

**Senior Officials Meeting on the 3R Initiative  
Questionnaire on 3Rs' strategies and activities  
SINGAPORE**

<b>1. Major developments of national and international strategies, policies and activities on the 3Rs of Singapore since the Ministerial Conference on the 3Rs (April 2005).</b>
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1.1 National Recycling Programme (NRP) for Households

In 2001, the National Environment Agency (NEA) introduced the NRP to provide a convenient means for residents living in public and private housing estates to recycle their waste. Under the NRP, recycling bags or bins are distributed to each household for residents to separate their recyclables from the general refuse. The recyclables are collected every fortnightly on a scheduled date by the appointed recycling companies. Participation rate by households has increased from 22% in 2001 to 56% in 2005.

We are now in the process installing some 1,600 centralized depositories in all high-rise public housing estates to make recycling even more convenient. This will complement the existing door-to-door collection. When the depositories are fully installed in 2007, residents will be able to deposit their recyclables any time of the day. They will not need to store their recyclables for 2 weeks and will have an outlet should they accumulate large amounts of recyclables in between collections.

1.2 Extended producer responsibility

1.2.1 Campaign to promote use of reusable bags and reduce excessive use of plastic bags

In 2005, NEA set up a working group comprising major supermarket chains, retailers, Singapore Retailers Association and the Singapore Environment Council (SEC) to study the excessive issue of single-use plastic carrier bags to customers in their shopping trips. All the major supermarkets and other retailers were involved in the work group. A national campaign was launched on 11 Feb 2006 to raise awareness and educate the public on the use of reusable bags instead of single-use plastic carrier bags. The participating retailers provided reusable bags at low cost or no cost if a purchase value meets a specified level to promote the use of reusable bags. Various retailers also provided direct incentives such as token gifts and lucky draws for customers who bring their own bags. The working group would be assessing the results of the campaign at the end of the year before deciding on new initiatives.

1.2.2 e-waste conference

A regional e-waste conference was held in Nov 05 drawing together interested industry players, international speakers and government officials to discuss the issue of e-waste and to share best practices.

Issues discussed included the pros and cons of a mandatory system vis-à-vis a voluntary system; merits and demerits of competitive take-back systems versus monopolistic structures; the importance of partnership between producer, government and consumer; the importance of producing measurable results; and the need for the system to be clear and enforceable to deal with free riders.

### 1.2.3 Packaging agreement

We have started consultation with various manufacturers and packaging companies to seek feedback on a voluntary scheme to minimise packaging waste.

## **2. Domestic 3R activities**

### **2.1 Good practices on 3Rs**

We are going to develop a showcase of the successful activities on the 3Rs, including those of the national level, the municipality level, industry, and NGOs/NPOs. Please fill out the EXCEL sheet attached to this e-mail with your good practices on the 3Rs.

Please see the Excel file on 3R showcase for details of the activities.

*(Please refer to attachment for details on the programmes)*

## **2.2 3Rs and governance**

To promote the 3Rs, it is necessary to develop a governance system that responds to different situations and conditions of each country. Are there any specific issues relating to institutional arrangements for the implementation of the 3Rs and environmentally-sound management of waste? For example, please explain the different roles of stakeholders in the promotion of the 3Rs, such as how to position the informal sector that is engaged in recycling and recovering activities under the context of national 3Rs policies.

In Singapore, we have been promoting waste recycling through non-legislative means by establishing 3P partnership. 3P refers to the People, Private and Public sector. One example of such partnership is the drafting of the Singapore Green Plan (SGP) 2012, our 10-year environmental blueprint to help Singapore strive for environmental sustainability over the decade. With the joint efforts of the 3P partners, specific targets were set and reviewed regularly to conserve resources, minimize waste and maximize recycling and to achieve our vision of a green Singapore. With greater involvement from the 3P sector, we hope that this exchange of ideas and the commitment of expertise and resources among the partners, will serve to inculcate greater sense of ownership and promote personal and shared responsibilities towards the environment.

## **2.3 3Rs and environmentally-sound management of industrial waste**

Since economic development tends to cause an increase in the amount of industrial waste generation, environmentally-sound management of industrial waste is essential to promote the 3Rs. To decouple economic development and industrial waste generation, what kind of role is expected for the industrial waste emitter, national and local governments, including municipalities? Also, please give us your views on how to share the responsibilities of construction and operation of landfill as final disposal sites among the stakeholders?

With economic development, it is inevitable that waste quantities will go up. In Singapore, the principle of producer-pays applies with waste generators paying more if more waste is produced. All waste in Singapore is collected and disposed of at either the incineration plants or landfill. In the case of hazardous waste, it is either destroyed by incineration in dedicated plants or stabilized before being sent to the landfill for final disposal. The incineration plants and landfill charge a fee by weight and the fee is calculated based on the actual cost of building and operating the disposal sites. It is therefore in the interest of waste producers to reduce waste. Having said this, the government spearheads initiatives to promote recycling and waste minimization for the long term goal of environmental sustainability and zero waste.

