

CHAIR SUMMARY

Greater Mekong Sub-Regional Workshop on National Strategy of Integrated Solid Waste Management and 3Rs Do Son, Viet Nam, 28-29 July 2010

1. The Greater Mekong Sub-Regional Workshop on National Strategy of Integrated Solid Waste Management and 3Rs was co-organized by ISPONRE/Ministry of Natural Resources and Environment (MONRE) of Viet Nam, United Nations Centre for Regional Development (UNCRD), and Institute for Global Environmental Strategies (IGES), in Do Son city of Hai Phong, Viet Nam on 28-29 July 2010, with the support of the Asian Development Bank (ADB) and Ministry of the Environment, Japan. The Workshop had the participation of representatives of Greater Mekong Sub-region (GMS) countries (Cambodia, People's Republic of China, Lao PDR, Myanmar, Thailand, and Viet Nam), international organizations and aid agencies such as ADB, United Nations Environment Programme (UNEP), and World Bank (See Annex 1).
2. The main objective of the sub-regional Workshop was to share the valuable experiences and lessons learned from the newly developed Viet Nam 3R strategy, and also to assess the desirability of GMS countries for developing similar 3R strategies and work programmes. The Workshop also provided an opportunity to share among participants the 3R-related initiatives and experiences of GMS countries, along with the issues and challenges faced by them.
3. Delivering the opening remarks, Dr. Nguyen The Chinh, Deputy General Director of ISPONRE/MONRE, Viet Nam, stated that in slightly more than twenty years of renovation, Viet Nam has achieved remarkable progress in socioeconomic development. GDP growth has been recorded as high as 7 per cent to 8 per cent every year. Accompanying economic development and the strong emphasis on industrialization, environmental issues have reached increasingly serious dimensions, and one of them is the country's solid waste management. Despite the rapid increase in waste volume of the country, waste management has not fully integrated the required separation process, which is being implemented only on a pilot basis. Reduction of waste is very limited. Recycling activities have been in existence for a long time, but they are based on informal, very small-scale activities which lack the clear direction of the government. The Ministry of Construction (MOC) had been assigned to revise the Strategy on Solid Waste Management in Urban and Industrial Areas in Vietnam up to 2020," which was approved

by the Prime Minister in 1999. With the joint initiative of two ministries, MONRE and MOC, the “National Strategy of Integrated Solid Waste Management to 2025, vision to 2050,” which integrates 3Rs principles and objectives with clear time-bound targets, was approved by the Prime Minister of Viet Nam in December 2009.

4. Recognizing the beneficial aspects of 3Rs as well as Viet Nam’s initiative in this regard, Mr. Kazunobu Onogawa, Director of UNCRD, remarked that the rapid economic growth in GMS had contributed to increasing the volume of waste, both in terms of gross amount and per-capita basis. He also pointed out that types of wastes were also diversifying with the addition of hazardous and e-wastes within the municipal waste stream. Proper management of generated wastes with the sound application of 3Rs and policies that have the objective of addressing resource efficiency should be considered by all GMS countries in order to protect the environment and public health in the sub-region.
5. IGES representative, Dr. Yasuhiko Hotta, noted that the targets included in the Integrated Solid Waste Management of Viet Nam were very ambitious and challenging. Therefore, Viet Nam will need to set proper planning and implementation objectives to achieve these targets. IGES expressed the hope that this Workshop would serve as a valuable platform for Viet Nam and other GMS countries to share their experiences and lessons, and thereby contribute to the development of strategies and policies for better waste management, the 3Rs, and the formation of a more resource-efficient society in Asia.
6. Expressing concern over illegal waste dumping in the sub-region, the representative of the ADB/GMS Environmental Operation Centre (EOC), Ms. Chonchinee Amawatana, cautioned that waste generation would continue to rise if a business-as-usual attitude and population growth continues. This would not only have adverse impacts on people’s lives, but would also have negative impacts on the tourism industry of the sub-region. It is crucial to ensure that each government's policy or strategy address these problems adequately and effectively giving due consideration to mobilizing and maximizing the responsibility of all involved parties, especially civil society, from the reduction of waste generation to waste sorting-reusing-recycling to collecting-transporting and treating for final disposal.
7. UNEP RRC.AP’s representative, Mr. Guilberto Borongan, gave a presentation on the development and promotion of a national 3R strategy in Cambodia, the Philippines, and Thailand. UNEP RRC.AP has led several waste and 3R-related initiatives and projects such as the 3R Knowledge Hub (3RKH), Thematic Working Group on Solid and

Hazardous Waste (Waste TWG) of the Regional Forum on Environment and Health in Southeast and East Asia, and the technical assistance for the development of national 3R strategies in developing countries.

