#### Sixth Regional 3R Forum in Asia and the Pacific

"3R as an Economic Industry - Next Generation 3R Solutions for a Resource Efficient Society and Sustainable Tourism Development in Asia and the Pacific"
Malé, Maldives, 17-19 August 2015

## **Country Report**

(Draft)

<The Republic of Korea>

This country report was prepared by the Government of The Republic of Korea as an input for the Sixth 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: Republic of Korea

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**Timeline of Submission: 17 JULY 2015 (Email: 3R@uncrd.or.jp)** 

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.

Secretariat of the Regional 3R Forum in Asia and the Pacific United Nations Centre for Regional Development (UNCRD) Email: 3R@uncrd.or.jp

Country Name Republic of Korea

Comments on this report

We submit this report to introduce waste management policies in Korea and to share them among relevant countries or bodies. However, it should be noted that there are limitations on some specific information that belongs to multiple ministries' jurisdictions. For example, there are SMEs, agricultural bimass waste, ISO and so on. We hope this information help to improve the relationship between Asian-Pacific countries.

Country Name Republic of Korea

#### 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?

In Korea, 'Volume-based waste fee system', a unique nation-wide "Pay as You Throw" system, plays, through differentiated charging system, an important role to encourage for households to reduce every discharge of waste.

In addition, another waste reduction policy addresses **cutting down the use of disposable containers and packaging materials**. The government has been carrying out policies to prevent the use of disposable products since 1994 by law. However, the policy instrument has been transformed to boost voluntary involvement of the stakeholders. Likewise, eco-friendly packaging is being encouraged via voluntary agreements and provision of incentives.

The products that have adopted the Design for Environment (DfE) are certified with an eco-labelling and are promoted preferentially to be bought by public entities etc. as a means of waste prevention at source.

<b>Q-2</b>	What is	the level	of participat	on o	f households	in	"source"	segregation	of	municipal
wast	e stream:	s? (Please	check the app	ropria	ate box)					

$\boxtimes$	Ve	ry	H	igh	ι (	(>	90%	)
_								

☐ Average (50-~70%)

 $\square$  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 2013-2014

It is difficult to specify the budget limited to MSW management sector because the budget for MSW reduction out of total annual government expenditure is directly or indirectly linked with all other relevant budgets. For reference, the total annual government expenditure for waste management amounts to # 300 billion(or \$ 260 million).

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

<sup>☐</sup> High (>70%)

<sup>\*</sup>According to "Waste Management Law" in Korea, wastes consist of household, commercial (including controlled waste) and medical wastes. The municipal solid waste as this questionnaire mentioned is similar to the "household wastes" which means any wastes other than commercial wastes.

*Is this Goal relevant for your country?* ⊠ Highly

Country Name Republic of Korea

□ Not at all

I. 3R Goals	in Urban/Industrial Areas (3Rs in municipal solid waste)
Goal 1	Significant <b>reduction</b> in the quantity of <b>municipal solid waste</b> 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.
-	of pilot projects, master plans and/or policies developed or under development – ebsites where relevant
_	policies/programmes/projects/master plans the government plans to undertake at five years (2015~2020)
Korea	is now intended to implement waste prevention policies, not only in MSW
manageme	nt sector, but also from the perspective of inclusive waste management. In particular,
by the ena	ctment of the Act on the Promotion of Transition to Resource Recirculation Society,
Korea is a	bout to introduce the Management System of Resource Recirculation Performances
that encou	rages businesses to voluntarily recirculate resources and to reduce waste generation,
and the lar	adfill/incineration levy that is imposed when recyclables go to landfills or incineration
facilities.	