## **3.1 Situation of transboundary movement of recyclable resources and remanufactured goods**

Regarding the transboundary movement of recyclable resources and remanufactured goods, what are the major recyclable resources observed in exports from and imports to your country? Are there any specific problems in relation to exports and imports of these recyclable resources and remanufactured goods? What are the major reasons for the problems?

In Singapore, recyclables collected are either sent to recycling local plants if they are available. This includes e-waste, construction and demolition waste, wood and horticultural waste. Other recyclables such as waste paper and glass are exported overseas for recycling, as we do not have local recycling facilities to process such recyclables. In such cases, the exporters are required to obtain a PIC (prior informed consent) from the importing country before approval can be obtained from the Singapore authorities to ship out the recyclables.

### **3.2 Environmentally-sound management in transboundary movement of recyclable resources and remanufactured goods**

To prevent environmental pollution caused by transboundary movement of recyclable resources, what kind of policies and measures (e.g., cooperation among national governments and other stakeholders) are expected? If your country has already launched such activities, please provide us with detailed information.

As a signatory of the Basel Convention in 1996, Singapore adopts the Prior Informed Consent procedure in granting any permit for the export, import or transit of recyclables.

### **3.3 Harmonization of economic and environmental benefits through the transboundary movements of recyclable resources and remanufactured goods**

Please provide information on the positive and negative socio-economic impacts of the increase in import and export of recyclable resources and remanufactured goods in your country. What kinds of policies and measures have been implemented to support the positive effects and mitigate negative effects of trade of recyclable resources and remanufactured goods?

Reuse of second-hand products and recycling of waste contribute towards waste minimisation and resource conservation. Nevertheless, it is essential that secondhand goods have sufficient useful life and that recyclables are exported to countries that have proper treatment facilities to avoid pollution. To this end, Singapore has acceded to the Basel Convention and ensures the safe transboundary movement of secondhand goods and recyclables through the application of the PIC system. Approval for export is only granted after a PIC has been issued for each shipment.

**4. Others**

If there are any other issues related to promotion of the 3Rs which should be discussed in the Senior Officials Meeting, please provide us with your input below.

**The Showcase of 3Rs Good Practices**

**Country/Organisation:**

**Singapore / National Environment Agency**

<b>No.</b>	<b>Name of the practice</b>	<b>Summary of the practice</b> -level of implementation(national, local, industry, NGOs/NPOs) -duration -stakeholders involved	<b>Impact:</b> -Improvements after the introduction of the practice	<b>Key For Success</b> What are the major reasons for the success of the activity?
1	Singapore Green Plan 2012	The SGP 2012 is Singapore's blue-print for environmental sustainability and was launched in 2002. Among other areas, the SGP 2012 sets targets to help Singapore achieve its long term goal of zero landill and zero waste and the targets for recycling are: to increase the recycling rate from 44% in 2002 to 60% by 2012.	The recycling rate in 2005 has reached 49%.	To aim high and make good progress by setting stretched targets, creating a conducive condition, providing necessary infrastructure, building capability, raising awareness and educating the public, fostering partnership with the 3P sectors and promoting ownership of the environment.
2	National Recycling Programme (NRP) for households	In April 2001, the NEA launched the NRP to provide a convenient means for all residents living in high-rise housing estates and landed properties to recycle their waste. Under the NRP, the public waste collectors (PWCs) are required under their licence, to provide door-to-door collection of recyclable materials (such as paper, cans, plastic and glass bottles) from households every fortnight. To ensure that the collection of recyclables is carried out in an orderly and consistent manner, NEA introduced the Quality of Service (QOS) standards in October 2002. Recycling companies that are involved in the door-to-door collection of recyclables from households are required to comply with the QOS. Demerit points and financial penalties are meted out to the permit holders for lapses in service standards.	Participation rate by households has increased over the past years: 2001: 22% 2002: 33% 2003: 45% 2004: 54% 2005: 56%	The mandatory requirement for all PWCs to provide door-to-door collection of recyclables has provided a convenient means for residents to practice recycling and encourage greater participation. The introduction of the QOS scheme is also effective to ensure reliable and consistent services provided by the PWCs.
3	Public Recycling Bins network	To supplement the NRP, recycling bins for paper, plastic, metal cans and glass bottles, have been placed at public areas such as outside mass rapid transit stations, bus interchanges, food courts, airport terminals, shopping centres, pedestrian malls, etc to encourage the public to recycle waste. The vast majority of the bins are set up and maintained by the private sector.	The number of public recycling bins increased from 1,700 in 2001 to 5,700 in 2005.	The bins provide a convenient means for the public to recycle on the move. They also help Increase awareness among the public of the need to minimise waste & maximise recycling.