8. Emphasizing the need for mainstreaming 3Rs from the global, regional, and national perspectives in his presentation, C.R.C. Mohanty, Environment Coordinator of UNCRD, shared the global natural resource and environment trends as well as the importance of integrated waste management (IWM) for the protection of natural resources and the local ecosystem. Introducing the outcome of the Inaugural Regional 3R Forum in Asia in 2009, the *Tokyo 3R Statement* as well as the outcome of the 18th Session of the Commission on Sustainable Development (CSD-18), he urged GMS countries to pursue an alternative path of more resource-efficient economic development that would decouple economic development from environment and resource degradation. Reducing waste production, recycling waste, and reusing materials should form the basis for sustainable waste management.
9. Considering the rapid economic growth across Asia, which has contributed to (i) change in raw material consumption and (ii) increase in volume of waste generation and diversification of wastes with the growing presence of hazardous and e-wastes, the meeting recognized the need to address 3R and IWM in the context of protecting freshwater resources, coastal and marine ecosystem, and biological diversity. These emerging new waste streams such as e-waste, plastics in the marine environment, and oil and lubricants should be given special attention with the objective of achieving a higher rate of recovery (both material and energy).
10. The meeting took note of the importance of 3Rs, which could (i) offer environmentally friendly alternatives to deal with the growing generation of wastes and its related impact on human health, economy, and natural ecosystem; (ii) provide a complementary and integrated package of measures and tools to harness resources, energy, and economic benefits from waste; (iii) provide a unique opportunity to local and national authorities for creating a new paradigm for the creation of a more human urban environment by effectively promoting resource efficiency and waste prevention as the top priority within the overall policy, planning, and development; and (iv) provide opportunities for source reduction through increased resource efficiency, eco-friendly designs and products, and structured or reorganized production processes so that the waste of one industry becomes a valued input to another.
11. The meeting took note of the co-benefit approach in achieving both 3Rs of waste and

reduction in GHG emissions. For example, 3Rs can provide several co-benefits, including GHG reduction through energy efficiency and resource efficiency, adaptation, and employment and job creation, attracting foreign direct investment (FDI) through certified emission reduction credits (CER), complying with the Millennium Development Goals (MDGs), and pollution reduction and other environmental benefits. At the same time, over-reliance on the conventional type of waste management such as landfills and incineration is not sustainable (landfills are a major source of methane (CH₄), a powerful GHG, and land costs are getting very high). As GHG emissions from waste are directly affected by numerous policy and regulatory measures that encourage energy recovery from waste, restrict the choices for final waste disposal, and waste prevention/minimization through 3R, countries could consider linking their waste management policies with national climate policies and programmes.

12. The meeting took special note of the emerging issue of flow of e-wastes, in particular the need to build local capacity for dealing with illegal shipments of near-end-of-life electronics to developing countries. The meeting observed that China and Viet Nam had become target countries for the illegal export of such e-wastes. In Viet Nam, even if a “no waste import policy” has been in force, it has still not been able to prevent the illegal import and export of e-wastes. This can be improved by strengthening interagency or inter-ministerial coordination and enforcement. In GMS, e-waste issues include (i) increasing amounts of e-waste; (ii) transboundary movements; (iii) lack of appropriate policies and regulations specifically related to e-waste; (iv) lack of recycling infrastructure and resources; (v) problems associated with the informal recycling sector; and (vi) lack of proper data on e-waste generation and its sources.
13. GMS countries could consider the following options for dealing with e-wastes such as (i) establish well-defined regulatory procedures; (ii) improve each country’s ability to gather data and inventory on e-waste; (iii) establish proper intuitional infrastructures; (iv) improve the working conditions of recyclers;(v) carry out awareness-raising programmes; (vi) develop public-private-community partnerships; (vi) address the obstacles related to implementing EPR (extended producers responsibility); (vii) make it a requirement for countries exporting used electronics to developing countries to formally test the equipment prior to export; (viii) prohibit import of e-waste if the receiving country is not fully capable of managing it; and (ix) promote reduction and reuse of used electronics.
14. The meeting attached importance to the necessity of capacity-building of importing or target countries in distinguishing between secondhand goods and waste (e.g., junk or near-end-of-life electronics), and on prior quality assurance of the exported secondhand

goods. The meeting recognized that there were a number of grey areas (smuggling or export of fake items, etc.) in terms of export/import of e-wastes that could be dealt on a regional basis.

