

Seventh Regional 3R Forum in Asia and the Pacific

“Advancing 3R and Resource Efficiency for the 2030 Agenda for Sustainable Development”

Adelaide, SA, Australia, 2-4 November 2016

Country Report

(Draft)

<Malaysia>

This country report was prepared by the Government of Malaysia as an input for the Seventh Regional 3R Forum in Asia and the Pacific. The views expressed herein do not necessarily reflect the views of the United Nations.

Country 3R Progress Report

Name of the Country: MALAYSIA

Name, Designation and Organization Respondent:

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Report:

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Progress and achievements towards implementation of the Ha Noi 3R Declaration
-Sustainable 3R Goals for Asia and the Pacific (2013-2023)-

With the objective of demonstrating renewed interest and commitment of Asia-Pacific countries towards realizing a resource efficient society, the Fourth Regional 3R Forum in Asia-Pacific in 2013 adopted the good-will and legally non-binding “*Ha Noi 3R Declaration – Sustainable 3R Goals for Asia and the Pacific 2013-23.*” The objective of the Country Reporting is to share among international community various initiatives launched and efforts made (such as new policy instruments, legislations, regulations, institutional arrangements, investments or financing, technological innovation or intervention, partnership mechanisms, such as PPPs, etc.) by the member countries of the Forum in addressing each of the underlined goals of the Ha Noi 3R Declaration. This would not only help the member countries to learn various 3R best practices in place across the region, but it would also help bi-lateral and multi-lateral development agencies, donors, development banks in assessing the sustainable needs and challenges to better devise their existing as well as future capacity building programmes and technical assistance in the areas of 3Rs and sustainable waste management.

We request you to kindly fill in the below table as much as possible with relevant data/information. If additional spaces are required, separate sheets could be attached.

Thank you very much for your kind cooperation.

**Voluntary Progress/Achievements/Initiatives in
Implementing Ha Noi 3R Declaration (2013~2023)**

MALAYSIA

United Nations Centre for Regional Development (UNCRD)
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I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)

Goal 1 Significant **reduction** in the quantity of **municipal solid waste** generated, by instituting policies, programmes, and projects at national and local levels, encouraging both producers and consumers to reduce the waste through greening production, greening lifestyle, and sustainable consumption.

Q-1 What specific 3R policies, programmes and projects, are implemented to reduce the quantity of municipal solid waste?

Program : Separation At Source for Households (implemented since 1st September 2015)

Q-2 What is the level of participation of households in “source” segregation of municipal waste streams? (Please check the appropriate box)

- Very High (> 90%)
 High (>70%)
 Average (50~70%)
 Low or not satisfactory (< 50%)
 Does not exist

Q-3 Total annual government expenditure per capita (US\$ per capita) in municipal solid waste management in 2014-2015

Development Expenditure	Operational Expenditure
For facility operation. (2015) *(exchange rate RM1 = 0.24USD)	For operational cost of solid waste facilities, waste collection services and public cleansing. (2015)
RM91,460,000 (USD 2,240,7061.61)	RM1,761,000,000 (USD 431,432,708.22)

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

- 1) Inadequate proper waste management facilities and expensive new waste facilities;
- 2) Inconsistence funds allocated for waste management especially from Local Authority; and
- 3) Lengthy and complicated legal procedure to enforce solid waste law.

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Policies : National Strategic Plan For Food Waste Management in ICI Sector

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Pay as You Throw

Is this Goal relevant for your country? Highly Partially Not at all

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)

Goal 2 Full-scale utilization of the organic component of municipal waste, including food waste, as a valuable resource, thereby achieving multiple benefits such as the reduction of waste flows to final disposal sites, reduction of GHG emission, improvement in resource efficiency, energy recovery, and employment creation.

Q-1 Does the central government have policies or support to utilize or reduce the organic waste such as composting, energy recovery and improving efficiency in food processing?

Yes, National Solid Waste Management Policies (Revision) 2016 clearly stated that the solid waste management in Malaysia must be managed according to waste hierarchy.

