Chapter 4

Prospects for establishing a SMC Society in East Asia, and Japan's cooperation

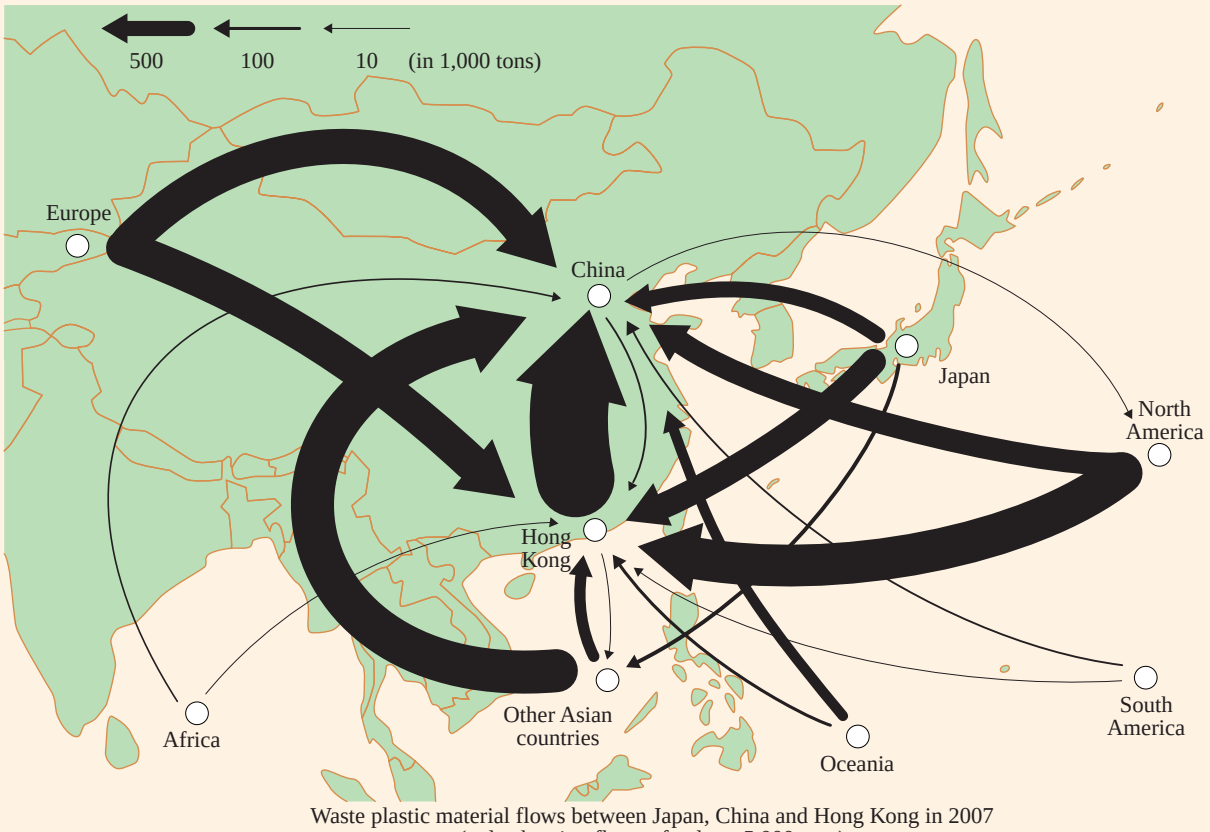
Section 1 Formulating an East Asia Sound Material-Cycle Society Vision

As explained in Chapter 1, the world is facing worsening waste management problems, a shortage of resources and energy, and an associated increase in the transboundary movement of CRs (Figure4-4-1). These all emphasize the need to create an international sound material-cycle (SMC) society as soon as possible.

Japan's Fundamental Law for Establishing a Sound Material-Cycle Society defines a SMC Society as one in which natural resource consumption is curbed and the burden on the environment is reduced, and which can be created by ensuring that (i) products are prevented from becoming waste, (ii) any wastes generated are used appropriately as resources whenever possible, and (iii) wastes with no uses at all are disposed of responsibly. An international SMC Society can be considered as a SMC Society established at the global level. The basic principles involved in the creation of an international SMC are:

1) Creating a domestic SMC Society in each individual country first,
2) Enhancing efforts to prevent illegal waste imports

Figure 4-4-1 International resource circulation



Waste plastic material flows between Japan, China and Hong Kong in 2007
(only showing flows of at least 5,000 tons)

Source: National Institute for Environmental Studies , Japan

and exports, and then

3) Facilitating imports/exports of CRs.

These principles were agreed among Asian countries at the Second Asia 3R Conference in 2008.

Creating a SMC Society in East Asia in line with these basic principles, with the properties of CRs also taken into consideration, is not only beneficial to East Asian countries but also meaningful in the context of sustainable development across the region. In addition, an East Asian SMC Society designed to allow optimal movements of CRs can also contribute to combating global warming and solving resource and energy issues. To achieve results such as these, Japan should share its experience with other countries and effectively and efficiently promote relevant efforts by combining initiatives to improve East Asian countries' capability to responsibly use and process CRs with initiatives to ensure the appropriate transboundary movement of CRs.

If this approach fails, the closely interrelated societies and economies of the East Asian region could face crises such as the expansion of environmental pollution and the exhaustion of resources. East Asian countries therefore share a common destiny and need to work in cooperation in order to realize a scenario for the responsible use and disposal of CRs in line with a common vision to establish a SMC Society.

Japan therefore plans to formulate an East Asia Sound Material-Cycle Society Vision by 2012, stipulating the basic principles and targets for the development of an East Asian SMC, as set forth in the Fundamental Plan for Establishing a SMC Society.

To achieve this goal, Japan is implementing several measures designed to improve East Asian countries' internal capability to responsibly use and process CRs. These measures include (i) support for the formulation of national 3R plans and strategies, (ii) policy dialogue, (iii) establishment of 3R-related information center and research networks, (iv) technology cooperation on the 3Rs and waste management and assistance for the development of associated infrastructure, and (v) international dissemination of 3R and waste management technologies. Japan is also working to ensure the appropriate transboundary movement of CRs by (i) strengthening the enforcement structure for Japanese regulations regarding illegal imports and exports, and clarifying which items are subject to regulation, and (ii) supporting joint initiatives with Asian countries to foster information exchange and improve the relevant authorities' enforcement capacity. The details of these initiatives are described in the following sections.