15. 3Rs for biomass utilization of agricultural waste can also contribute to waste minimization and GHGs reduction. There are many possible ways for utilizing agricultural waste such as source of energy, bio-plastics, compost, bio-fuel, particleboard, softwood furniture, paper-making pulp, additives in cement mixes, animal feed, etc. GMS countries should take full benefit of these potential opportunities of turning various biomass wastes into wealth and resources to achieve a number of co-benefits of 3Rs. Even though Viet Nam produces a large amount agricultural biomass waste such as rice straw and husk, they are not utilized to their fullest economic potential.
16. Even though the informal sector makes a significant contribution to 3R promotion, national economy, and employment generation, the meeting noted a number of issues concerning basic health and labour rights of people engaged in informal waste activities. In this regard, it is highly essential to address the harmonization of work conditions, and health and labour standards.. If not properly managed, the potential health risks among informal waste pickers could include: HIV (hospital waste), tetanus (jagged metal), neural damage (smoke, PCBs and lead), stress, and skin, gastric, and respiratory problems. Special attention should be given to child protection and prevention of child labour, with due consideration to the MDGs, in particular achieving universal primary education.
17. GMS countries face a number of challenges for the promotion of 3Rs. The fundamental issue is that the prevailing economic system or policies do not provide adequate incentives for conservation and efficient resource allocation. Prevailing production and consumption patterns are not adequately oriented towards resource efficiency, contributing to growing quantities of wastes that must be managed for final disposal. Also, waste is traditionally thought of as having no value and is widely assumed to be unavoidable, which has led to economic and management practices that tend to promote generation of more waste. Municipalities often spend approximately 50 per cent of their total annual budget on waste management, which reduces capital for other developmental works and public services.
18. Whereas Chinese waste management legislation systematically includes a number of: (i) Laws (Environmental Protection Law of the PRC issued in1989; Law of the PRC on Prevention of Environment Pollution Caused by Solid Waste issued in1995, amended in

2004; Cleaner Production Promotion Law of the PRC issued in 2002; and Circular Economy Promotion Law of the PRC issued in 2008); (ii) Administrative Regulations (Hazardous Waste, Medical Waste, and E-Waste); (iii) Department Rules (Hazardous Waste, Municipal Waste, Recyclable Waste, and Waste Import and Export); and (iv) Local Regulations. In particular, the 3Rs principle is at the core of the Chinese circular economy which aims to promote saving in resources and protection of the environment, guarantee production safety, ensures quality of products, and avoids re-pollution during waste reuse and recycle. The meeting took note of China's significant achievements in establishing eco-industry parks and sustainable public procurement. GMS countries expressed their interest in learning from China's experiences in these areas.

19. Viet Nam's National Strategy of Integrated Solid Waste Management to 2025, which integrates 3R principles, was approved by the Prime Minister and issued as a governmental decision in December 2009. The strategy includes the following major tasks: (i) preventing and reducing solid waste generation; (ii) promoting at-source solid waste sorting; (iii) improving the collection and transportation of solid waste; (iv) accelerating the reuse and recycling of solid waste; (v) improving solid waste treatment; and (vi) restoring the ambient environment of solid waste treatment facilities. Viet Nam's strategy that included a number of targets in solid waste management served as a fine example for other GMS countries.

20. In Cambodia, the prevailing practice involves solid wastes generated from houses, commercial centres, hospitals, industrial handicrafts, etc. being disposed of and burnt at the dumpsite, while some is left to decompose under weather conditions. The companies licensed for waste collection in Phnom Penh are characterized by poor performance, lack of experience, and management problems. The existing legislation on waste management in Cambodia include: (i) Sub-decree on Solid Waste Management (MoE) approved in 1999; (ii) Directive on Industrial Hazardous Waste Management (MoE) issued on 26 May 2000; (iii) Directive on Industrial Sludge Management (MoE) issued on 9 October 2000; (iv) The Joint Prakas 19 on Solid Waste Management in Cities and Provinces made between the MoE and the Ministry of Interior (MoI); and (v) "Directive on Managing Health Wastes in the Kingdom of Cambodia" approved in 2008 by the Minister of Health. However, these polices have yet to integrate 3Rs/integrated waste management aspects. Integration of 3Rs in the National Strategic Development Plan would be very useful for Cambodia.