Q-2 What is happening to country's organic waste? (Please check the appropriate box)

- mostly landfilled
- mostly incinerated
- both landfilled and incinerated
- mostly open dumped or open burned

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

High cost of open dump site upgrading and closure. Building new sanitary landfills and treatment facilities require huge budget and often opposed by the public.

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Policies : Waste to Energy
Websites : <http://wte.kpkt.gov.my/>

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

- 1) Integrated Waste Management

Is this Goal relevant for your country? Highly Partially Not at all

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)

Goal 3 Achieve significant **increase in recycling rate** of recyclables (e.g., plastic, paper, metal, etc.), by introducing policies and measures, and by setting up financial mechanisms and institutional frameworks involving relevant stakeholders (e.g., producers, consumers, recycling industry, users of recycled materials, etc.) and development of modern recycling industry.

Q-1 What is the recycling rate of various recyclables? (Please check the appropriate cell & add more waste streams as relevant for the country)

Rate Type	Very High (>90%)	High (>70%)	Average (50~60%)	Poor (<50%)	Recycling does not exist	Definition of recycling rate*
Paper		/				2
Plastic		/				3
Metal		/				3
Construction waste				/		3
e-waste	-	-	-	-	-	-
others	-	-	-	-	-	-

*Note: Please specify in the cell which of the following definitions (ie., 1 or 2 or 3) is followed for recycling rate

Definition 1: (collected recyclable waste)/(estimated generation of waste)

Definition 2: (volume of utilized recyclable waste)/(volume of raw material)

Definition 3: (volume of utilized recyclable waste)/(volume of collected waste for recycling)

Q-2 What specific policies are introduced at local and national level for prevention or reduction of waste streams – paper, plastic, metal, construction waste, e-waste?

- 1) Separation At Source; and
- 2) Promotion of 3R activities.

Q-3 What is the rate of resource recovery from various waste streams?

Rate Type	Very High (>90%)	High (>70%)	Average (50~60%)	Poor (<50%)	Recycling does not exist
Paper	-	-	-	-	-
Plastic		/			
Metal	-	-	-	-	-
Construction waste				/	
e-waste	-	-	-	-	-

(Please check the appropriate cell & add more waste streams as relevant for the country)

Q-4 What is the level of existence of resource recovery facilities/ infrastructures in cities?

Level Type	Every Major City	Few Major Cities only	Does not exist	Supportive policy or programmes exists	No supportive policy or programmes
Paper	-	-	-	-	-
Plastic	-	-	-	-	-
Metal	-	-	-	-	-
Construction waste		/			
e-waste	-	-	-	-	-

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)	
Goal 3	Achieve significant increase in recycling rate of recyclables (e.g., plastic, paper, metal, etc.), by introducing policies and measures, and by setting up financial mechanisms and institutional frameworks involving relevant stakeholders (e.g., producers, consumers, recycling industry, users of recycled materials, etc.) and development of modern recycling industry.
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i> High cost in building, maintenance and operation of a recovery facilities. Relatively low cost on virgin materials are widely available.	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i> <ol style="list-style-type: none"> 1. Separation at Source for Households 2. Dedicated collection for recyclables for households 	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i> <ol style="list-style-type: none"> 1. Separation At Source For ICI sector 	
<i>Is this Goal relevant for your country?</i> <input checked="" type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)

Goal 4 Build **sustainable cities /green cities** by encouraging “**zero waste**” through sound policies, strategies, institutional mechanisms, and multi - stakeholder partnerships (giving specific importance to private sector involvement) with a primary goal of **waste minimization**

Q-1 What specific waste management policies and programmes are introduced to encourage private sector participation in municipal waste management?

Objective 3 National Solid Waste Management Policies (Revision) 2016, which is to achieve better waste management system through privatization of solid waste management.

Q-2 What are the major waste management areas that have strong involvement of private and business sector? (Please check appropriate boxes and add other areas if not listed below)

- waste collection
- resource recovery
- waste recycling
- waste to energy, composting, etc.
- PPP projects in waste sector

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

High cost of privatization of solid waste management

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Full privatization of solid waste collection in 7 states under Act 672

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Expansion of Act 672 to other states

Is this Goal relevant for your country? Highly Partially Not at all

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)

Goal 5 Encourage the **private sector**, including small-and medium-sized enterprises (SMEs) to implement measures to increase **resource efficiency and productivity**, creation of decent work and to improve environmentally-friendly practices through applying environmental standards, clean technologies, and cleaner production.