Section 2 Establishing a SMC Society in Asia and provision of cooperation tailored to the needs

It is essential that Japan contribute to the improvement of Asian countries' capability for CR use and processing so that they can implement the 3Rs and responsible waste management as a step towards establishing a domestic SMC Society. A major challenge for many developing countries is how best to manage waste appropriately, for example, by establishing a public waste collection system or by ensuring the sanitary disposal of wastes. In contrast, rapidly growing economies, such as those of many typical East Asian countries, are faced with the need to curb waste generation and recycle waste materials because the amount of waste has increased, even when waste collection and disposal systems have already been developed, especially in urban areas. In addition, concerns about soaring resource prices and constraints on resource supply are creating a growing need to use resources more effectively. This means that an essential challenge for Asian countries is to step up their efforts toward responsible waste management, while also promoting the 3Rs. Another important approach to the urgent issue of global warming is to take measures that bring about co-benefits (measures that can benefit both public hygiene and global warming issues) by promoting CDM (Clean Development Mechanism) projects and other initiatives directed towards responsible waste management and the 3Rs in order to prevent global warming.

Japan's new Fundamental Plan for Establishing a SMC Society stipulates that Japan should address the international dissemination of its systems, technologies and experience as follows:

"Japan will make its accumulated knowledge of advanced schemes and outstanding technologies and systems regarding the 3Rs and waste management, as well as the experience accumulated by domestic entities by means of relevant activities and collaborations, available to other countries. This will include rapidly developing Asian countries and potentially emerging African countries, and will thereby support these countries' establishment of a

domestic SMC Society. This accumulated knowledge will be provided in the form best suited to each country's needs, such as assistance in formulating national 3R promotion plans, cooperation to help develop sound material-cycle cities modeled after Japanese Eco-towns, and support to help increase access to safe and sanitary night soil disposal systems. To this end, each country's situation and needs will be assessed so that Japan's 3R technologies/systems and training programs can be tailored to each country's actual needs. Furthermore, Japan will foster international collaboration not only at the national level but also at a variety of other levels, including the public, enterprises and local governments."

Japan has already been helping other countries solve their problems by engaging in policy dialogue and addressing their needs through frameworks such as the Tripartite Environment Ministers Meetings between China, Japan and Korea. Now that countries in Asia, especially in East Asia, are enhancing their waste management policies by introducing the concept of the 3Rs, in accordance with their social and economic situations, Japan should explore a specific vision of international cooperation that meets these countries' needs. In this way, Japan can offer East Asian countries the benefits of its experience, gained through past reforms for the promotion of waste management and recycling, and let these counties make use of this information as a valuable resource (Table 4-4-1).

The FY 2007 White Paper on a Sound Material-Cycle Society mentioned Japan's outstanding technologies, policies and systems. Japan can make a significant contribution by making the most of its superior technologies and systems to assist other countries in establishing waste management mechanisms and formulating 3R promotion plans and visions.

Japan also needs to help other countries develop human resources and form organizations to implement technologies and systems related to responsible waste management and the 3Rs, through the use of existing technology development and training programs carried out by the Japan International Cooperation Agency (JICA) and other organizations. Japan should also pursue co-benefits to global warming prevention through CDM or similar projects, construct a network of researchers and experts through which to share the scientific knowledge and technical information needed to formulate and implement 3R policies, and promote initiatives implemented by local governments and NGOs/NPOs, which will play major roles in a SMC Society.

(1) Support for the formulation of national 3R plans and strategies

In order for each country to effectively and efficiently implement 3R initiatives, it is essential that the government declare its intention to promote the 3Rs as a national policy and formulate a plan or strategy that takes account of the existing legal framework for waste management and the regional status of waste management and recycling. Japan has been assisting countries such as Vietnam and Indonesia in developing 3R plans and strategies in accordance with their individual situations, in cooperation with the United Nations Centre for Regional Development (UNCRD), the United Nations Environment Programme (UNEP) Regional Resource Centre for Asia and the Pacific, and the Institute for Global Environmental Strategies (IGES). In providing such assistance, the approach taken by the Japanese government is to develop each plan or strategy with as much open consultation as possible by liaising with the recipient's environment ministry and involving all parties concerned, including the local governments in charge of waste disposal, as well as related ministries and NGOs. For example, Japan is trying to extend the results of, and the experience gained through, the development of Vietnam's national 3R strategy to other countries in the Mekong basin by coordinating its assistance with the support of the Asian Development Bank (ADB). JICA is also active in supporting the formulation of 3R-related plans. For example, it is assisting Malaysia to develop a plan to reduce solid waste.

(2) Policy dialogue

Japan has been engaging in policy dialogue with the government bureaus responsible for waste management and the 3Rs in various countries seeking to enhance their domestic systems for 3R promotion and implement relevant policies in a well-planned manner. In the case of South Korea, the Japan-Korea Policy Dialogue on Waste Management and Recycling was conducted between director-general level officials from Japan and the Korean Ministry of the Environment in June 2006 in Tokyo (the first time) and in May 2007 in Seoul (the second time). With South Korea's law on the recycling of electrical and electronic waste (e-waste) and end-of-life vehicles set to come into effect in 2008, both countries exchanged information and opinions on their respective policy developments, including the current state of recycling for these wastes and each country's associated experience.

In the case of China, the Japan-China Policy Dialogue on Waste Management and Recycling was conducted between director-general level officials from Japan and

