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)

< Pakistan>

This country report was prepared by the Government of Pakistan 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.

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

PAKISTAN

Country 3R Progress Report

Name of the Country:

Name, Designation and Organization Respondent:

Other Ministries, Organizations, Agencies contributing to Country Report:

Timeline of Submission:30 September 2016
(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

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

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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?

Presently, national policies on 3R are reflected in the following government policies, strategies and plans to reduce municipal solid waste:

- Pakistan Environmental Protection Act (PEPA) 1997.
  - Section 11, prohibits discharge of waste in an amount or concentration that violates the National Environmental Quality Standards (NEQS).
  - Section 12, directs that an Initial Environmental Examination (IEE) and an environmental impact assessment is to be filed with the Environmental Protection Agency (EPA) for review and approval before the initiation of construction at a site where there is the likelihood of causing environmental damage.
- Hazardous Substances Rules 2003.
- National Environment Quality Standards Rules, Section 132 of the Cantonment Act 1924 deals with deposits and disposal of rubbish etc.
- Guidelines for Solid Waste Management, 2005

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 governmen*t expenditure per capita (US$ per capita) in municipal solid waste management in 2014-2015**

Presently the statistics for per capita are not drawn up, however, the municipal administrations are conscious to the policies stated at Q1. Sooner or later this data field to be consolidated by Statistics Division.

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

Brief challenges are as follows

- Continues population growth and urbanization leading to increasing spending on municipal revenues on Solid Waste Management (SWM). This may soon be streamlined.
- A lack of technical know-how, data, human resources and equipment is compounded by a low revenue base and financial management capacity.
- Lack of political will for implementing an effective and sustainable SWM system.
- The development of a functional SWM system requires a major investment and it may be difficult to give it priority over other resource demands such as energy. Funding from donor agencies to take lead in Waste Management can bring in a replicable moment by municipalities.
- Institutional roles are dependent on the availability of relevant regulations and their effective implementation. Legal and administrative support is usually lacking or deficient in our decentralized and devolved local government system.

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

- Government of Punjab Solid Waste Management Initiatives
    - Development of Lahore Waste Management Company (LWMC). The LWMC has plans to adopt 3R concept by establishing a Material Recovery Facility in coming years plus source segregation pilot project is also initiated in Shadman Lahore.
    - Development of Waste Management Companies on the same pattern as LWMC at Gujranwala, Sialkot, Faisalabad, Rawalpindi, Multan and Bahawalpur.
- Lahore Compost (Pvt.) Ltd. – a public private project; utilizes organic content of Municipal Solid Waste of Lahore City, mainly consisting of household kitchen waste, to convert it into compost (organic soil supplement), commonly known as Compost Fertilizer, through a process of 60 to 90 days of aerobic composting.
- Waste Busters is an independent private sector waste Management Company (offices located at Lahore, Karachi, Islamabad, Faisalabad, Gujrat, Peshawar, Quetta) and janitorial contractor, segregate and recycle all the collected waste into various product streams such as Refuse Derived Fuel, organic fertilizers as well as recycled plastic and tetrapak products.

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

- Various policies in place as discussed above and participation in awareness 3R conferences suggests to develop a comprehensive framework to bring the public and private (formal and informal) sectors to work together on the subject.
- Punjab Environmental Policy 2015
- Draft Hazardous Waste And Hazardous Substances Rules, 2016
- Draft Pakistan Environmental Protection Motor Vehicle Regulations 2016
- 11th Five Year Plan
    - Installation of composting plants and scientific landfill sites
    - Projects for promotion of generation of energy from waste
    - Urban waste water treatment plants for its reuse will be encouraged through the public-private partnership.
    - Bio-remedial measures will be adopted for the waste water treatment.
    - Sustainable monitoring and implementation of hospital (hazardous) 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 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?

A policy needs to be made addressing organic waste in Pakistan. Organic waste is not tackled separately in legislation, but assumed to be part of MSW.

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:

- Waste segregation issues are not addressed by policy.
- Technical and scientific research on organic waste is also absent, partly due to financial concerns, and a lack of institutional initiative.
- Consequently, public awareness of waste segregation and the possibility of composting are also low.
- Despite the need for organic waste to be treated as a separate waste stream from general MSW, a basic degree of composting is already practiced in many areas of Pakistan.
- Technical capacity is inadequate and the quality of compost produced is thus low.