21. Though several polices do exist, Lao PDR faces a number of challenges in solid waste management such as: (i) inadequate legal framework and unclear institutional responsibilities; (ii) institutions envisaged to be established in accordance with a law are

sometimes not established, nor given the proper mandate in accordance with the law (if established), and not allocated a budget to enable them to function in accordance with the law; (iii) new legislation is often drafted without proper reference to other legislation; (iv) a considerable amount of waste is illegally dumped into the drainage channels and rivers; (v) collection vehicle fleet is old and subject to frequent breakdown; (vi) the institutional and administration structure is not established well enough to deal with waste management issues; and (vii) public education system and participation programmes are not well established.

22. Myanmar seems to have no serious pollution problem owing to its sparsely populated area and minimal industrial development. Despite this, solid waste management is currently regarded as one of the country's most immediate environmental issues. Whereas organic waste dominates in the composition of wastes in major cities (approximately 77 per cent in Yangon and 63 per cent in Bagan), average waste collection service coverage is about 60 per cent. With the objective of promoting solid waste management and environmentally sound management of toxic chemicals and hazardous wastes, the activities to be completed within five years, including those ongoing, are: (i) enact the drafted Myanmar Environmental Protection Law; (ii) apply the polluter pays principle; (iii) heighten public awareness to promote community participation; (iv) improve sewage system management and treatment for domestic wastes, especially in cities; (v) educate the public to promote environmentally sound waste management, including waste reduction, recycling, and composting; (vi) develop a framework for hazardous waste management; and (vii) encourage private investment in solid waste management services. Similarly, a ten-year future plan is expected to include, among others, formulation of a solid waste management master plan and guidelines, with priority given to major cities, and enactment of a hazardous waste law.
23. Thailand has developed a comprehensive waste management policy that systematically includes 3Rs promotion, integrated technology aspects, clustering management, public-private-partnership (PPP), and waste-to-energy aspects. The newly developed Thai National 3R Strategy applies various principles and measures of waste management to all processes of waste generation such as production, distribution, consumption, waste recycling, treatment, and disposal. The Thai Government's green procurement programme includes lists of green products and services (nineteen products and four services), guideline and criteria for green procurement, capacity building for stakeholders, and a road map for the promotion of green procurement. With the objective of promoting a recycling-oriented society, over 200 communities in Thailand implement the 3Rs activities, and some municipalities have been able to reduce wastes from between 30 per

cent and 50 per cent. Thailand also has a number of waste-to-energy projects to meet its energy demand, while reducing wastes at the same time.

24. As an expression of their common intention, the GMS countries underscored the importance of national 3R strategies in support of the objectives of the *Tokyo 3R Statement*, which was agreed upon by all GMS countries, among others, in 2009. The GMS countries attached strategic importance to cooperation and partnership with international organizations, and bilateral and multilateral donor communities towards training and capacity development, research networking, development and implementation of 3R, IWM, and green-economy related projects, including transfer of environmentally sound 3R/IWM technologies dealing with municipal solid waste (in particular plastics), industrial and hazardous waste, e-waste, biomass waste, hazardous waste from agriculture activities, construction waste, healthcare wastes, and urban wastewater treatment and recycling.
25. The GMS countries expressed their interest in continuing this type of exercise of exchanging information on best practices, policy instruments, tools and technologies, issues, and challenges in 3Rs and integrated waste management.
26. The GMS representatives fully expressed their appreciation for the progress achieved under the 3R Initiative in Asia, and further recognized the efforts of UNCRD, ADB/GMS EOC, UNEP/RRC.AP, MoE-Japan, and IGES in extending their financial and technical support for the promotion of 3Rs in Asia and the sub-region.
27. The participants conveyed their sincere appreciation to the host country, Viet Nam, for their hospitality and for organizing this important Workshop.