Table 4-4-1 Examples of 3R initiatives in Asian countries

Bangladesh	**Community-based composting** (operated by Waste Concern (an NGO)) Project results -Employment creation (predicted to be able to create jobs for 90,000 people across the nation) -Involvement of informal workers in the compost production process
China	**Promotion of a sound material-cycle economy as a priority issue for the government** Integrated activities directed towards the realization of a sound material-cycle economy in the new five-year social-economic development plan at national and local government levels. Circular economy law (under consideration)
	Stricter management of end-of-life electrical and electronic appliances (establishment of laws, regulations, policies, etc.) Regulations to prevent pollution caused by home and information appliances (March 2007) National regulations regarding the management of electrical and electronic appliances in China (draft)
	Environmental industrial park policy Established about 20 pilot eco-industrial parks. Designated eight regions as pilot regions for establishing sound material-cycle economies at the regional level.
India	**Formulation of national environmental policy** (2006)
	Draft regulations on entities engaged in recycling, reprocessing and hazardous waste handling Environmental (Protection) Law (1986)
	Development of plastic recycling Amount recycled: 1.7 million tons (2004-2005)
Indonesia	**National action plan (2008–2015)** Establishment of regulations: Plans to institute new regulations over the next two years after establishing the municipal waste management law.
	Activities among SMEs Of the total amount of hazardous waste produced by industry, 35% was reused or recycled. There are excellent practices in place, such as clean production in the tofu manufacturing industry (reuse, waste/residue recycling).
	Composting subsidy program The composting/recycling rate increased by 2% as a result of composting subsidies allocated to 19 cities. Under this program, 217 tons of compost was produced per day, exceeding the target of 200 tons.
Malaysia	**National recycling program** (2000) Long-term goals to make recycling common practice
	National strategic plan for solid waste management (2005) Comprehensive efforts to promote the reduction, reuse, and collection of solid waste
	Establishment of a master plan to minimize national waste (2006)
Philippines	**National-level legislation: National 3R policies** Set the goal of achieving a waste conversion rate of at least 25% by 2006.
	Backyard composting and organic waste disposal Of the total amount of waste available for composting, 25% was collected and recycled as organic fertilizer.
	Initiative to improve the collection and recycling rates of waste lead-acid batteries Set the goal of collecting 3,600 tons of waste lead-acid batteries annually (amount collected in 2004: 398 tons).
South Korea	**Food waste minimization and recycling** Improvement in the recycling rate: 2.1% (1995), 41.1% (2000), 93.8% (2005) Extended the useful life of final waste disposal sites from 7 to 11 years.
	Charge system based on the amount of waste produced The amount of solid waste produced in urban areas was reduced by 0.62% in the period between 1994 and 2004.
	Extended producer responsibility (EPR) Improvement in the recycling rate for EPR items (end-of-life electrical and electronic appliances and end-of-life vehicles)
Singapore	**Recycling** The recycling rate in 2006 was 51%, up 2% from 2005. The recycling of construction and demolition waste, wood waste and plastic waste is being promoted.
	National recycling program -Launched a household recycling program in 2001. -Installed collection boxes for recyclable items in public places. -Promotes the recycling of construction and demolition waste (achieved a recycling rate of over 90%)
	Disposes of 90% of burnable waste at four incineration facilities. Disposes of 10% of non-burnable waste at an off-shore sanitary landfill site.
Thailand	**Program to collect used products** In 2005, 85% of all waste lead-acid batteries were collected. A program to collect fluorescent lamps was carried out in cooperation with the Japanese government.
	Initiative to create a recycling-oriented society Over 200 communities practice 3R, with some municipalities having successfully achieved a 30-50% reduction in the amount of waste produced.
	Industrial waste exchange program Over 450 industrial sectors are registered members (as of 2005).
Vietnam	**3R-related policies and legislation** 2005 Environmental Protection Law: 14 provisions were added in order to promote 3R and other related activities.
	3R national strategy 3R targets through 2020: Thirty percent of the total waste collected was recycled. Thirty percent of household waste and 70% of all commercial waste was sorted by source.
	Has identified a need to improve the recycling system in rural villages dependent on the handicraft industry

Source: Created by the Ministry of the Environment and the Institute for Global Environmental Strategies, based on materials provided at the Senior Officials' Meeting on the 3R Initiative in October 2007.

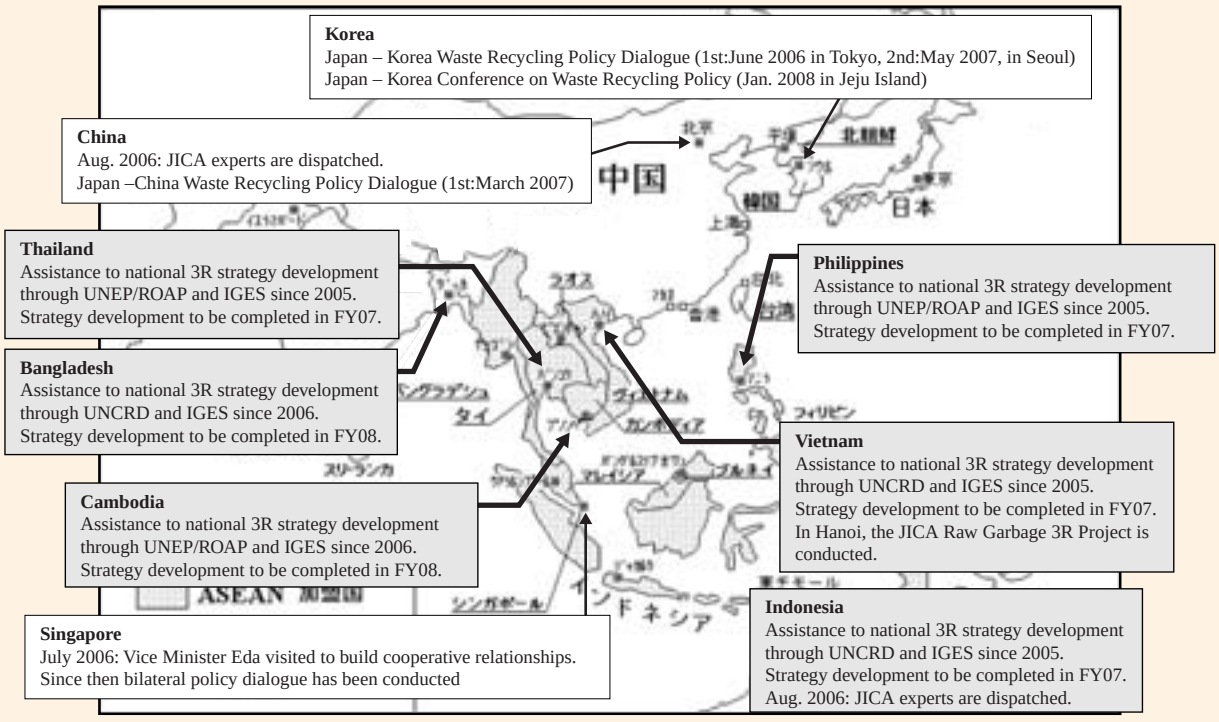
the Chinese Ministry of Environmental Protection (formerly the State Environmental Protection Administration) in March 2007 in Beijing (the first time) and in March 2008 in Tokyo (the second time). The two counties discussed the importance of bilateral cooperation on measures to counter hazardous waste and waste import and export controls. Japan also conducted talks at a similar level with China's National Development and Reform Commission in the Second Japan-China Policy Dialogue on the 3Rs in June 2007 in Beijing. The two sides discussed cooperation on the creation of SMC cities based on Eco-town projects in Japan.