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

- Lahore Compost (Pvt.) Ltd. – a public private project; utilizes organic content of Municipal Solid Waste of Lahore City, mainly consisting of household kitchen waste, to convert it into compost (organic soil supplement), commonly known as Compost Fertilizer, through a process of 60 to 90 days of aerobic composting.
- Currently LWMC is further exploring into the potential of generation of biogas from cattle's dung, for this plant has been set up at DunyaPur,Chak 342 and Ichogil. The aim is to generate biogas and provide it to the residents of the respective villages.
- Furthermore, on small scale and in rural agriculture areas small plants are also operational.

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

- 11th Five Year Plan
  - Installation of composting plants and scientific landfill sites
- Punjab Environmental Policy 2015
- Project of Green waste recycling by LWMC

About 100 tons per day yard waste is being generated in Lahore. This massive volume of yard wastes is putting strain on municipal garbage collection systems. The major generators of yard waste are various government departments and commercial establishments with extensive plantings and landscaping. Most of the green waste is generated by PHA during trimming of trees & plants, season plantation, landscaping for plantation and maintenance of roadside green belts. Garbage bags for handling of the green belts waste will be provided to the gardeners by PHA on regular basis. It is therefore proposed that PHA gardeners will bring the yard waste from gardens & green belts at nearest green waste enclosure by means of existing tractor trolleys. And this collected waste will be then munched and in the end organic pallets will be produced which can be reused further.

Source: LWMC

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

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

PAKISTAN

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 exist not	Definition of recycling rate*
Paper				X		
Plastic				X		
Metal				X		
Construction waste				X		
e-waste						
others				X		

**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?

- Pakistan Environmental Protection Act 1997
- 11th Five Year Plan
- Punjab Environmental Policy 2015

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				X	
Plastic				X	
Metal				X	
Construction waste				X	
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		X		X	
Plastic		X		X	
Metal		X			
Construction waste		X			
e-waste					

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

- Development of Strategy/Policy and Facilitation for establishing recycling plants including financial and institutional mechanisms needs to be focused;
- Promotion of Public Private Partnerships (PPP) and various incentives (providing land at low cost, Tax rebate, easy delivery of waste to recycling facility, etc.) needs to be realized to attract private investments;
- Source separation, Extended Producers Responsibility (EPR), awareness of people and capacity of government and private sector need to be improved;
- Already developed huge informal recycling sector should be brought under formal setting with necessary support of the government;

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

Refuse Derived Fuel

LWMC signed an agreement with the M/s DG Khan cement in August 2011 for sale of waste. M/s D G Khan cement has built a Refuse Derived Fuel (RDF) plant for processing of 1000 tons of municipal waste. RDF is largely combustible components of municipal waste such as plastics and biodegradable waste. DG Khan Cement uses RDF in its cement plants as an additive fuel with coal. Source: LWMC

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

- **11th Five Year Plan**
  - Projects for promotion of generation of energy from waste
  - Urban waste water treatment plants for its reuse will be encouraged through the public-private partnership.
  - Provincial Cleaner Production Centers will beestablished to promote waste minimization,recycling and waste exchange.
  - To treat and recycle industrialeffluents, a Wastewater TreatmentProgramme will be initiated in the country incollaboration with the provincialgovernments.

- **Private sector contribution - Lahore Waste Management Company(LWMC)**

  1. Establishment of a C&D Waste recycling facility

  Recycling of C&D waste is one of the most important aspects of environment. As the city of Lahore is growing at a larger pace, C&D waste generation has increased in the recent

times because of increased C & D activities. Provision of recycled C & D waste materials to local vendors and processors can be used as a resource generation option. This initiative will not only generate revenue but may also help to reduce environmental footprint.

2. LWMC- PET recycling

The target is to collect and crush plastic (PET) bottles via specially designed machines. The shredded PET bottles can be sold to recycling companies as "PET flakes", which are then used as a raw material for a range of products like polyester sheets & fibers or back into PET bottles.

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

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

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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?

- 11th Five Year Plan, Chapter 22
  - Installation of incinerators for handling hospital waste under the public-private partnership
  - Urban waste water treatment plants for its reuse will be encouraged through the public-private partnership.
- Punjab Environment Policy 2015

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:

- Waste segregation issues are not addressed by policy.
- Technical and scientific research on waste is negligible, partly due to financial concerns, and a lack of institutional initiative.
- Consequently, public awareness of waste segregation and the possibility of composting are also low.
- Technical capacity is inadequate and the quality of compost produced is low.
- Lack of Policy initiatives to encourage private sector to invest in the waste management sector is important
- It is also advisable to encourage mass population for spending on waste management.