☐ Partially

I. 3R Goals in Urban/Industrial Areas (3Rs in municipal solid waste)
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?
In line with aforementioned MSW, the <b>Volume-based waste fee system'</b> has also
been introduced in food waste sector as a principle of 'Pay as You Throw'. In
addition, through the establishment of new recycling facilities of food waste, Korea
is seeking ways to further minimize final disposal of food waste and to maximize
recycling as compost or recovering energy as biogas.
<ul> <li>Q-2 What is happening to country's organic waste? (Please check the appropriate box)</li> <li>□ mostly landfilled</li> <li>□ mostly incinerated</li> <li>□ both landfilled and incinerated</li> </ul>
☐ mostly open dumped or open burned
As of 2011, the total generation of food waste in Korea is 13,537 tons per day, which consists of
12,905 tons per day to recycling facilities, 167 tons per day to landfills and 465 tons per day to
incineration sites. Landfilling is merely 4.6% of the total generation of such waste.
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
<i>Is this Goal relevant for your country?</i> $\boxtimes$ Highly $\square$ Partially $\square$ Not at all

Country Name Republic of Korea

#### 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	Very High	High	Average	Poor	Recycling	Definition
	(>90%)	(>70%)	(50-~60%	(<50%	does not	of recycling
Type			)	)	exist	rate*
Paper	O					3
Plastic	О					3
Metal	О					3
Construction waste	O					4
e-waste	O					3
glass	0					3
others						

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

#### Definition 4: (volume of utilized recyclable waste)/( estimated generation of waste)

(Source: Statistics on the status of municipal waste generation and treatment in 2013)

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?

For paper, plastic and metal, Volume-based fee system, separate discharge by households and industries, separate collection by municipalities are relevant.

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

Rate	Very High	High	Average	Poor	Recycling
Type	(>90%)	(>70%)	(50-~60%)	(<50%)	does not exist
Paper		0			
Plastic			0		
Metal				0	
Construction				0	
waste					
e-waste - *					

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

Definition: (Volume of Incinerated waste)/(estimated generation of waste - volume of collected waste for recycling)

(Source: Statistics on the status of municipal waste generation and treatment in 2013

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

Level	Every Major	Few Major	Does	Supportive	No supportive
	City	Cities only	not	policy or	policy or
Type			exist	programmes	programmes
,,				exists	
Paper	0				
Plastic	0				
Metal	0				
Construction waste	0				
e-waste	0				

(Source: Statistics on the status of municipal waste generation and treatment in 2013)

*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)* 

<sup>\*</sup> According to the statistics, most e-waste(more than 90% of total generation) is separately collected at source and few goes to incinerators or landfills.

I. 3R Goals	s in Urban/Industrial Areas	(3Rs in municipal solid	waste)	
Goal 3	Achieve significant incometal, etc.), by introducers, and institute producers, consumers, development of modern	ucing policies and autional frameworks recycling industry,	measures, and by so involving relevant	etting up financial stakeholders (e.g.,
Challeng	es (policy/ institutional/ i	technological/ financ	cial) faced in impleme	entation:
-	s of pilot projects, mast vebsites where relevant	er plans and/or poli	cies developed or un	der development –
-	t policies/programmes/pext five years (2015~2020	-	s the government p	lans to undertake
Is this Go	oal relevant for your cou	<i>ntry?</i> ⊠ Highly	☐ Partially	☐ 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?
Since 1996, Korea has been implementing the 'industrial waste reduction system', by which
businesses with large-quantity generation of waste(more than 1,000 tons for municipal waste
and 300 tons for controlled waste, annually) voluntarily set goals for waste reduction, report the
result to the government annually and manage the goals continuously.
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:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
include websites where retevant
Important policies/programmes/projects/master plans the government plans to undertake
within next five years (2015~2020)
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 <b>private sector</b> , including small - and medium - sized enterprises (SMEs) to implement measures to increase <b>resource efficiency and productivity</b> , creation of decent work and to improve environmentally-friendly practices through applying environmental standards, clean technologies, and cleaner production.					
~	are the major clean fficiency of SMEs?	techno	logy related po	licies aiming to	increase energy and	
	are the capacity build f SMEs in 3R areas?	ding p	rogrammes cur	rently in place to	build the technical	
Challenge	s (policy/ institutional/	techno	logical/ financi	al) faced in implen	nentation:	
-	of pilot projects, mast ebsites where relevant	ter plai	ns and/or polici	es developed or u	under development –	
-	policies/programmes/jet five years (2015~2020		s/master plans	the government	plans to undertake	
Is this God	al relevant for your cou	ntry?	☐ 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?
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
Is this Goal relevant for your country? ☐ Highly ☐ Partially ☐ Not at all