Japan also promotes dialogue with China and Korea through the annual Tripartite Environment Ministers Meetings between China, Japan and Korea and the exchange of opinions on SMC Society establishment. At the ninth such meeting, held in Toyama in December 2007, the three countries agreed that sharing a single vision is essential to promoting the establishment of a SMC Society in each East Asian country and across this region, and all participating countries increased their understanding of Japan's proposal to formulate an East Asia Sound Material-Cycle Society Vision. China and Korea, along with Singapore, with which Japan has been conducting a separate dialogue, are all expected to join Japan in playing a leading role in establishing a SMC Society across East Asia. The Ministry of the Environment will continue strengthening the cooperative relationship with these countries (Figure4-4-2).

In order to establish a framework for policy dialogue across the Asian region, the Ministry of the Environment hosted the Asia 3Rs Conference in October 2006 in Tokyo, bringing together director-general level officials from 19 Asian countries and related international organizations to discuss the comprehensive promotion of the 3Rs and measures to manage kitchen garbage, e-waste and medical waste. Another example of policy dialogue is the Environment Congress for Asia and the Pacific (ECO ASIA 2007), which was held in September 2007 in Fukuoka. Environment ministers and other representatives from Asia and the Pacific freely exchanged opinions at this meeting. The participants recognized the significance of creating national and Asia-wide SMCs and agreed that, in order to achieve this goal, they should work in cooperation to more actively foster policy dialogue on the 3Rs and to disseminate information on 3R-related policies, technologies and good practices in order to develop regional visions.

In East Asia, the Regional Forum on Environment and Health was organized in August 2007 with the aim of promoting collaboration between environment ministries and health ministries in order to improve the regional capability

Figure 4-4-2 3R-related bilateral cooperation with Asian countries



Source : Ministry of the Environment

to cope with local environmental and health problems. The forum comprises 14 countries, namely, 10 Southeast Asian countries and Japan, China, South Korea and Mongolia. For about the next three years, the forum will conduct its activities through six thematic working groups (TWGs), one of which is the TWG on Solid and Hazardous Waste, chaired by Japan. Focusing on urban and medical waste, this TWG will collect and share good practices from different countries and compile recommendations for regional initiatives to tackle the common challenges facing member countries. The first meeting of the TWG was held in February 2008 in Singapore to share updates on national initiatives and good practices for medical waste management and to develop a future work plan. Japan expects that this TWG will conduct continuous follow-ups on the urban and medical waste problems discussed at the Asia 3R Conference and improve information sharing.

(3) Construction of information centers and research networks for the 3Rs

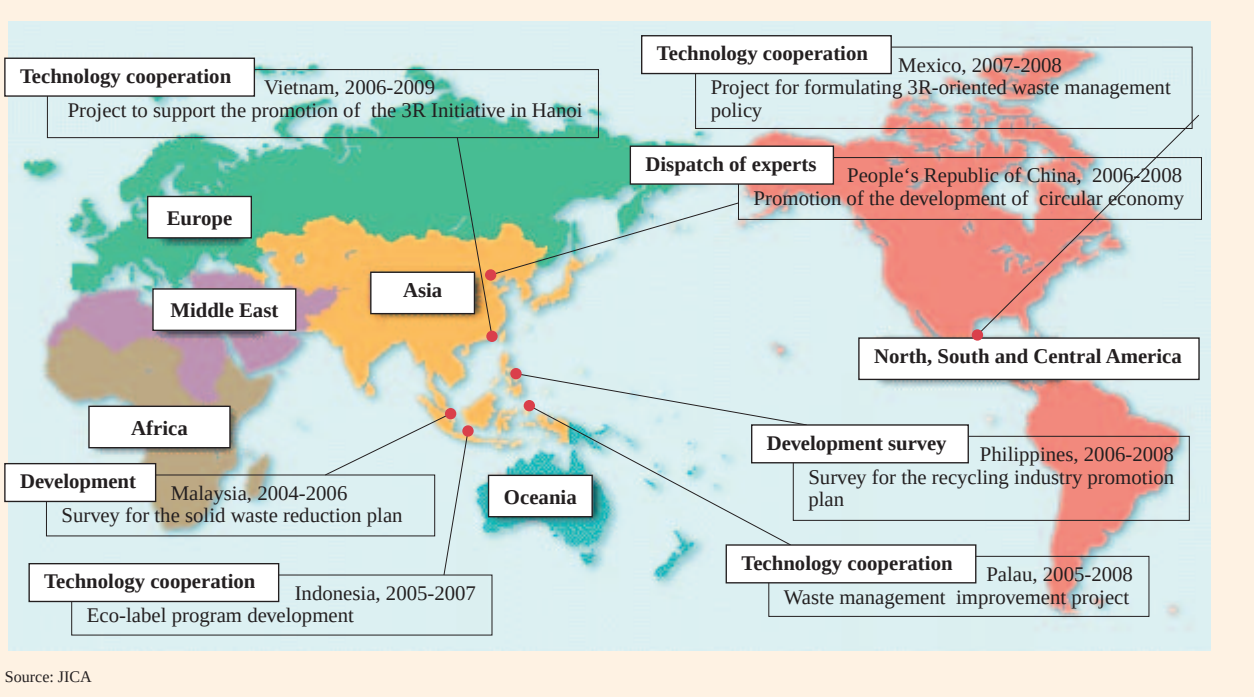
It is critically important that Asian countries adopt technologies and develop systems that are suitable for their own situations. To establish a SMC Society in Asia, it is also necessary to efficiently accumulate and provide 3R-related knowledge and technical information. Therefore, the Ministry of the Environment supports content creation for the 3R Knowledge Hub, an information center established and operated as part of an initiative led by the ADB and the UNEP Regional Resource Centre for Asia and the Pacific.

The Japanese government also assists the activities of the Society of Solid Waste Management Experts in Asia & Pacific Islands (SWAPI), organized under the leadership of the Japan Society of Waste Management Experts, in the expectation that this organization will develop as a network of Asian researchers and experts in waste management and the 3Rs. At the Third East Asia Summit in November 2007, Prime Minister Yasuo Fukuda announced "Japan's Environmental Cooperation Initiative," which states that Japan will "establish an 'Asia 3Rs Research and Information Network' with a view to assisting 3Rs-related activities in each country through the sharing of policies and good-practices." It declares Japan's determination to help foster coordination between the 3R Knowledge Hub and SWAPI and between these frameworks and each country's competent authorities.