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

- Government of Punjab Solid Waste Management Initiatives
  - Development of Lahore Waste Management Company (LWMC). The LWMC has plans to adopt 3R concept by establishing a Material Recovery Facility in coming years plus source segregation pilot project is also initiated in Shadman Lahore.
  - Development of Waste Management Companies on the same pattern as LWMC at Gujranwala, Sialkot, Faisalabad, Rawalpindi, Multan and Bahawalpur.

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

- 11th Five Year Plan
- Pakistan Vision 2025

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?

- Policy for Development of Renewable Energy for Power Generation (Employing Small Hydro, Wind, and Solar Technologies)
- SME Policy 2007

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

- Trainings/Workshops organized by various ministries
- Global Cleantech Innovation Program (GCIP)

  The GCIP in Pakistan focuses on fostering emerging and commercially viable clean technology startups to fuel green industrial growth in the country, while small and medium-sized enterprises are provided with training, mentoring, and access to potential investors. GCIP has established an effective awareness campaign and platform to mobilize interest among targeted beneficiaries and ensure the adequate buy-in of SMEs by working closely with SMEs, national ministries, academia, industrial associations, provincial governments, potential investors, partner agencies and autonomous research centers in the country and abroad.

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

- Heavy reliance on import of clean technology
- Political instability
- Inconsistent policies
- Venture Capital Fund for innovators in waste management

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

- Global Cleantech Innovation Program (GCIP), www.cleantech.pk
- A study on Sustaining Growth: Cleaner Production in Pakistan
- Energy Efficiency Project for Textile Sector
- Energy Efficiency Project for Steel Sector
- Energy Efficiency in Buildings
- Cleaner Technology Program for Korangi Tanneries
- Environmental Technology Program for Industry
- Introduction of Cleaner technologies in Punjab Tanneries
- FFC Energy, 50 MW Wind project, Jhampir, District Thatta.
- ZorluEnerji, 56.4 MW Wind Project, Jhampir, District Thatta.
- Three Gorges Pakistan 50 MW Wind Project, Jhampir, District Thatta.
- Foundation Wind Energy–I & II Pvt. Ltd, 100 MW, Gharo Sindh.
- Sapphire Wind Power (Pvt) Limited, 49.5 MW, Sindh
- Quaid-e-Azam Solar Power (Pvt.) Limited, 100 MW, Bahawalpur.
- Pakistan Parliament, 80 MW, Islamabad

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

- 11th Five Year Plan
- Pakistan Vision 2025
- China Pakistan Economic Corridor
- A Turkish company has carried out a study regarding solid waste management of the industrial sector in Pakistan. LWMC intends to work on this project in the near future.Source: LWMC

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

Although awareness conferences been held but green accounting is not yet practiced. ISO 14000 is being voluntarily implemented by many organizations.

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

Although awareness conferences been held but social accounting is not yet practiced.

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?

ILO at Pakistan has initiated some groundbreaking activities to promote the concept and activities for green jobs in most-demanding sectors. The major initiatives launched include the development of:

- A short as well as medium term strategy to introduce and promote the concept of green jobs in three sectors including construction, tourism and energy; and
- Promotional and training material on green jobs for all stakeholders including the ILO constituents, other line ministries, civil society and academia.

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

- Need more attention for effective policy
- Lack of mass awareness
- Funding support
- Capacity building of Human Resource

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

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

- Green Jobs initiative by ILO at Pakistan

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

- 11th Five Year Plan
- Pakistan Vision 2025
- China Pakistan Economic Corridor

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?

There are few examples of industrial symbiosis in Pakistan such as bi-products of sugar industry are being used by other industries. However, focused policies and programmes are required for systematic development of 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?

Government has developed Rachna Industrial Park as eco-industrial park and plans to develop more eco-industrial parks/zones.

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

- Financial Support
- Technical Training
- Energy supply including gas

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

Rachna Industrial Park

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

- 11th Five Year Plan

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.?

- Global Environmental Facility (GEF) in collaboration with UNIDO has recently launched a programe "Global Cleantech Innovation Program (GCIP)" for training, mentoring and assessment of SMEs in Pakistan to encourage innovation through environment-friendly technologies in Pakistan.
- Green Productivity Centre, National Productivity Organization
- Cleaner Production Center
- Cleaner Production Institute

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.?