Q-1 What are the major clean technology related policies aiming to increase energy and resource efficiency of SMEs?

This initiative is not directly under jurisdiction of Solid Waste Management Department

Q-2 What are the capacity building programmes currently in place to build the technical capacity of SMEs in 3R areas?

Nil

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Nil

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Nil

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Nil

Is this Goal relevant for your country? Highly Partially Not at all

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)

Goal 6 Promote the **greening of the value chain** by encouraging industries and associated suppliers and vendors in socially responsible and inclusive ways.

Q-1 What percent of companies and industries have introduced green accounting and voluntary environmental performance evaluation (Ref: ISO 14000)?

- Very High (> 90%)
- High (>70%)
- Average (50~70%)
- Low or not satisfactory (< 50%)
- None

Q-2 What percent of companies and industries have introduced social accounting (Ref: SA 8000) in consultation with their workers?

- Very High (> 90%)
- High (>70%)
- Average (50~70%)
- Low or not satisfactory (< 50%)
- None

Q 3 Does government have a programme for promoting greening of the value chain? What specific policies, programmes and incentives are introduced to promote greening of value chain?

This initiative is not directly under jurisdiction of Solid Waste Management Department

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Nil

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Nil

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Nil

Is this Goal relevant for your country? Highly Partially Not at all

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)

Goal 7 Promote **industrial symbiosis** (i.e., recycling of waste from one industry as a resource for another), by providing relevant incentives and support.

Q-1 Does your government have policies and programmes promoting industrial symbiosis in industrial parks or zones? What specific policies, programmes and incentives are introduced to promote industrial symbiosis?

Integrated waste management policy

Q-2 How many eco-industrial parks or zones or the like, which is supported by the government, are there in the country?

No data

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Enforcement of the law to prevent pollution and fraud.

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Waste management platform and taskforce

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Integrated waste management facilities

Is this Goal relevant for your country? Highly Partially Not at all

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)

Goal 8 Build **local capacity** of both current and future practitioners, to enable the private sector (including SMEs) to obtain the necessary knowledge and technical skills to foster green industry and create decent, productive work.

Q-1 How many dedicated training facilities or centers are there to cater the needs of SMEs and practitioners in the areas of cleaner production, resource efficiency and environment-friendly technologies, etc.?

Available : 1 (I-KPKT, Bukit Tinggi Pahang)
Planning: 1 (Negeri Sembilan by Cenviro Sdn. Bhd.)

Q-2 Please provide an indicative figure on annual government (US \$) expenditure on building technical capacity of SMEs and practitioners in the areas of cleaner production, resource efficiency and environment-friendly technologies, etc.?

No data

Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Changing and transfer of officer to other department due to promotion and etc.

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Objective 6 of National Solid Waste Management Policies (Revision) 2016

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)
Establishment of Center of Excellence by private

Is this Goal relevant for your country? Highly Partially Not at all

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)

Goal 9 Develop proper **classification and inventory of hazardous waste** as a prerequisite towards sound management of such waste.

Q-1 *Is there a systematic classification of hazardous waste? If so, please attach.*

Yes No

Q-2 *What specific rules and regulations are introduced to separate, store, treat, transportation and disposal of hazardous waste?*

Environment Quality Act 1974

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Enforcement of the law is lengthy and complicated

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Nil

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Nil

Is this Goal relevant for your country? Highly Partially Not at all

II. 3R Goals in Rural Areas

Goal 10 **Reduce losses in the overall food supply chain** (production, post harvesting and storage, processing and packaging, distribution), leading to reduction of waste while increasing the quantity and improving the quality of products reaching consumers.

Q-1 What specific policies, rules and regulations, including awareness programmes, are introduced to minimize food or crop waste?