(4) Technology cooperation and infrastructure development for the 3Rs and waste management

As part of official development assistance (ODA) to developing countries, JICA provides technology cooperation aimed at capacity building and improving coordination of the central government, local governments and the

Figure 4-4-3 Support provided by JICA in 3R-related fields



Source: JICA

private sector. Assistance to the central government includes supporting the establishment of a legal framework to promote the 3Rs and waste management at the national level and helping to formulate and implement a fundamental policy and plan for implementing legislation. Assistance to local governments includes helping them raise public awareness and develop a mechanism to promote the reduction of waste generation and sorted collection in cooperation with the public. For the private sector, support is provided for the study and formulation of policies such as green purchasing and the eco-label system in order to foster efforts by individual businesses and promote the growth of the recycling industry.

Japan also supports a variety of programs that invite engineers and government officials from developing countries to learn about waste management and the 3Rs. Some of the many training courses provided by JICA are the SMC Establishment course, a regional training program for environment officials from Asian countries to share information on related legislation, administration and technologies, and the 3Rs and Recycling of Waste course, a group training program for engineers engaged in the disposal and recycling of industrial waste.

In addition, financial assistance is also provided in the form of grants and loans for improving infrastructure, including waste management equipment and disposal facilities (Figure4-4-3).

(5) International promotion of 3R and waste disposal technologies

Disseminating Japan's 3R and waste disposal technologies internationally can constitute the central part of Japan's international cooperation for establishing an international SMC Society. Japan should step up 3R and waste management measures, some of which can even contribute to the prevention of global warming.

Companies in Japan have developed world-leading technologies in the fields of eco-friendly design and production, product reuse and recycling, and the recovery and use of energy from waste. These technologies can make a major contribution to the establishment of an international SMC Society, if they are disseminated through the promotion of the 3Rs across the entire life cycle or supply chain of the products moving across national boundaries.

In light of this, the government will take actions to allow such technologies to be adopted, where appropriate, by countries in Asia and elsewhere. With due consideration to the protection of intellectual property rights, the government will foster bilateral and multilateral policy dialogue and information exchange in order to assess each country's technology needs, while proactively providing and disseminating information on 3R and waste disposal technologies.

Here are some examples of such efforts with regard to night soil disposal. At a session on "johkasoh" systems during the Third World Water Forum, held in March 2003 in Kyoto, lectures were presented describing Japanese johkasoh, including their history, technologies, maintenance and institutional systems. This was followed by an exchange of opinions. At this forum, the Portfolio of Water Actions was compiled by collating information on water-related initiatives and specific actions taken to solve world water problems, from around the world. One of the Japanese water actions listed in this report was the "transfer of low-cost waste-water treatment technologies that allow installation to be carried out in a short period of time."

Information on Japan's johkasoh technologies has been effectively publicized at events such as the Asia-Pacific Water Summit, held in Oita Prefecture in December 2007 ahead of the start of International Sanitation Year 2008, the Asia Water Environment Partnership (WEPA)'s workshop in Jakarta on johkasoh in March 2004, and the 12th session of the Commission on Sustainable Development (CSD-12) held in New York in April 2004.

Furthermore, at the Japan-China Policy Dialogue in June 2007, the two countries agreed to implement joint projects to create SMC cities through cooperation between Kitakyushu City, which conducts an Eco-town project in Japan, and Qingdao City, and between Hyogo Prefecture and Guangdong Province. In September 2007, Kitakyushu and Qingdao started a joint survey and other preparations for further cooperation.

(6) Measures taken to address specific issues (using sanitation improvement as an example)

Japan's experience, technologies and systems can be of great help in establishing responsible waste disposal systems in Asian countries. However, these systems may not always be appropriate because the situation varies from one developing country to another, including differences in each country's needs and the properties of the waste generated there. For example, since sanitation is closely related to the sanitary use of water, the form of support provided needs to take account of each country's water system and usage, which are often very different from that in Japan.

One report shows that, as of 2004, 2.6 billion people

(41% of the total world population of 6.4 billion) had no access to improved sanitation[1]. There are many areas where less than half the population is provided with adequate sanitation, especially in Asia and Africa (*World Water and Sanitation facilities*, edited by WHO and UNICEF).

Lack of sanitation not only creates water pollution and an unsanitary environment, increasing the risk of disease among infants and pregnant women, but can also destroy the local ecosystem, exert a negative impact on fisheries and agriculture, and reduce the value of tourism resources.

In 2008 (International Sanitation Year), the need to improve sanitation coverage is expected to rise and Japan will consider how it can best make a contribution (Figure4-4-4).

Support for night soil treatment has to take the form of a comprehensive approach that encompasses every process from the installation of toilets through to the disposal of sludge. The design of the disposal system must also give careful consideration to geographical, economic and social factors in the target area.

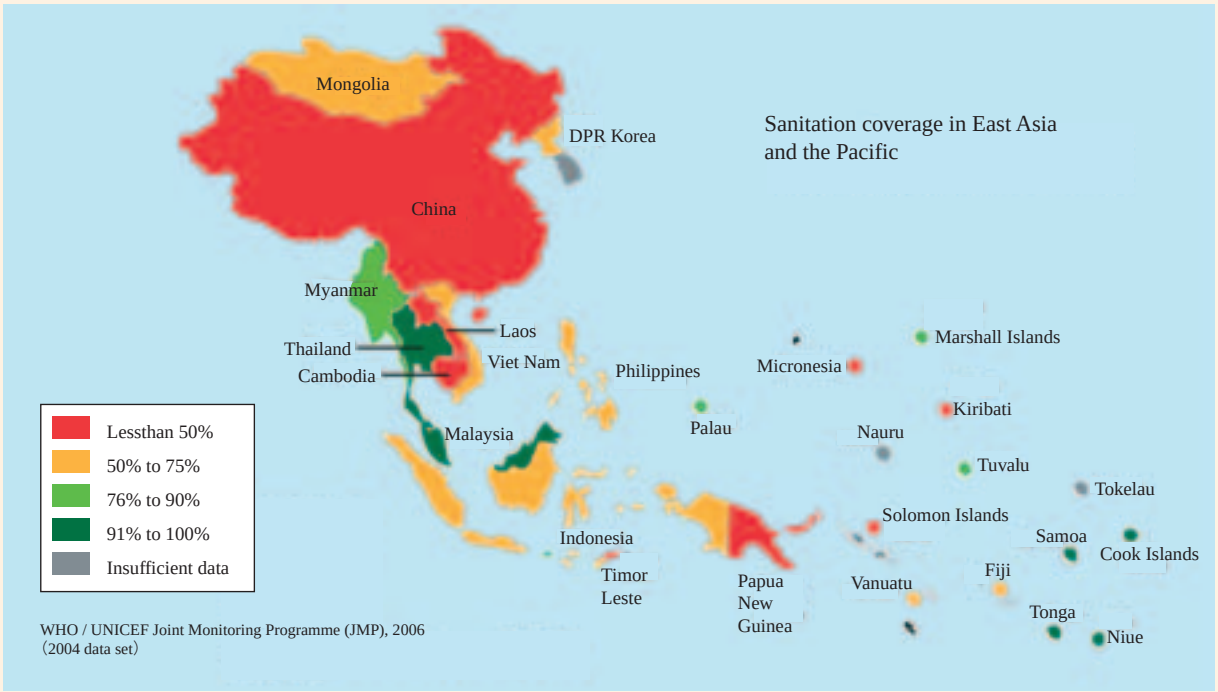
Since assistance for toilet installation is closely related to the issue of subsequent sewage and sludge treatment, taking the treatment process into consideration when selecting the type of toilet to be installed will help facilitate efficient night soil treatment and reuse. There are three steps that follow the installation of toilets: (i) sewage and sludge collection, (ii) sewage and sludge treatment, and (iii) release or reuse of the treated water and final disposal or reuse of the sludge. If these steps are followed and a system is constructed in accordance with regional characteristics, the region will most likely succeed in achieving sanitary night soil treatment and reuse.