Financial figures are not consolidated but partial contribution is provided by the Government to such agencies that work in this area.

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

- Heavy reliance on import of clean technology
- Political instability
- Inconsistent policies

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

- Global Cleantech Innovation Program (GCIP)
- Energy Efficiency Project for Textile Sector
- Energy Efficiency Project for Steel Sector
- Mass Awareness Program on Energy Conservation for Industries

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

National Energy Efficiency and Conservation Awards 2015-16

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

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

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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?

- Hazardous Substances Rules of 1999.
- Hazardous Substances Rules 2003.

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 (2016~2021)

- Draft Hazardous Waste And Hazardous Substances Rules, 2016
- 11th Five Year Plan

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 Conservation Strategy
- National Environmental Policy

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?

Q-3 What is the average wastage of crops or agricultural produce between farms to consumers, if there is a study in your country?

☐ Very High (> 20~ 30%)

☐ High (10~20%)

☐ Medium (5~10%)

☐ Low (< 5%)

☐ Negligible (<1%)

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 (2016~2021)

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?

By using animal dung, the country can produce 50 million cubic metres of biogas per day from the available 66,000 tones of animal dung in a day.

Another 150 million cubic metres of biogas a day can be produced from almost 3.65 million tones of fruits and vegetables that gathers in markets every year. Poultry waste, organic (solid/sewage) waste can also be used to produce millions of cubic metres biogas.

Source: The Dawn, From InpaperMagazine — PublishedJul 08, 2013

Q-2 How are most of the agricultural biomass wastes utilized or treated? (Please check allappropriate 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.

- National Conservation Strategy
- National Environmental Policy

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

- Waste Agriculture Biomass (WAB) management capacities need to be built primarily within the agricultural sector.
- Awareness and understanding of the use of WAB is very poor, given that many farmers are illiterate and environmental education is non-existent
- The renewable energy policy should also be revised and an institutional framework be established

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

1. Project on Slaughtered animal waste disposal and energy generation by LWMC:

A large amount of waste from animal stock ends up in the landfill. LWMC is planning on a project for the separate collection and safe (hygienic) disposal of slaughtered animal waste and

thus generating biogas from the organic waste.

2. LWMC is further exploring into the potential of generation of biogas from cattle's dung, for this plant has been set up at DunyaPur,Chak 342 and Ichogil. The aim is to generate biogas and provide it to the residents of the respective villages.

Source: LWMC

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

- 11th Five Year Plan
- Punjab Environmental Policy 2015

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?

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

Using Bio-degradable bags for waste collection

In order to fight the emerging issue of plastic pollution caused by the plastic bags which eventually end up in the landfills or are a source of havoc for aquatic life due to it's flow to the main streams of water; LWMC in collaboration with Business Dynamics Pvt. has introduced biodegradable bags for the collection and transport of waste. These bags are readily bio degradable and thus do not lay unattended at the landfill sites for years.

Source: LWMC

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

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

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	
	2	Take to recycling center / resource recovery facilities
	3	Take to landfill
	1	Take to the retailer
		Take to local charity for re-use
		Take to second-hand shop for re-use
		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)?

Not available

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

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…			

Presently the statistics for e-waste are not drawn up, however, the municipal administrations are conscious to the policies stated at Q1. Furthermore, due to raising awareness on e-waste, 3R, green productivity, etc. sooner or later the relevant departments or agencies such as LWMCmay consolidate this data field.

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

- Lack of modern Waste Electrical and Electronic Equipment (WEEE) management facilities and mechanism

- Illegal waste trafficking.
- Lack of awareness for negative effects of e-waste.
- Absence/lack of data for e-waste in Pakistan.

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

Not available

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

- Punjab Environmental Policy 2015
- 11th Five Year Plan

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?

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

☐ Yes ☐ No

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

- Lack of modern Waste Electrical and Electronic Equipment (WEEE) management facilities and mechanism
- Illegal waste trafficking.

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 (2016~2021)

- Draft Hazardous Waste And Hazardous Substances Rules, 2016
- 11th Five Year Plan

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

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) ***Q-2 Please provide a list of products and product groups targeted by EPR nationally?***	
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 (2016~2021)	
Is this Goal relevant for your country? ☐ Highly ☐ Partially ☐ Not at all	

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?