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)
<b>Goal 7</b> Promote <b>industrial symbiosis</b> (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?  Q-2 How many eco-industrial parks or zones or the like, which is supported by the government, are there in the country?
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
<i>Is this Goal relevant for your country?</i> ☐ Highly ☐ Partially ☐ Not at all

I. 3R Goals in Urban/Industrial Areas (3Rs in Industrial waste)
Build <b>local capacity</b> 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.?
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.?
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
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?			
In Korea, hazardous wastes such as waste oils, waste acids etc. that can contaminate			
surrounding environments or can do harm to human health are categorized as controlled			
waste(much the same meaning as hazard waste) and managed according to related laws and			
regulations such as 'the Waste Management Law'.			
In addition, Korea revised the Waste Management Law this year to tighten up the safety			
management standards of waste treatment in order to prevent fire accidents etc. in the overall			
processes of collection, movement and treatment of waste. E.g. the revised law stipulates that			
the corrosive waste such as dust, sludge etc. must be neutralized as a way of intermediate			
treatment before landfilling and the inflammable waste must be controlled as specified by safety			
management standards.			
management standards.			
The law also requires large-quantity generators and waste disposers to be equipped with the safety			
facility for contingency plans, preventive chemicals and safety manuals in every workplace.			
Challenges (policy/ institutional/ technological/ financial) faced in implementation:			
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant			
Important policies/programmes/projects/master plans the government plans to undertake			
within next five years (2015~2020)			
<i>Is this Goal relevant for your country?</i> ⊠ Highly □ Partially □ Not at all			

*Is this Goal relevant for your country?* □ Highly

Country Name Republic of Korea

II. 3R Goals in	Rural Areas
s	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.
	specific policies, rules and regulations, including awareness programmes, are o minimize food or crop waste?
As men	tioned above in line with the Goal 2, the main policy on food waste reduction is
'Volume Ba	sed Waste Fee System'. And large-quantity generators such as big restaurants are
required to	submit their plans on food waste reduction. In addition, to raise the citizens'
awareness of	f food waste reduction, nation-wide events such as a UCC contest are being held.
As for	the crop waste (more specifically, agricultural waste), Korea has established
infrastructure	e to collect and recycle waste agricultural plastic films and agrochemical containers
in collaborat	ion with municipalities. The oversight of the overall system has been entrusted to the
Korea Enviro	onment Corporation since 1980.
~	any continuing education services or awareness programmes for the farmers or marketing associations on reduction of crop wastes for increased food security?
consumers, i	is the average wastage of crops or agricultural produce between farms to if there is a study in your country? $(> 20 \sim 30\%)$
☐ High (10~	
☐ Medium (	
□ Low (< 59	%)
□ Negligible	e (<1%)
Challenges (	(policy/ institutional/ technological/ financial) faced in implementation:
	f pilot projects, master plans and/or policies developed or under development – sites where relevant
	policies/programmes/projects/master plans the government plans to undertake five years (2015~2020)

 $\boxtimes$  Partially

 $\square$  Not at all

II. 3K Goals	s in Rurai Areas
	Promote full scale <b>use of agricultural biomass waste and livestock waste</b> 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. <b>much amount of</b> $-$ (a) agricultural biomass waste and (b) livestock waste are grossly per annum?
appropriate ☐ as secon ☐ biogas/e ☐ compos ☐ mostly ☐ ☐ mostly €  Q-3 What of agricult	are most of the agricultural biomass wastes utilized or treated? (Please check all e boxes)  Indary raw material input (for paper, bioplastic, furniture, etc.)  Relectricity generation  Restriction of the agricultural biomass wastes utilized or treated? (Please check all eboxes)  Relectricity generation  Restriction of the agricultural biomass waste input (for paper, bioplastic, furniture, etc.)  Relectricity generation  Restriction of the agricultural biomass waste and dumped of the paper (please check all eboxes)  Restriction of the agricultural biomass waste and livestock waste are introduced for efficient utilization the paper (please check all eboxes)  Restriction of the agricultural biomass waste and livestock waste are introduced for efficient utilization than the paper (please check all eboxes)  Restriction of the agricultural biomass waste and livestock waste are introduced for efficient utilization than the paper (please check all eboxes)  Restriction of the agricultural biomass waste and livestock waste as a secondary material inputs towards full the paper (please check all eboxes)
Challenge	s (policy/ institutional/ technological/ financial) faced in implementation:
_	of pilot projects, master plans and/or policies developed or under development – ebsites where relevant
-	policies/programmes/projects/master plans the government plans to undertake at five years (2015~2020)
Is this God	al relevant for your country?