There are various types of toilet, such as vault, power-flush, urine separation, composting, and flush toilets. The collection and treatment of sewage and sludge can be divided into two types: on-site treatment, in which waste water is treated on the spot, and off-site treatment, in which waste water is collected and carried to treatment facilities elsewhere. Methods of final disposal or reuse include landfill and recycling for uses such as composting, production of combustion improver through carbonization, and energy recovery after methane collection.

One effective measure to improve sanitation coverage is to provide recognizable benefits to users. Policy packages that can make the most use of sludge play an essential role in increasing access to sanitation.

When integrating efforts directed towards a low-carbon society, sludge recycling projects that can be coordinated with CDM projects should be promoted.

Figure 4-4-4 Sanitation coverage in East Asia and the Pacific



Source: UNICEF『Wash for Children』

1 This refers to sewage systems, johkasoh, flush toilets and power-flush (PF) toilets connected to pits, ventilated improved toilets, enclosed toilets, and composting toilets.

Column

Waste water treatment in mountainous areas

Waste water treatment in mountainous areas provides a valuable insight into some of the problems encountered when considering assistance for developing countries, raising issues such as the urgent need for improvement and the difficulty of maintenance.

There are many different initiatives underway to install eco-friendly toilets in mountainous areas in Japan. For example, bio-toilets (which use biological treatment) and toilets operated by natural energy (such as solar energy and wind power) have been built and have proven highly effective in terms of ease of maintenance.

[Waste water treatment in mountainous areas]
Source: Ministry of the Environment

Section3 Efforts to prevent illegal waste imports and exports

To supplement the above initiatives in order to improve East Asian countries' capability to responsibly use and process CRs, the government should expand its efforts to prevent illegal waste imports and exports.

(1) Trends in waste imports and exports

In Japan, imports and exports of goods that are designated as specified hazardous wastes by the Law for the Control of Export, Import and Others of Specified Hazardous Wastes and Other Wastes (the Basel Law) or are designated as wastes by the Waste Management Law are subject to various statutory formalities.

Statistics on Japan's imports and exports of specified hazardous wastes under the Basel Law show that exports primarily consist of lead acid batteries bound for developed countries for use in metal recovery, and that none of these wastes are exported to developing countries. Imports mainly consist of metal-containing sludge and scrap electronic parts from Asian countries for use in metal recovery.

On the other hand, statistics on Japan's waste imports and exports under the Waste Management Law show that exports consist of coal ash exported to South Korea for cement production, and that the volume of these exports is growing. In the case of imports, only a few cases have been reported, primarily consisting of mercury-containing waste batteries and fluorescent lamps from Asian countries, destined to be treated and recycled (Figure4-4-5).

(2) Efforts to prevent illegal imports and exports

To control imports and exports of wastes, especially hazardous wastes, many Asian countries have put relevant laws in place pursuant to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention). However, there are still problematic practices such as exporting hazardous wastes without conducting the necessary formalities, and different countries having different definitions of the hazardous wastes controlled under the Basel Convention. One example of this can be seen in cases where wastes determined to be exempt from control in the exporting country are found to be subject to control in the importing country and are consequently rendered illegal.

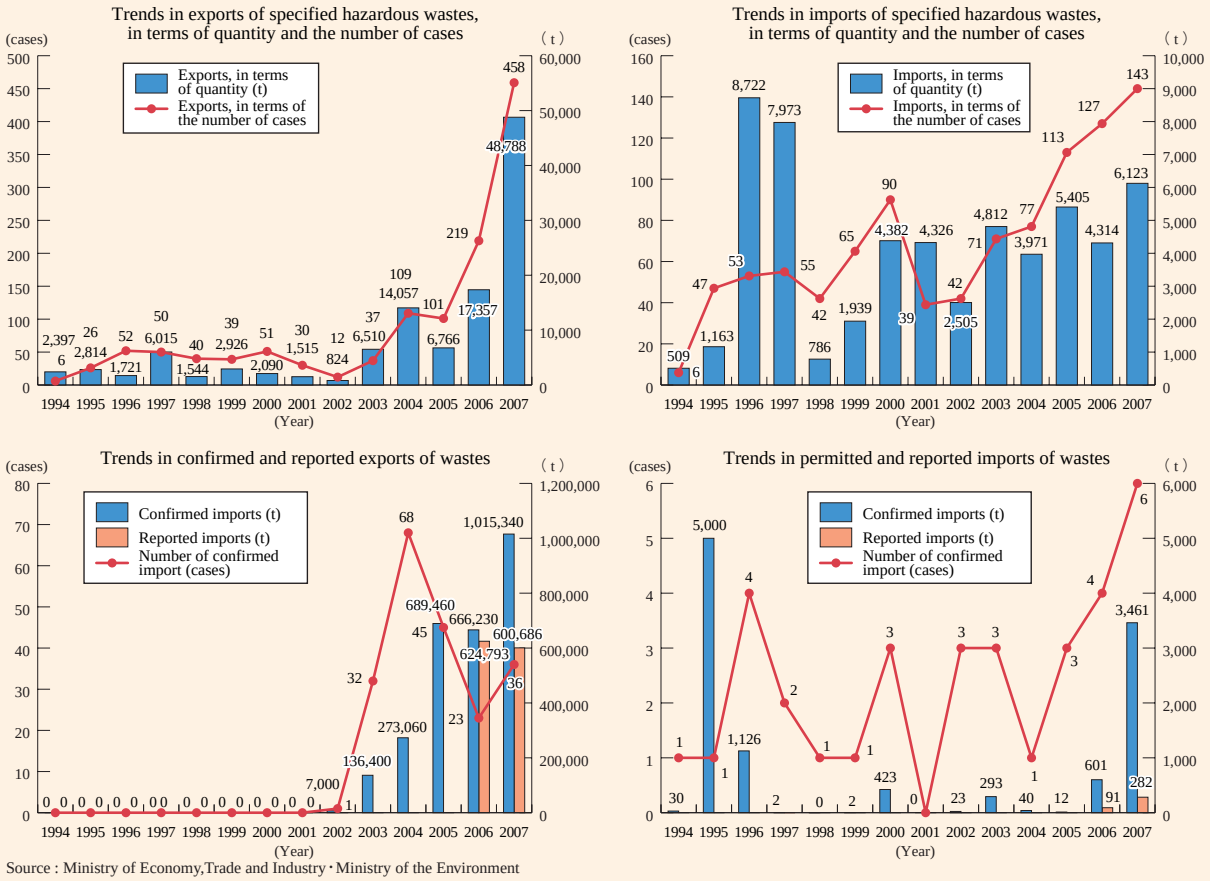
To address such problems, the government should take action to strengthen the enforcement structure for the relevant regulations, and take domestic and international measures to clearly define which items are subject to control.