- Guidelines for Hospital Waste Management since 1998 prepared by the Environmental Health Unit of the Ministry of Health, Government of Pakistan.
- Hospital Waste Management Rules 2005.
- Hospital Waste Management Rules 2014.

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

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

- Provincial Health Departments
- Tehsil Municipal Administration (TMAs)

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:

- Lack of ownership and mechanism for waste management at source
- Improper disposal practices
- Waste pilferage
- Lack of checking/monitoring mechanism
- Lack of awareness
- Low number of waste treatment facilities

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

Lahore Waste Management Company (LWMC) is working on Hospital Waste Management (HWM) project in Lahore by devising a mechanism of hospital risk waste collection, transportation, storage, treatment and disposal. A dedicated system has been launched, most probably through private sector, to transport infectious hospital waste to the designated waste disposal site. Under this arrangement, the hospitals are bound to deliver their infectious waste to the licensed operators on the basis of cost per ton. LWMC has currently taken up an incineration plant at Children Hospital where it is incinerating all the hazardous hospital waste.

Source: LWMC

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

PAKISTAN

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

- Draft Hazardous Waste And Hazardous Substances Rules, 2016
- 11th Five Year Plan
    - Sustainable monitoring and implementation of hospital (hazardous) waste management

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 nationwide 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)?

National Quality Policy and Plan, 2004 (being revised)
National Qualifications Framework
Revised National Environmental Quality Standards-2000

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

- Energy Standards and Labeling Scheme
- Energy efficient CDM project initiated by both public and private Sector
- National Energy Efficiency and Conservation Awards 2015-16

Source: http://www.enercon.gov.pk/

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

Not available

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

- Institutional Coordination
- Financial constraints for technology upgradation
- Lack of data on technological aspects

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

There are several projects for resource efficiency/ energy generation etc. some of them are as under;

- Energy Standards and Labeling Scheme
- National Energy Efficiency and Conservation Awards 2015-16
- 2x660 MW Coal Fired Power Project, Sahiwal
- Coal Fired Power Project, Muzaffargarh
- Coal Fired Power Project, Rahim Yar Khan
- Solar PV Power Plant at Quaid-e-Azam Solar Park, Bahawalpur
- Soalr PV Power Plant at Punjab
- Marala (Lucky HPP)(Chenab)District Sialkot
- C.J. Link Tail Canal Fall (RD. 316+622) District Khushab
- T.P. Link Canal(RD. 183+000)District Muzaffargarh

Source: http://www.enercon.gov.pk/
http://www.energy.punjab.gov.pk/_pages/initiatives_PowerProjects.html

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

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?

- National Operational Strategy for Clean Development Mechanism, 2006: This strategy is promoting pro-poor CDM projects on waste by harnessing carbon financing
- Linkage of municipal solid waste management to GHG reduction
- Landfill gases recovery

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

- Green Industry
- Cleantech Innovation
- Venture Capital fund

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

No such waste management technologies exist in Pakistan at the moment. Industries are more inclined towards end-of-pipe treatment technologies but there is no proper framework for treatment at national level.

Source: LWMC

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

- LWMC Project on Material recovery facility (MRF):

  A materials' recovery facility, is a specialized plant that receives, separates and prepares recyclable materials for marketing to end-user manufacturers. MRF accepts a mixed solid waste stream and then proceeds to separate out designated recyclable materials through a combination of manual and mechanical sorting. The sorted recyclable materials may undergo further processing required to meet technical specifications established by end-markets while the balance of the mixed waste stream is sent to a disposal facility such as a landfill. This modern technology will save valuable resources and reuse them, it will cut down on pollution, it will reduce the landfilling costs and if properly organized, can create a new industry and provide hundreds of jobs. Source: LWMC

- Punjab Environmental Policy 2015
- 11th Five Year Plan

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?

National Energy Efficiency and Conservation Awards 2015-16

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.)?

- Green Productivity Centre, National Productivity Organization
- Cleaner Production Center
- Cleaner Production Institute

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

- Lack of mass awareness
- Green Industry
- Cleantech Innovation
- Venture Capital fund

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

- A study on Sustaining Growth: Cleaner Production in Pakistan
- Energy Efficiency Project for Textile Sector
- Energy Efficiency Project for Steel Sector
- Energy Efficiency in Buildings
- Cleaner Technology Program for Korangi Tanneries
- Environmental Technology Program for Industry
- Introduction of Cleaner technologies in Punjab Tanneries
- Energy Conservation Program for Tanneries

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

- Punjab Environmental Policy 2015
- 11th Five Year Plan

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 (Experts, Central Government)

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:

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

The involvement of private sector can improve efficiency of the SWM systems besides being cost effective. Further, private sector helps to bring in technical expertise and better techniques. The past experience within CDGL suggested that there was lack of institutional capacity and willingness to create enabling environment for PSP in SWM.