National Strategic Plan for Food Waste Management

Q-2 Is there any continuing education services or awareness programmes for the farmers or agricultural marketing associations on reduction of crop wastes for increased food security?

Yes

Q-3 What is the average wastage of crops or agricultural produce between farms to consumers, if there is a study in your country? – no data

Very High (> 20~ 30%)

High (10~20%)

Medium (5~10%)

Low (< 5%)

Negligible (<1%)

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Foreign workers in farming and agricultural sectors

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

MySaveFood

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Nil

Is this Goal relevant for your country? Highly Partially Not at all

II. 3R Goals in Rural Areas

Goal 11 Promote full scale **use of agricultural biomass waste and livestock waste** through reuse and/or recycle measures as appropriate, to achieve a number of co - benefits including GHG emission reduction, energy security, sustainable livelihoods in rural areas and poverty reduction, among others.

Q-1 How much amount of – (a) agricultural biomass waste and (b) livestock waste are grossly generated per annum?

No data

Q-2 How are most of the agricultural biomass wastes utilized or treated? (Please check all appropriate boxes)

- as secondary raw material input (for paper, bioplastic, furniture, etc.)
- biogas/electricity generation
- composts/fertilizers
- mostly left unutilized or open dumped
- mostly open burned

Q-3 What specific policies, guidelines, and technologies are introduced for efficient utilization of agricultural biomass waste and livestock waste as a secondary material inputs towards full scale economic benefits? Relevant websites could be shared for additional information.

No data

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

No data

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

No data

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

No data

Is this Goal relevant for your country? Highly Partially Not at all

III. 3R Goals for New and Emerging Wastes

Goal 12 Strengthen regional, national, and local efforts to address the issue of **waste, in particular plastics** in the marine and coastal environment.

Q-1 *What specific policies and regulations are in place to address the issue of plastic wastes in coastal and marine environment?*

1. Solid Waste and Public Cleansing Management Act 672 – Section 72(1), Prohibition against unauthorized escape of any controlled solid waste
2. Environmental Quality Act 1974 – Section 29(1), Prohibition of discharge of wastes into Malaysian waters
3. Water Act 1920 – Section 7(A)(1) – Prohibition of pollution of rivers

Q-2 *What extent issue of plastic waste is considered in integrated coastal zone management (ICZM)? (Please check the appropriate box)*

Very much Somehow Not at all

Q-3 *Please provide a list of centre of excellences or dedicated scientific and research programmes established to address the impacts of micro-plastic particulates (<5 mm) on coastal and marine species? If yes, please provide relevant websites.*

No data

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Difficulty in enforcement

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

No data

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

No data

Is this Goal relevant for your country? Highly Partially Not at all

III. 3R Goals for New and Emerging Wastes

Goal 13 Ensure **environmentally-sound management of e-waste** at all stages, including collection, storage, transportation, recovery, recycling, treatment, and disposal with appropriate consideration for working conditions, including **health and safety aspects** of those involved.

Q-1 How do people usually recycle their e-waste (waste electrical and electronic equipment)?
(Please check the appropriate box in order of priority by filling in numbers like 1, 2, 3, 4,...etc., for example 1 => Highest priority)

Check if applicable	Number in priority order	
	5	Take to recycling center / resource recovery facilities
	5	Take to landfill
	1	Take to the retailer
	2	Take to local charity for re-use
	1	Take to second-hand shop for re-use
	10	Ship back to the manufacturer
	10	Ship back to the manufacturer
	10	Recycle in another country
		Do not know how people dispose

Q-2 What specific policies and regulations are in place to ensure health and safety aspects of those involved in e-waste management (handling/sorting/resource recovery/recycling)?

Environment Quality (Household Scheduled Waste) Regulation 20xx

Q-3 How much amount of e-waste is generated and recycled per year?

No data

Type of e-waste	Estimated total volume generated (ton/year)	% of collected by permitted recycler	% of volume recycled in collected
Television			
Computer			
Mobile phone			
Refrigerators			
Washing machines			
Air conditioners			
Others...			