4	Recycling Corner Programme for schools	A structured waste recycling programme at schools was launched by NEA together with recycling companies and the Singapore Environment Council (SEC) in September 2002. The recycling programme involves the setting up of a Recycling Corner in schools where recycling bins for paper, cans, and plastic are placed at a designated area called a Recycling Corner. Educational materials are also made available at the Recycling Corners to raise awareness on waste minimisation and recycling among students. Talks, activities, and surveys organised by NEA and SEC are conducted to sustain the recycling programme. Students are also trained to be Environmental Champions in their schools to impart greater ownership of the recycling programme. The Champions are responsible for conducting recycling talks and assist in planning, organizing and running recycling/environmental activities. Schools are also encouraged to form Environmental Clubs. Financial support in the form of grants is given to Environmental Clubs to organize environmental related activities. The NEA also provide other forms of support such as providing educational aids to these clubs.	Percentage of schools with the recycling programme has increased over the past years: 2003: 30% 2004: 50% 2005: 78%	The involvement of students and teachers in decorating the Recycling Corners and putting up information and display on 3Rs help to generate interest and build a sense of responsibility and ownership. The students also get practise the 3R at a young age to inculcate good habits in their adult lives.
4	Annual Recycling Day	The first Recycling Day was held on 21 Nov 04 by the NEA in partnership with the community and the private sector to raise awareness and educate the public on recycling. Awareness and educational activities on 3R were held at public libraries and communities centres at different parts of the city-state.	Recycling Day 2005 was held on 17 Sep 2005 with greater participation from schools and the young.	The involvement of various stakeholders such as grassroots organisations, local authorities, NGOs, schools, waste collectors, recycling companies, business associations and other private companies in the planning and implementation of the event, the publicity generated by the event and the active engagement of the public has enhanced awareness among the the 3P(people, private, public) partners on the need
5	Annual Clean & Green Week	Events and activities to raise awareness on the 3Rs are also organized during Singapore's annual Clean and Green Week which is organised by NEA/Ministry for the Environment and Water Resources in November each year.	Clean & Green Week has been held every year since 1990. It has grown in scope as well as is reaching out to a wider audience in the public. This is evident in the increasing level of awareness as manifested by the number and tone of public feedback.	The success is due to a large extent to the active involvement and participation of all 3P stakeholders such as grassroots organisations, local authorities, NGOs, schools ,waste collectors, recycling companies, business associations other private companies and residents.

6	Joint campaigns with commercial sector partners	NEA works with businesses, NGOs, other 3P partners to jointly organise 3R initiatives to promote the message of recycling and waste minimisation, such as:		
		a. NEA together with major retailers, Singapore Retailers Association (SRA) and the Singapore Environment Council (SEC) launched a campaign to educate stores and shoppers to avoid wastage of plastic bags in Nov 2002, & to promote recycling and waste minimisation in the commercial sector.	The full participation of all the major supermarkets in the face of market rivalry demonstrates a measure of the success of the campaign. There has been increased awareness among the public on the ground on the need to use reusable bags and use less plastic bags. The results will be evaluated at the year-long campaign.	The involvement of the stakeholders, in this case, all the major supermarket chains, in the planning group was crucial to the success of the campaign. They were involved in the decision making and were able to customise individual incentive schemes and packages to suit their business models.
		b. Proposed voluntary packaging agreement: Consultations with major food and beverages manufacturers and packaging manufacturers have begun to seek feedback on a voluntary scheme to minimise packaging waste.		The success of the initiative will hinge very much on the participation of the major manufacturers, importers and brand owners. The public will also have an important role to play in the choice of products. Targets and measurements will figure as important tools in the implementation of the scheme.
7	Develop supporting infrastructure for recycling facilities/ industry	<ul style="list-style-type: none"> <li>- Two sites have been set aside for waste recycling facilities to facilitate the setting up of waste recycling facilities.</li> <li>- A Waste Management and Recycling Association of Singapore (WMRAS) was set up in 2001 to provide a platform for the waste management and recycling companies to collaborate and develop the industry through partnerships and joint projects, and to raise the professionalism of workers in the industry through setting of skills standards.</li> </ul>	Singapore now has the capability and capacity to recycle electronic waste, food waste, wood waste, horticultural waste, used slag, construction and demolition waste, ferrous waste and plastic waste. The overall recycling rate increased from 40% in 2000 to 49% in 2005. We have set a target of 60% by 2012 in the Singapore Green Plan 2012(SGP 2012)	Banding waste recycling companies together facilitate the forming of partnerships & networks.
8	IES Fund	To promote development and adoption of innovative environmental technologies, the National Environment Agency (NEA), set up a S\$20 million Innovation for Environmental Sustainability (IES) Fund to provide financial support for companies to carry out test bedding of recycling projects.	Over 30 projects have been approved as of Dec 2005. Some companies, such as GPac which makes light-weight pallets from horticultural waste, have moved ahead to commercialise their products.	Funding assistance helps new start-ups defray the cost of testbedding projects and therefore promotes new recycling technologies and open up new outlets to recycle more waste.