The LWMC will involve private sector and thus give them awareness on 3R to provide efficient SWM services in the city. In this regard, already six model areas have been outsourced to the private service providers. This experience has produced very encouraging results and provides a basis for the city wide private sector involvement in waste collection and transportation. These arrangements may be launched by involving international or local firms in waste collection, transportation and disposal.

Source: LWMC

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

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?

There are government and private institutions. In some of the private institutions the concepts of 3Rs are being taught. However, this is not incorporated at overall level.

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.

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

National University of Science & Technology

COMSATS University

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?

National University of Science & Technology
COMSATS University

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

- Lak of awareness
- Lack of Jobs availability / Green Jobs

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

Lahore Waste Management Company (LWMC) signed an MOU on 14th December 2012 with **World Wildlife Fund (WWF)** in order to aware the school going children about the New Solid Waste System and habits of proper disposal of waste.

According to MOU, WWF had to run its Spellathon Program 2013 on the theme of LWMC's improved system of Solid Waste Management and related concepts like disposal of waste, waste recycling etc. MOU also states that WWF had to publish 10,000 booklets on abovementioned themes. This program was a huge success.

Similarly, LWMC is going to sign it's MOU with **Kulshif, Care Foundation and APWA** in order to tap their schools and to impart awareness of SWM practices and engage the students in activities revolving around 3R.

Source: LWMC

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

PAKISTAN

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

Different Ministries are addressing 3R related issues such as Ministry of Climate Change, Ministry of Industries & Production, Ministry of Water & Power, National Productivity Organization, Pakistan Environmental Protection Agency (Pak-EPA), Pakistan Council Of Renewable Energy Technologies (PCRET), Alternate Energy Development Board, National Energy Conservation Centre (ENERCON), etc. However, it requires further coordination for data collection on 3R and implementation of 3R friendly policies.

Q-2 What type of coordination mechanism are there among ministries and agencies for a resource efficient economic development? **Not available**

□ 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:

- Awareness among public sector on 3R
- More regular coordination
- Development of Regional/country level 3R forums with defined TORs may help in regular coordination and setting targets for raising awareness and driving the said agenda in a focused manner

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

- Quaid-e-Azam Solar Power (Pvt.) Limited, 100 MW, Bahawalpur.
- Pakistan Parliament, Solar 80 MW, Islamabad

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

- 11th Five Year Plan

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?

- Green Office Initiative by WWF Pakistan

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

- Energy Standards and Labeling Scheme

Q-3 Please provide a list of criteria for eco-labeled products and services in your country.
Not available

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

This could be in processbut not yet formally adopted.

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

This subject in Pakistan is at infancy stage and requires specific efforts to integrate it with the Policies of Pakistan Procurement Regulatory Authority.

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

- Mass awareness
- Policy initiatives
- Needs addressing financial issues

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

- Energy Standards and Labeling Scheme
- WWF- Pakistan Green Office Initiative aims to greening office and business practices including green and socially responsible procurement. Some of petrochemical plants are already on Green Office.
  http://www.wwfpak.org/greenoffice/

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

- Energy Standards and Labeling Scheme

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. Not available	
Challenges (policy/ institutional/ technological/ financial) faced in implementation: Not available	
Examples of pilot projects, master plans and/or policies developed or under development – include websites where relevant Not available	
Important policies/programmes/projects/master plans the government plans to undertake within next five years (2016~2021) Not available	
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, waste management is priority in our country as Municipalities in our country spends a major proportion of their municipal revenues on Solid Waste Management (SWM). However, there is an evolution of policies and measures in this regard.

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

- Pakistan Environmental Protection Act 1997
- Guidelines on Solid Waste Management 2005

In Pakistan A large proportion of the municipal waste is either burned, dumped or buried illicitly on vacant land in many towns and even major cities, causing significant environmental damage and threatening human health. Although there are several rules and regulations to prevent open dumping and burning of waste but implementation mechanism is weak. Moreover, continuing population growth and urbanization further worsens the situation.