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

nil

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

The Project for Development of mechanism for Household E-Waste Management in Malaysia

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Pilot project for e-waste storage, handling and transportation of household e-waste

Is this Goal relevant for your country? Highly Partially Not at all

III. 3R Goals for New and Emerging Wastes

Goal 14 Effective enforcement of established mechanisms for preventing illegal and inappropriate export and import of waste, including transit trade, especially of hazardous waste and e-waste.

Q-1 *What specific policies and regulations are introduced to prevent illegal import and export of e-waste?*

Environment Quality Act 1974

Q-2 *Do you have required number of well-trained custom or other officials (for airport, sea-port, land border control, etc.) to track illegal export and import of e-waste?*

Yes No

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Frauds and close proximity encourages e-waste to be exported to Malaysia as recyclable or repairs.

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Nil

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Nil

Is this Goal relevant for your country? Highly Partially Not at all

III. 3R Goals for New and Emerging Wastes

Goal 15 Progressive implementation of “**extended producer responsibility (EPR)**” by encouraging producers, importers, and retailers and other relevant stakeholders to fulfill their responsibilities for collecting, recycling, and disposal of new and emerging waste streams, in particular e-waste.

Q-1 What specific Extended Product Responsibility (EPR) policies are enacted or introduced? (If there is none, then skip Q-2 below)

Environment Quality (Household Scheduled Waste) Regulations 20xx. However this regulation is still in drafting stage.

Q-2 Please provide a list of products and product groups targeted by EPR nationally?

- 1) Television;
- 2) Washing machine;
- 3) Air conditioning;
- 4) Refrigerator;
- 5) Computer; and
- 6) Mobile Phone

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Enforcement and facility shortage

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Environment Quality (Household Scheduled Waste) Regulations

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Management of household schedule waste

Is this Goal relevant for your country? Highly Partially Not at all

III. 3R Goals for New and Emerging Wastes

Goal 16 Promote the 3R concept in health-care waste management.

Q-1 What specific policies and regulations are in place for healthcare waste management?
Environment Quality Act 1974 – (Scheduled Wastes) Regulations, 2005

Q-2 What is the total annual government expenditure towards healthcare waste management (US\$ per year)?

2015 : RM103,808,081 (USD 25,432,255.26) exchange rate RM1 = 0.24USD

Q-3 List the agencies or authorities responsible for healthcare waste management.

Ministry of Health Malaysia

Q-4 What is the common practice for disposal of healthcare wastes?

(Please check the appropriate box and add if any other practice followed)

- open dumping (untreated)
- open burning (untreated)
- ordinary landfilling (untreated)
- sanitary landfilling (treated)
- Low cost small scale incineration (do not meet air emission standards)
- Highly controlled air incineration (dedicated/modern medical waste incinerators)
- Other methods (please specify names:)

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Nil

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Nil

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Nil

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 17 Improve resource efficiency and resource productivity by greening jobs nation - wide in all economic and development sectors.

Q-1 What specific policies and guidelines are introduced for product standard (towards quality/durability, environment/eco-friendliness, labour standard)?

No data

Q-2 What specific energy efficiency schemes are introduced for production, manufacturing and service sector?

No data

Q-3 What specific policies are introduced to create green jobs in product and waste sector?

No data

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Nil

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Nil

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Nil

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 18 Maximize co-benefits from waste management technologies for local air, water, oceans, and soil pollution and global climate change.

Q-1 Please share how climate mitigation is addressed in waste management policies and programmes for co-benefits?

Under 11th Malaysia Plan, one special committee has been formed to coordinate the management of various type of waste in Malaysia.

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Lack of data and coordination

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Catchment Area Needs Statement will be conducted to obtain basic data on waste generation in Kuala Lumpur

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Integrated waste management

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 19 Enhance **national and local knowledge base and research network on the 3Rs and resource efficiency**, through facilitating effective and dynamic linkages among all stakeholders, including governments, municipalities, the private sector, and scientific communities.

Q-1 What specific policies are introduced to encourage triangular cooperation between government, scientific & research institutions and private/business sector in 3R areas?

Thrust 2, Strategy 5 of National Solid Waste Management Policy 2016.