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?
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 participles (<5 mm) on coastal and marine species? If yes, please provide relevant websites.
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
Is this Goal relevant for your country? ☐ Highly ☐ Partially ☐ Not at all

Country Name Republic of Korea

#### 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)

example 1 –	/ Ingliest prior	uy)
Check if	Number in	
applicable	priority order	
0		Take to recycling center / resource recovery facilities
		Take to landfill
0		Take to the retailer
0		Take to local charity for re-use
0		Take to second-hand shop for re-use
0		Ship back to the manufacturer
		Ship back to the manufacturer
		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)?

To control hazardous characteristics of e-waste, Korea is taking the lifecycle approach from the production to the end-of-life phase of such products. The use of hazardous substances in the products is restricted in accordance with ROHS and only the products that meet this standard can accordingly be manufactured and sold..

And to prevent illegal dumping and negligence of e-waste at the collection stage, as of 2014, the government persons themselves visit the households that apply for the collection service of e-waste, and collect them free of charge. For the households that do not utilize the free collection service, the producers do offer the collection service when buying a new one or households themselves can separately discharge them. All of these collection options consist of proper collection system of e-waste.

At the recycling stage, the EPR system has been introduced for 27 items such as TV, washing machine, air conditioner, PC, etc. to promote recycling of such items. A recycling target ratio is set by items and producers who fail to comply with the target must pay the recycling fee commensurate with the unmet portion of the target.

Country Name	
Republic of Korea	

#### 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-3 How much amount of e-waste is generated and recycled per year?			
Type of e-waste	Estimated total volume	% of collected by	% of volume recycled
	generated	permitted recycler	in collected
	(ton/year)		
Television	81,541		43%
	1		I

	generated	permitted recycler	in collected
	(ton/year)		
Television	81,541		43%
Computer	47,067		14%
Mobile phone	3,202		21%
Refrigerators	214,503		27%
Washing machines	95,689		32%
Air conditioners	126,600		3%
Others			
Challenges (policy/ i	institutional/ technolog	gical/ financial) faced i	in implementation:
Examples of pilot p include websites who		and/or policies develo	ped or under development –
Important policies/p within next five year		naster plans the gove	ernment plans to undertake
Is this Goal relevant	for your country? 🛛	Highly $\square$ Partiall	y 🗆 Not at all

III. 3R Goals for New and Emerging Wastes

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

inappropriate	e export and import of aste and e-waste.	1	0 0
Q-1 What specific police of e-waste?	es and regulations are in	troduced to prevent ille	gal import and export
Since Korea is a	party to the Basel Conv	ention, it only permits	the importation and
exportation of waste that	t can be disposed of proj	perly to control transbo	undary movements of
hazardous waste in acco	ordance with the Conven	tion. Particularly to cor	mbat illegal traffic, in
collaboration with Korea	Customs Service, the ph	ysical inspection of expo	ort goods is conducted
to verify if they are the	items that have been ap	propriately permitted b	y MoE and real time
information on import/ex	sport goods is shared throu	igh a computer network	
sea-port, land border co ⊠ Yes □ No	ired number of well-tra ntrol, etc.) to track illegal	export and import of e-	-waste?
Challenges (policy/ inst	tutional/ technological/ f	inancial) faced in imple	mentation:
Examples of pilot proje include websites where t	cts, master plans and/or relevant	policies developed or	under development –
Important policies/prog within next five years (2	rammes/projects/master 015~2020)	plans the government	plans to undertake
Is this Goal relevant for	your country? ⊠ Highly	☐ Partially	☐ Not at all

