateral and regional supporting mechanisms to promote 3R technology transfer; and
- Contribute towards enhanced regional input to the UNCSD 2012 (Rio+20) by addressing 3R technologies towards Green Economy.

3. EXPECTED OUTCOME

- Enhanced awareness and understanding among the participating countries on available 3R technologies and their benefits;
- Identification of policies and institutional requirements for utilization of 3R technologies;
- Identification of partnership opportunities for 3R technology transfer; and
- Enhanced regional input to the UNCSD 2012 (Rio+20).

4. CO-ORGANIZERS

The Third Regional 3R Forum will be co-organized by the National Environment Agency (NEA) of Singapore, the Ministry of the Environment of the Government of Japan (MoEJ), and the United Nations Centre for Regional Development (UNCRD), with supports from various partner organizations and donor agencies.

5. GEOGRAPHIC COVERAGE

The geographic coverage of the meeting encompasses nineteen Asian-Pacific countries, including ten member countries of the Association of Southeast Asian Nations (ASEAN), Australia, Bangladesh, People's Republic of China (hereinafter, China), India, Japan, Republic of Korea (hereinafter, Korea), Mongolia, New Zealand, and Timor-Leste. Selected Small Island Developing States (SIDS) of the Pacific are also invited to join.

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6. PARTICIPANTS

Participation in the Forum is by invitation only. It is expected that around 200 participants, including senior government representatives from Asian-Pacific countries, international experts and resource persons, and others as listed below will attend the Forum:

- High level government representatives and policy makers from Ministry of Environment and Ministries involved in municipal and/or industrial waste management (such as Ministry of Local Government, Ministry of Urban Development, Ministry of Industry, etc.);
- Distinguished 3Rs, waste management, and resource management experts and international resource persons;
- Experts and representatives of relevant UN and international organizations, including international financial institutions and donor agencies; and
- Selected representatives of the private sector and NGOs.

A limited number of travel supports will be available for nominated government representatives from the developing countries and invited experts/international resource persons. Unless otherwise clearly indicated in the official invitation, rest of the participants is expected to cover their own travel and accommodation costs.

7. PROPOSE DRAFT PROGRAMME

7.1 Main Programme

Refer draft Provisional Programme.

7.2 Side Events and other related activities

Exhibition Booths:

TBC

NGO Side Event:

TBC

Preliminary Meeting of IPLA Partners:

In the afternoon of DAY 3, a meeting will be held among the key partner organizations of the International Partnership for Expanding Waste Management Services of Local Authorities (IPLA) to discuss the operational arrangements and implementation modalities. The meeting will involve UNCRD, the Asian Institute of Technology (Global Secretariat of IPLA), UN HABITAT (Regional Secretariat for Asia, Africa and Latin America), the Sub-regional Secretariats, interested donor organizations, and other key partners.