Q-2 Please share the number and list of dedicated scientific institution, or coordinating centers in the areas of 3Rs (e.g., waste minimization technologies, eco-products, cleaner production, recycling technologies, industrial symbiosis, resource efficiency, etc.)?

Local Higher Learning Institution of Malaysia such as University Malaya, University Putra Malaysia, Universiti Tun Hussien Onn Malaysia and etc

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Financial support is limited and lacking in expertise to validate and verify the research done by researcher

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Development of Smart Recycle Bin with , Universiti Tun Hussien Onn Malaysia

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Thrust 2, Strategy 5 of National Solid Waste Management Policy 2016

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 20 Strengthen multi-stakeholder partnerships among governments, civil society, and the private sector in raising public awareness and advancing the 3Rs, sustainable consumption and production, and resource efficiency, leading to the behavioural change of the citizens and change in production patterns.

Q-1 Does central government have official dialogue with multi-stakeholders in the process to formulate 3R-related policies and regulations? Which stakeholders are involved in the dialogue?(Please check all applicable)

- NGOs
 Industrial Association
 Local Government
 Academic Institution
 Others, please add/specify ()

Q-2 What is the level of NGOs' involvement in 3R, sustainable production and consumption, resource efficiency related promotional activities? (Please check the appropriate box)

- Very high
 Moderate
 Low
 Almost Negligible

Q-3 What is the level of citizens' awareness on beneficial aspects of 3R, sustainable production and consumption and resource efficiency. (Please check the appropriate box)

- Very high
 Moderate
 Low
 Almost Negligible

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

NGO program or activities are highly dependent on funds allocated by Government or private institution.

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Thrust 4, Strategy 14 of National Solid Waste Management Policy 2016 emphasis on the importance of collaboration with NGO. Thus, awareness program with local NGOs is conducted annually especially during National Recycling Day eg. EcoRangers, Treasure Hunt and etc

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Thrust 4, Strategy 14 of National Solid Waste Management Policy 2016

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 21 Integrate the 3Rs in formal education at primary, secondary, and tertiary levels as well as non-formal education such as community learning and development, in accordance with Education for Sustainable Development.

Q-1 Provide a list of formal programmes that addresses areas of 3R and resource efficiency as part of the academic curriculum?

Sustainable Living Subject for Primary and Secondary School

Q-2 Please provide an overview of the Government policies and programmes to promote community learning and development (non-formal education) on 3R and sustainable waste management.

Thrust 4, Strategy 13 of National Solid Waste Management Policy 2016 emphasis on communication, education and awareness of each layer of Malaysian society

Q-3 Please provide a list of academic and research institutions offering PhD programmes in the areas of 3Rs and resource efficiency?

- 1) Malaya University, Kuala Lumpur
- 2) National University of Malaysia, Bangi, Selangor
- 3) Putra Malaysia University, Serdang, Selangor
- 4) University of MARA Institute of Technology

Q-4 Please provide a list of management institutions (offering BBA /MBA courses) which have integrated resource efficiency and life cycle assessment (LCA) as part of their curriculum or course development?

- 1) Putra Malaysia University, Serdang, Selangor
- 2) University of MARA Institute of Technology

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Nil

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Nil

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

To introduce Sustainable Living Subject for Primary and Secondary School

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 22 **Integrate the 3R concept** in relevant policies and programmes, of key ministries and agencies such as Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries, Ministry of Industry, Ministry of Trade and Commerce, Ministry of Energy, Ministry of Water Resources, Ministry of Transport, Ministry of Health, Ministry of Construction, Ministry of Finance, Ministry of Labour, Ministry of Land and Urban Development, Ministry of Education, and other relevant ministries towards transitioning to a resource-efficient and zero waste society.

Q-1 Please list the name of the Ministries and major Government Agencies which are promoting 3R and resource efficiency as part of their policy, planning and developmental activities at local and national level.

3R for solid waste management : Ministry of Urban Wellbeing, Housing & Local Government
 3R for e-waste : Ministry of Natural Resources
 Resource efficiency and green energy : Ministry of Energy, Green Technology and Water

Q-2 What type of coordination mechanism are there among ministries and agencies for a resource efficient economic development?