Country Name Republic of Korea

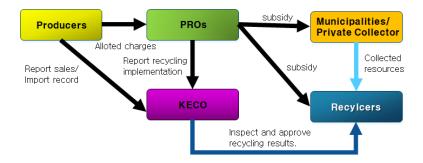
#### III. 3R Goals for New and Emerging Wastes

#### 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)

Since the Korean Extended Producer Responsibility (EPR) System was introduced in 2003 the target items have expanded. As of 2013, the items covered by the scheme include ten electronic products defined by Article 8 of the presidential decree of the "Act on Resource Recirculation of Electrical and Electronic Waste and End of Life Vehicles", as well as tires, lubricant, batteries, and fluorescent lamps, Styrofoam float, and packaging materials defined by Article 18 of the presidential decree of the "Act on the Promotion of Saving and Recycling of Resources". A mandatory recycling ratio for each EPR product category is announced every year by the Ministry of Environment.



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

Packages(metal can, glass bottle, carton pack, PET bottle, synthetic resin packaging material) that are used to pack food and beverages, agricultural products, marine products, livestock products, cleansers, medicines and cosmetics, etc.

- Battery, Tire, Lubricant, Fluorescent lamp, Styrofoam float

*Is this Goal relevant for your country?* ⊠ Highly

- Television, Refrigerator, Washing machine, Air conditioner, Computer, Audio, Mobile phone, Copier, Fax machine, Printer, Vending machine and so on (totally 27 items)

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

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

Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)

☐ Partially

 $\square$  Not at all

Country Name Republic of Korea

#### 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?

Definition: 5. The term "medical refuse" means the wastes specifically enumerated by Presidential Decree among the wastes discharged from public health and medical institutions, veterinary clinics, testing and inspection institutions and other similar institutions, which may cause harm to human bodies by infection or otherwise and need to be specially controlled for public health and environmental conservation such as parts and extracts of human bodies and carcasses of laboratory animals

Medical refuse shall be treated using medical refuse-only containers that are inspected by such institutions or organizations as designated by the Minister of Environment in accordance with the inspection standards established and publicized by the Minister of Environment. This principle is under the "safety disposal".

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

(US\$ per year)?
Q-3 List the agencies or authorities responsible for healthcare waste management.
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:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
<i>Is this Goal relevant for your country?</i> ⊠ 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)?
Q-2 What specific energy efficiency schemes are introduced for production, manufacturing and service sector?
Q-3 What specific policies are introduced to create green jobs in product and waste sector?
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
<i>Is this Goal relevant for your country?</i> ☐ Highly ☐ Partially ☐ Not at all

IV. 3R Goa	lls for Cross-cutting Issues			
Goal 18	Maximize co-benefits from	•	•	for local air, water,
	oceans, and soil pollution and	global climate c	hange.	
Q-1 Plea	se share how climate mitigat	ion is addresse	d in waste mana	gement policies and
programn	nes for co-benefits?			-
. 0				
<i>CI</i> 11	/ 1. /	1 • 1/ 6• •	1) C 1 · · · 1	
Challeng	es (policy/ institutional/ techno	logical/ financu	al) faced in implei	mentation:
-	s of pilot projects, master plai	ns and/or polici	ies developed or i	ınder development –
include w	ebsites where relevant			
Importan	t policies/programmes/project	s/master plans	the government	plans to undertake
within ne	xt five years (2015~2020)		_	
	,			
Is this Go	oal relevant for your country?	☐ Highly	☐ Partially	☐ Not at all
	<i>y y</i>	<i>U</i> ,	<i>y</i>	

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?
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.)?
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
<i>Is this Goal relevant for your country?</i> ⊠ Highly □ Partially □ Not at all