A Domestic efforts

(a) Enforcement structure for regulations

The Japanese government is taking measures to ensure appropriate implementation of the Basel Law and the Waste Management Law in an integrated manner, and to strengthen the enforcement structure. This includes hosting explanatory sessions for businesses, providing preliminary consultation on individual import/export cases, and

Figure 4-4-5 Trends in waste imports and exports



Source : Ministry of Economy,Trade and Industry・Ministry of the Environment

imposing stricter controls at the border through coordinated efforts by the customs authorities and agencies responsible for the enforcement of the Basel Law and the Waste Management Law.

a. Explanatory sessions on the Basel Law

A prerequisite to constructing an appropriate structure to control waste imports and exports is to ensure that businesses engaged in imports and exports are familiar with the Basel Convention and all other related laws. With this in mind, the Ministry of the Environment (MOE) and the Ministry of Economy, Trade and Industry (METI) have been jointly hosting explanatory sessions on the Basel Law and other related laws in order to help companies understand the key points of the legislation concerning waste imports and exports and to prompt them to import and export regulated goods in an appropriate manner. These sessions provide an overview of the Basel Convention, the Basel Law and the Waste Management Law and explain the statutory formalities associated with all imports and exports. In FY 2007, these sessions were held in 10 places throughout Japan.

[An explanatory session on the Basel Convention]
Source: Ministry of the Environment

b. Preliminary consultation on individual import/export cases

MOE and METI provide preliminary consultation services for companies planning to import or export wastes. Companies can receive advice on whether the goods being imported or exported are designated as specified hazardous wastes under the Basel Law or as wastes under the Waste Management Law.

Companies applying for this consultation service are

expected to fill out a designated preliminary consultation form and submit this along with related documents, including the invoice, the contract, the domestic transaction voucher, a photograph of the whole item and, where necessary, an analysis of the components and a photograph of the analysis sample. The submitted documents are then used to decide whether the item in question is subject to control under the Basel Law or the Waste Management Law.

c. Stricter controls at the border

The customs authorities conduct careful examination and inspection at the point from which CRs are shipped overseas, in order to prevent any items regulated under the Basel Law or the Waste Management Law from being exported without compliance with the necessary formalities. A variety of measures have been introduced, such as improving the capacity to collect and analyze information and the upgrading of inspection equipment. For example, a large x-ray container inspection system has been installed at 16 sites across Japan in order to improve the speed and accuracy of container inspection. In the event of discovery of a suspicious cargo during customs examination or inspection, the customs authorities are required to work in close cooperation with MOE and METI to inspect the cargo and take strict measures pursuant to the law.

MOE and METI also cooperate with the customs authorities in the implementation of this policy by proactively providing information and periodically exchanging opinions.

(b) Clear definition of regulated goods

The Basel Convention allows each country to set up its own criteria for defining the hazardous wastes subject to control, including criteria for deciding toxicity and separating wastes from non-wastes. Therefore, the definition of regulated goods may differ between the importing and exporting countries. To avoid such situations, each country should provide as much objective information as possible in order to decide whether an item being imported or exported is subject to control.

In light of this, the government has provided a list of both regulated and non-regulated items in the form of an official notification based on Basel Convention Annexes VIII and IX. For certain items such as waste lead batteries and waste PET bottles, the government has defined key considerations to be taken into account when determining whether an item should be categorized as waste or specified hazardous waste and has made this information available to both importers and exporters.

To prevent household appliances which are no longer useful from being exported for the nominal purpose of second-hand use, the government will conduct studies to clarify the criteria for identifying exports for second-hand use under the Basel Law.

The government has announced key considerations to be taken into account when distinguishing wastes and determining the toxicity of each category of waste, such as waste lead batteries and waste PET bottles, and has been publicizing this information.

In the future, the government will consider setting the criteria for exports for second-hand use under the Basel Law in order to prevent discarded household appliances that contain hazardous substances and are inappropriate for second-hand use from being exported for this purpose.

B International efforts

To combat the illegal transboundary movement of waste, Japan has been joining forces with other Asian countries, promoting information exchange for the prevention of illegal waste imports and exports and supporting initiatives to improve the authorities' enforcement capacity.

(a) Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Wastes

In 2003, Japan proposed the idea of establishing an Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Wastes to serve as a framework (network) for improving the capacity to implement the Basel Convention and to foster information exchange between the countries concerned. Since then, Japan has, in cooperation with other Asian countries, been taking various measures to prevent illegal imports and exports, including the hosting of workshops, making country-specific regulatory information available on the web, and

[Asian Network for the Prevention of Illegal Transboundary Movement of Hazardous Wastes]

Source: Ministry of the Environment

exchanging information on illegal exports. In addition, Japan plans to strenuously implement the following measures: collecting information on the state of each country's ongoing initiatives to prevent illegal imports and exports of hazardous wastes; identifying other countries' definitions and criteria for hazardous wastes and reporting the results in order to narrow differences in the criteria used to identify items controlled under the Basel Convention; and sharing information on good practices for implementing the Basel Convention in order to enhance each country's implementation capacity.