- Official regular coordination meeting among ministries and agencies
- Official ad-hoc coordination meeting among ministries and agencies
- Informal meeting among ministries and agencies
- Other coordination mechanisms (please add/specify)

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Cross Ministerial functions usually time consuming and require good coordination for an action plan to successful implemented

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Integrated biogas treatment plant in Sungai Besi, Selangor

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Integrated waste management

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 23 Promote **green and socially responsible procurement** at all levels, thereby creating and expanding 3R industries and markets for environmentally-friendly goods and products.

Q-1 What specific policies are introduced to promote green and social responsible procurement?

Government Green Procurement circular

Q-2 Please provide details of eco-labelling schemes of your country.

Nil

Q-3 Please provide a list of criteria for eco-labeled products and services in your country.

Nil

Q-4 Please provide the list of Ministries and major Government Agencies which have adopted green procurement policy.

No data

Q-5 What % of municipalities have adopted the green procurement policy?

No data

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Nil

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Nil

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

Nil

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 24 Phase out harmful subsidies that favour unsustainable use of resources (raw materials and water) and energy, and channel the freed funds in support of implementing the 3Rs and efforts to improve resource/energy efficiency.

Q-1 Are there any government subsidy programmes that directly or indirectly favour unsustainable use of resources (raw materials, water, and energy)? If so, please provide a list of such programmes along with the responsible Ministry or Agency administering and implementing it.

No

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Public objection

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Subsidy rationalization

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

None

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 25 **Protect public health and ecosystems, including freshwater and marine resources by eliminating illegal activities of open dumping, including dumping in the oceans, and controlling open burning in both urban and rural areas.**

Q-1 Is waste management a public health priority in your country?

Yes

Q-2 What are the rules and regulations to prevent open dumping and open burning of waste?

Solid Waste and Public Cleansing Management Act 2007

Environment Quality Act 1974

Q-3 Rank the five most important rivers in terms of water quality (BOD values) passing through major cities and urban areas?

No data

Q-4 What are the specific laws, rules and regulations in place to prevent littering in river and water bodies?

No data

Q-5 What are the specific laws, rules and regulations in place to prevent marine littering?

No data

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

No data

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

No data

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

No data

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 26 Facilitate the international circulation of re-usable and recyclable resources as well as remanufactured products as mutually agreed by countries and in accordance with international and national laws, especially the Basel Convention, which contributes to the reduction of negative environmental impacts and the effective management of resources.

Q-1 What are major recycling industries in your country?

Metal, Paper and Plastic industries

Q-2 Please specify the regulation on transboundary movement of hazardous waste.

Environment Quality Act 1974. Transboundary movement of hazardous waste into Malaysia is prohibited.

Q-3 If your government has restriction on import of non-hazardous waste or quality control of non-hazardous waste, please list it up.

Non-hazardous waste importation must get an Import Permit from relevance Agencies

Q-4 Does your government restrict import of remanufactured goods?

No data

Q-5 Does your government regard remanufactured goods as secondhand goods, and regulate it as secondhand goods?

No data

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Enforcement and fraud in waste importation

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Imported Solid Waste Regulation 20xx

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

To review regulation on waste importation

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 27 Promote data collection, compilation and sharing, public announcement and application of statistics on wastes and the 3Rs, to understand the state of waste management and resource efficiency.

Q-1 Please give an overview on availability of various data and information on material flow and waste management by checking (X or ✓) the appropriate boxes. (Please respond on both "Data Availability" and Monitoring Base")

Data Type	Data Availability			Monitoring Base	
	Good	Very limited	No data exist	Good	Not good
Waste generation		✓			✓
Material flow		✓			✓
Cyclical use			✓		✓
Amount of final disposal	✓			✓	
Disposal to land		✓			✓
Direct disposal to water			✓		✓
Import of waste			✓		✓
Export of waste			✓		✓
Total landfilled waste	✓			✓	
Import of recyclables	✓			✓	
Export of recyclables			✓		✓
Hazardous waste generation (solid, liquid, sludge, etc.)	✓			✓	
e-waste generation			✓		✓

(Please add any other data type relevant to your country)

Q-2 What are the current and planned government policies and programmes to strengthen data and information availability in waste sector?