IV. 3R Goals	s for Cross-cutt	ing 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.				
formulate	3R-related p	policies and reg	•		ders in the process to are involved in the
dialogue?(  ⊠ NGOs		all applicable)	⊠ Indu	strial Association	
	Government			lemic Institution	
	, please add/sp	pecify (	△ Acac	ienne mstitution	
□ Others	, piease add/sp	cerry (	,		
~	U		· · · · · · · · · · · · · · · · · · ·	tainable producti se check the appro	on and consumption, opriate box)
□ Very h	igh		□ Low		☐ Almost Negligible
	and consum	•		Please check the a	of 3R, sustainable ppropriate box)  ☐ Almost Negligible
·					2 2
Challenges (policy/ institutional/ technological/ financial) faced in implementation:					
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant					
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)					
Is this God	ıl relevant for	your country?	☐ Highly	□ Partially	☐ Not at all

IV. 3R Goal	s for Cross-cutting Issues			
Goal 21	Integrate the 3Rs in formal well as non-formal education accordance with Education for	on such as com	munity learning a	
	le a list of formal programmes academic curriculum?	s that addresses	areas of 3R and r	esource efficiency as
~	e provide an overview of the y learning and development ( ent.			-
-	e provide a list of academic a of 3Rs and resource efficiency		titutions offering	PhD programmes in
have inte	e provide a list of manageme grated resource efficiency a n or course development?			-
Challenge	s (policy/ institutional/ techno	logical/ financio	al) faced in implen	nentation:
_	of pilot projects, master plan bsites where relevant	s and/or polici	es developed or u	nder development –
	policies/programmes/projects t five years (2015~2020)	s/master plans	the government	plans to undertake
Is this God	ul relevant for your country?	□ Highly	☐ Partially	☐ Not at all

IV. 3K Goals	s for Cross-cutting Issues			
Goal 22	Integrate the 3R concept in and agencies such as Ministry Fisheries, Ministry of Industry Energy, Ministry of Water Ministry of Construction, Minist	y of Environment stry, Ministry of Resources, Ministry of Finance Ministry of Edu	t, Ministry of Agr f Trade and Con stry of Transport, e, Ministry of Labe cation, and othe	iculture, Forestry and mmerce, Ministry of Ministry of Health, our, Ministry of Land r relevant ministries
promoting	e list the name of the Min 3R and resource efficiency t local and national level.	•		0
resource ej  ☐ Officia ☐ Officia ☐ Informa	type of coordination mechanificient economic development I regular coordination meeting all ad-hoc coordination meeting all meeting among ministries are coordination mechanisms (please	<ul><li>t?</li><li>among ministrie</li><li>among ministrie</li><li>nd agencies</li></ul>	es and agencies	and agencies for a
Challenges	s (policy/ institutional/ techno	logical/ financia	l) faced in implen	nentation:
	of pilot projects, master plan bsites where relevant	is and/or policie	es developed or i	ınder development –
_	policies/programmes/project t five years (2015~2020)	s/master plans	the government	plans to undertake
Is this God	l 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?
Q-2 Please provide details of eco-labelling schemes of your country.
Q-3 Please provide a list of criteria for eco-labeled products and services in your country.
Q-4 Please provide the list of Ministries and major Government Agencies which have adopted green procurement policy.
Q-5 What % of municipalities have adopted the green procurement policy?
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
<i>Is this Goal relevant for your country?</i> ☐ Highly ☐ Partially ☐ Not at all

IV. 3R Goals for Cross-cutting Issues
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, energy)? If so, please provide a list of such programmes along with the responsible Ministry or Agency administering and implementing it.
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
Is this Goal relevant for your country? ☐ Highly ☐ Partially ☐ Not at all

IV. 3R Goals	s 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 was	te management a public health priority in your country?
Q-2 What	are the rules and regulations to prevent open dumping and open burning of waste?
	the five most important rivers in terms of water quality (BOD values) passing ajor cities and urban areas?
Q-4 What water bodi	are the specific laws, rules and regulations in place to prevent littering in river and es?
Q-5 What	are the specific laws, rules and regulations in place to prevent marine littering?
Challenge	s (policy/ institutional/ technological/ financial) faced in implementation:
-	of pilot projects, master plans and/or policies developed or under development – bsites where relevant
-	policies/programmes/projects/master plans the government plans to undertake t five years (2015~2020)
Is this God	al relevant for your country?