(b) Partnership on the Environmentally Sound Management of Electrical and Electronic Wastes for the Asia-Pacific Region

Japan provides funds for the Partnership on the Environmentally Sound Management of Electrical and Electronic Wastes for the Asia-Pacific Region, an ongoing project within the framework of the Basel Convention. As part of this initiative, Japan supports projects conducted by the Basel Convention Asia-Pacific Regional Centre, including surveys on the criteria used to separate e-wastes (e.g., end-of-life TVs, PCs and refrigerators) from appliances for second-hand use and the creation of e-waste inventories.

(c) Collaboration under multilateral and bilateral frameworks

Japan exchanges information with its major CR trading partners on initiatives aimed at preventing illegal waste imports and exports.

One example of multilateral frameworks is the Tripartite Environment Ministers Meeting held between China, Japan and Korea (TEMM), which promotes information exchange concerning the measures used to prevent the inappropriate import and export of e-wastes and other hazardous wastes, and also hosts workshops addressing this issue.

Japan has also established bilateral frameworks with China and South Korea in order to exchange information on legal systems concerning waste exports and imports to and from these countries, and the mechanism needed to implement these systems.

Section4 Establishing an East Asian SMC block

As shown in the previous sections, the 3R Initiative proposed by Japan has expanded geographically to include not only the G8 countries but also OECD member states and Asian countries. As the global situation changes, this scheme is being adopted, worldwide, as an effective measure to address waste management issues and to improve resource productivity. Global 3R initiatives are entering a new phase (Table 4-4-2).

In light of the discussions held regarding the past G8 processes, initiatives in Asia, and the Second Fundamental Plan for Establishing a SMC Society, Japan has recognized the issues it should tackle in its role as a world leader. They include resource conservation through 3R activities, the pursuit of co-benefits to greenhouse gas emission reductions, and stronger international partnerships to help developing countries build their capacity for waste management and implementation of the 3Rs.

Japan plans to launch full-fledged initiatives to establish an East Asian SMC block. The first step will be to formulate an East Asia Sound Material-Cycle Society Vision by 2012 and help create a sustainable material cycle in Asia.

Table4-4-2 Examples or progress in 3Rs-related efforts in the G8 member Countries and by the European Commission

Canada	✓Waste diversion (recycling and composting) per person in 2004 improved by 24%, compared to 2000. ✓Implements green purchase programs at the national and state level, along with an extended producer responsibility program for specific waste flows. ✓Makes international contributions, as part of the OECD, to the development of environmentally responsible waste management guidelines and other activities. ✓Has successfully established links between improvements in energy efficiency through the promotion of recycling and reductions in greenhouse gas emissions, and addresses these issues in cooperation with neighboring countries.
European Commission	✓Formulated a thematic strategy on waste reduction and recycling (2005) and a thematic strategy on the sustainable use of natural resources (2005). ✓Established targets for the End-of-Life Vehicle Directive (ELV) as a result of WEEE and RoHS reviews in 2008. ✓Established an international panel on sustainable resource management, in collaboration with the UNEP. ✓Proposed the Waste Framework Directive. ✓Proposed action plans on sustainable consumption/production and sustainable industrial policies.
France	✓Formulated the National Plan for Waste Prevention (2004). ✓Has undertaken various awareness campaigns. ✓In addition to enforcing EU recycling-related laws, has applied extended producer responsibility to waste tires (2004), unsolicited flyers (2007), etc. ✓Grenelle de l'Environnement (environmental policy program) - Aims to reduce waste production by 5 kg per person, annually, over the next five years. - Aims to improve the recycling rate (e.g., collect organic materials) ✓Promotes sustainable production and consumption (by economic instruments, e.g., bonuses) and has broadened the applicability of extended producer responsibility to include household hazardous waste, waste furniture, etc.
Germany	✓As a result of the introduction of recycling laws, the rate of resource recycling from waste increased from 13% in 1990 to 58% in 2006. Landfills lacking intermediate treatment were banned in 2005. ✓The waste management sector is expected to contribute 10% of the greenhouse gas reduction target under the Kyoto Protocol. ✓Established the goal of doubling resource productivity by 2020, compared to 1994 levels.
Italy	✓Established original targets for the sorted collection of urban solid waste: 50% by the end of 2009 and 60% by the end of 2011. ✓Established the goal of reducing total material requirements by 25% by 2020, 50% by 2030, and 90% by 2050. ✓Active in introducing various market mechanisms under the new financial law of 2007. Uses environmental indicators and target setting (incl. waste production and management targets) when distributing EU Structural Funds.
Japan	✓Formulated the Fundamental Law for Establishing a Sound Material-Cycle Society as the framework law and the Fundamental Plan for Establishing a Sound Material-Cycle Society as an implementation program. Established targets to be achieved by 2015 for resource productivity (¥420,000/ton, gross domestic product (GDP)/direct material input (DMI)), cyclical use rate (14-15%, amount of cyclical use/(amount of cyclical use + DMI)), and the amount of final disposal (23 million tons in landfill). ✓The 21st Century Environment Nation Strategy, established in 2007, positions 3R activities as a key environmental strategy. ✓Revised recycling-related laws for the further promotion of waste recycling (e.g., the Containers and Packaging Recycling Law, and the Food Waste Recycling Law). ✓Actively promotes 3R through close cooperation with international organizations and diverse activities such as policy dialogue and capacity building.
Russia	✓Waste from mineral extraction processes accounts for 90% of the total waste generated. ✓Forty percent of all municipal solid and industrial wastes are collected as resources and subject to treatment. ✓Working on draft laws for 3R promotion, including a federal law on circulative resources. Enacted a permit system for hazardous waste management.
U.K.	✓Formulated a new waste strategy in 2007, setting stricter targets for recycling and household waste composting: 40% by 2010, 45% by 2015, and 50% by 2020. ✓Set new targets for reducing the amount of household waste (waste not subject to reuse, recycling or composting): a 29% reduction by 2010, compared to 2000 levels, and a 45% reduction by 2020. ✓Introduced economic incentives such as landfill tax. Plans to raise the rate of this tax from £32/te to £48/te in 2010. ✓In addition to setting targets for key waste materials (used paper, food, glass, aluminum, wood, plastic, fabric), conducts various activities to achieve sustainable consumption and production. ✓Under the framework of the Basel Convention, strives to prevent the illegal transboundary movement of hazardous wastes.
U.S.	✓Issued presidential directives in January 2007 to strengthen federal control of the environment, energy and traffic by incorporating the 3R concept. ✓The EPA has set a recycling rate target of 35%. ✓Promotes 3R principles through various activities, including product stewardship, e-waste reuse and recycling, and the promotion of remanufactured products.

Source： Ministry of the Environment