To develop waste database structure

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Technical expertise, human resources and restricted financial allocation

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

Catchment Area Need Statements

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

To establish waste database

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues	
Goal 28	Promote heat recovery (waste-to-energy), in case wastes are not re-usable or recyclable and proper and sustainable management is secured.
<i>Q-1 What are the government policies and programmes, including incentives, for waste-to-energy programmes?</i>	
Feed in tariff	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
Technical expertise, financial allocation and NIMBY syndrome	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
Solid Waste Management Policy 2016	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
To build Waste to Energy Plant in Kuala Lumpur	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues

Goal 29 Promote overall regional cooperation and multi-stakeholder partnerships based on different levels of linkages such as government-to-government, municipality-to-municipality, industry-to-industry, (research) institute-to-institute, and NGO-to-NGO. Encourage technology transfer and technical and financial supports for 3Rs from developed countries to less developed countries.

Q-1 Please provide a list of on-going bilateral/multi-lateral technical cooperation in 3R areas?

No data

Q-2 What actions are being taken to promote inter-municipal or regional cooperation in areas of waste exchanges, resource recovery, recycling, waste-to-energy and trade of recyclables?

No data

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

No data

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

No data

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

No data

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 30 Pay special attention to issues and challenges faced by developing countries including SIDS in achieving sustainable development.

Q-1 Please describe any past and on-going cooperation with SIDS (Small Island Developing States) countries in 3R areas.

No data

Q-2 Please list 3R related projects linked to climate change, biodiversity, disaster management and sustainable tourism. (This is to be reported by SIDS countries only)

No data

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

No data

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

No data

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

No data

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues	
Goal 31	Promote 3R + “Return” concept which stands for Reduce, Reuse, Recycle and “Return” where recycling is difficult due to the absence of available recycling industries and limited scale of markets in SIDS, especially in the Pacific Region.
<i>Q-1 What specific policies, programme, including pilot projects, are implemented to promote 3R+ “Return” concept? (This is to be reported by SIDS countries only)</i>	
No data	
<i>Challenges (policy/ institutional/ technological/ financial) faced in implementation:</i>	
No data	
<i>Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant</i>	
No data	
<i>Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)</i>	
No data	
<i>Is this Goal relevant for your country?</i> <input type="checkbox"/> Highly <input type="checkbox"/> Partially <input type="checkbox"/> Not at all	

IV. 3R Goals for Cross-cutting Issues

Goal 32 Complete elimination of illegal engagement of children in the **informal waste sector** and gradually **improve** the working conditions and livelihood security, including **mandatory provision of health insurance**, for all workers.

Q-1 What is the approximate market size (in US\$) of the informal waste sector?

No data

Q-2 Number of annual labor inspections in waste sector?

No data

Q-3 Is health insurance a mandatory to all informal workers in waste sector by law?

No

Q-4 What specific policies and enforcement mechanisms are in place to prevent illegal engagement of children in waste sector?

None

Q-5 Number of landfill sites accessible to register waste pickers?

Only 2.

Q-6 Average life span of informal waste workers?

No data

Q-7 Any government vaccination programmes for informal waste workers?

None

Q-8 Any public awareness programmes for informal waste workers on health and safety measures?

None

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

Financial allocation and cross ministerial collaboration

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

None

Important policies/programs/projects/master plans the government plans to undertake within next five years (2016~2021)

None

Is this Goal relevant for your country? Highly Partially Not at all

IV. 3R Goals for Cross-cutting Issues

Goal 33 Promote 3Rs taking into account gender considerations.

Q-1 Please give a brief assessment on how the national, provincial and municipal governments incorporate gender considerations in waste reduction, reuse and recycle.

None

Challenges (policy/ institutional/ technological/ financial) faced in implementation:

None

Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant

None

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021)

None

Is this Goal relevant for your country? Highly Partially Not at all