Country Name Republic of Korea

## 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? Q-2 Please specify the regulation on transboundary movement of hazardous waste. Under the Basel Convention, we adopted the ACT ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL in 1994. Q-3 If your government has restriction on import of non-hazardous waste or quality control of non-hazardous waste, please list it up. Also if someone wants to im/export non-hazardous wastes, he has to declare information which is similar to hazardous wastes—disposal place, import place and so on--to the competent authority. It is under Waste Management Law. Q-4 Does your government restrict import of remanufactured goods? Not yet do we have restriction because remanufactured goods are not considered wastes. Q-5 Does your government regard remanufactured goods as secondhand goods, and regulate it as secondhand goods? Challenges (policy/institutional/technological/financial) faced in implementation: Examples of pilot projects, master plans and/or policies developed or under development include websites where relevant Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)

☐ Partially

 $\square$  Not at all

*Is this Goal relevant for your country?* ⊠ Highly

Country Name	
Republic of Korea	

IV. 3R Goals	s for Cross-cutting	Issues					
Goal 27	Promote data	collection,	compilation	and sharing	, public ar	nnouncement and	
				the 3Rs, to 1	understand t	the state of waste	
O 1 Dlama	management a		•		i		
						e on material flow e respond on both	
	ilability" and Mo	_		ppropriate of	oxes. (1 icas	e respond on both	
Data Type			ability		Monitoring	Monitoring Base	
		Good	Very limited	No data exist	Good	Not good	
Waste gene	eration	0			О		
Material flo	ow						
Cyclical us	se						
Amount of	final disposal	0			0		
Disposal to	land	0			О		
Direct disp	osal to water						
Import of v	waste						
Export of v	waste						
Total landf	illed waste	О			0		
Import of r	ecyclables						
Export of r	ecyclables						
(solid, liqu	waste generation id, sludge, etc.)	O			0		
e-waste ger	neration	О			О		
(Please add any other date type relevant to your country) (The data types with good data availability can be obtained from nationally approved statistics such as statistics on municipal waste generation and treatment, statistics on the controlled(hazardous) waste generation and treatment, etc.)  Q-2 What are the current and planned government policies and programmes to strengthen data and information availability in waste sector?							
Challenges (policy/ institutional/ technological/ financial) faced in implementation:							
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant							
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)							

☐ Partially

 $\square$  Not at all

*Is this Goal relevant for your country?* □ Highly

IV. 3R Goals for Cross-cutting	ng Issues		
	t recovery (waste-to- l proper and sustainab		wastes are not re-usable or ecured.
Q-1 What are the go	overnment policies	and programmes,	including incentives, for
waste-to-energy program	mes?		
Challenges (policy/ instit	utional/ technologica	l/ financial) faced i	n implementation:
Examples of pilot project include websites where re	· -	/or policies develo	ped or under development –
Important policies/progr within next five years (20		er plans the gove	rnment plans to undertake
Is this Goal relevant for	<i>your country?</i> □ Hi	ghly □ Parti	ally □ Not at all

IV. 3R Goals for Cross-cutting Issues
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?
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?
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
<i>Is this Goal relevant for your country?</i> ☐ 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.				
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)				
Challenges (policy/ institutional/ technological/ financial) faced in implementation:				
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant				
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)				
<i>Is this Goal relevant for your country?</i> ☐ Highly ☐ Partially ☐ Not at all				

IV. 3R Goals for Cross-cutting Issues				
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.				
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)				
Challenges (policy/ institutional/ technological/ financial) faced in implementation:				
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant				
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)				
<i>Is this Goal relevant for your country</i> ? ☐ Highly ☐ Partially ☐ Not at all				

IV. 3R Goal	s for Cross-cutting Issues		
Goal 32	Complete elimination of illegal engagement of children in the <b>informal waste sector</b> and gradually <b>improve</b> the working conditions and livelihood security, including <b>mandatory provision of health insurance</b> , for all workers.		
Q-1 What	is the approximate market size (in US\$) of the informal waste sector?		
Q-2 Numb	er of annual labor inspections in waste sector?		
Q-3 Is hea	lth insurance a mandatory to all informal workers in waste sector by law?		
	specific policies and enforcement mechanisms are in place to prevent illegal nt of children in waste sector?		
Q-5 Numb	er of landfill sites accessible to register waste pickers?		
Q-6 Avera	ge life span of informal waste workers?		
Q-7 Any g	overnment vaccination programmes for informal waste workers?		
Q-8 Any public awareness programmes for informal waste workers on health and safety measures?			
Challenge	s (policy/ institutional/ technological/ financial) faced in implementation:		
_	of pilot projects, master plans and/or policies developed or under development – bsites where relevant		
_	policies/programs/projects/master plans the government plans to undertake within ears (2015~2020)		
Is this God	<i>Il relevant for your country</i> ? ☐ 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.
Challenges (policy/ institutional/ technological/ financial) faced in implementation:
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2015~2020)
<i>Is this Goal relevant for your country?</i> □ Highly □ Partially □ Not at all

# Major 3R Policies In The Republic of Korea

17 AUG 2015

**Manager Jang Sehoon** 

Dept. of Resource Recirculation, Korea Environment Corporation

Country Breakout Group(3)-Country Presentation







## I . Overview: Republic of Korea

#### **About Republic of Korea**

Location : North-east Asia

• Area: 99,720km² (109th in the world)

• Population: 51 million(26<sup>th</sup> in the world)

- Korea is a relatively small country with large population and limited quantity of natural resources.
- Thus, 3R policies are indispensable for both the environment and the economic growth.



Source: Northeast Asian History Foundation, Korea





# II. Major 3R Policies in The Republic of Korea

#### 1. Reduce Policies

• Volume-Based Fee System:
Introduced in 1995, it helps reduce household wastes considerably by using a special plastic bag for discharge of unrecyclable waste.





<MSW>

<Food Waste>

• Waste Charge System: ADF imposed on producers/importers of hazardous or hard-to-recycle products.(Chewing gum, diapers, etc.)











• Industrial Waste Reduction Program: Introduced in 1996, businesses set goals for waste reduction and report the result annually to the Government.

# II. Major 3R Policies in The Republic of Korea

#### 2. Reuse Policies



• Deposit-Refund System: For containers of soft drinks and alcohol, a deposit is made at purchase and refunded when the container is returned by a consumer. They are then sent to the production for reuse.

• Recyclable Resources Market (www.re.or.kr): An on-line Marketplace where businesses and individuals trade waste resources and used products. It helps increase reusing and recycling of waste resources.







# II. Major 3R Policies in The Republic of Korea

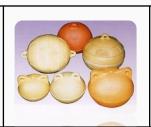
#### 3. Recycle Policies

• EPR System: Tack-back obligation for the items with recycling goals is given to producers.(5 products and 4 packaging materials)











• Eco-Assurance System: Ex ante regulation for DfE and ex post tack-back obligation imposed on producers of consumer electronics and vehicles







• Collection and Treatment of Agricultural Waste:

Waste agricultural plastic films and agrochemical containers are collected and treated nationwide for recycling and energy-recovery.

## III. Challenges faced and Possible Solutions

#### **Challenges Faced and Possible Solutions**

- 3R policies on municipal waste is focusing more on household sector than industrial sector
- Source separation for reuse and recycling is 16% higher in household sector than in business and industry sector

Sector	Source separation	Use of volume-based fee system, etc.
Household	57%	43%
Business and Industry	41%	59%

(Source: National statistics on municipal waste generation and disposal in 2013)

#### Possible solutions

- 1. Recently revised 'The Waste Management Law' to further increase the recycling rate of industrial waste that used to be incinerated or landfilled.
- 2. Preparing for the enactment of 'the Act on the Promotion of Transition to Resource Recirculation Society' (The Management System of Resource Recirculation Performances for businesses to increase resource recirculation and reduce waste generation, landfill/incineration levy imposed when recyclables go to landfill, etc.)