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

1. River Ravi
2. River Indus

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

Pakistan Environmental Protection Act 1997

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

Not available

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

- Awareness polices
- Development of Policies
- Implementation mechanisms
- Massive population growth
- Industrial Development

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

- It is imperative for large projects to conduct environmental assessments as part of feasibility reports. Some examples are as under:
    - Ghazi Barotha Hydropower Project
    - GomalZam Dam Multipurpose Project

- Tarbela Hydropower Project 4th Extension

Source: http://www.wapda.gov.pk/index.php/environmentplans/env-plan-for-gbhp

- **Waste Treatment and disposal site/Landfill:**

  In order to prevent the disposal of waste haphazardly in and around Lahore, now proper sites have been identified for waste treatment and disposal. One dumping and landfilling site is Lakhodair and the other one is Mehmoodbooti. Arrangements are being made to recover biogas from the available organic waste.

Source: LWMC

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

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?

- Plastic
- Industrial Scrap

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

- Pakistan restricts the export of hazardous wastes and other wastes for final disposal and recovery (Pakistan Environmental Protection Act – 1997)
- Pakistan restricts the import of hazardous wastes and other wastes for final disposal and recovery. (Pakistan Environmental Protection Act,1997 and Import Policy Order, 2006 issued by Ministry of Commerce).
- Pakistan restricts the transit of hazardous wastes and other wastes (Pakistan Environmental Protection Act, 1997)

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

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

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

- Federation of Pakistan Chambers and Commerce has included environment services as one of its principal function and also established its Standing Committee on Environment;
- A number of Industrial Sectors/units have established environment cells;
- Pakistan Tanners Association contributed about 28% of the total cost of construction of Korangi Combined Effluent Treatment Plant in Karachi;
- Local Tanneries Associations inKasur have contributed about 54% of the total cost of construction of Kasur Tanneries Pollution Control Project;

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

- Draft Hazardous Waste And Hazardous Substances Rules, 2016
- 11th Five Year Plan

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	DataAvailability			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 date 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?

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 (2016~2021)

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.

Q-1 What are the government policies and programmes, including incentives, for waste-toenergyprogrammes?

Policy for Development of Renewable Energy for Power Generation

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

- Lack of experienced firms
- Inadequate numbers of local higher technology providers
- Procedures for public private partnerships for waste to energy projects need to be simplified and explained to local authorities.

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

WtE project in Lahore by Energy department and Lahore Waste Management Company

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

Policy for Development of Renewable Energy for Power Generation

Is this Goal relevant for your country? ☑ Highly ☐ Partially ☐ 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?

Technical Cooperation with Turkey on Solid Waste Management (SWM)

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?

- Establishment of LWMC in cooperation with Turkey.
- LWMC signed an agreement with the M/s DG Khan cement in August 2011 for sale of waste. M/s D G Khan cement has built a Refuse Derived Fuel (RDF) plant for processing of 1000 tons of municipal waste. RDF is largely combustible components of municipal waste such as plastics and biodegradable waste. DG Khan Cement uses RDF in its cement plants as an additive fuel with coal.

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

- Financial Constraints(Lack of funds and hesitation of donor agencies to invest money in a third world country)
- Institutional/governance challenges(Lack of proper framework)
- Policy gaps
- Non-availability of data (to establish partnership with foreign institutions)

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

- Establishment of LWMC in cooperation with Turkey.
- Establishment of following companies by Government of Punjab in collaboration with different stakeholders
  - Multan Waste Management Company, http://mwmc.com.pk/
  - Rawalpindi Waste Management Company, http://rwmc.org.pk/
  - Sialkot Waste Management Company
  - Bahawalpur Waste Management Company, http://www.bwmc.com.pk/
  - Gujranwala Waste Management Company, http://gwmc.com.pk/
  - Faisalabad Waste Management Company, https://lgcd.punjab.gov.pk/Faisalabad%20Waste%20Management%20Company

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

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.

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

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

- Mass Awareness
- Financing
- Technical know how

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 (2016~2021)

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. **Not available**
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 (2016~2021)	
Is this Goal relevant for your country? ☐ Highly ☐ Partially ☐ 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?

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

Due to weak labour inspection mechanism, Pakistan is working with ILO on a project to strengthen Labour Inspection System for Promoting Labour Standards and Ensuring Workplace Compliance in Pakistan

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

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

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

Q-6 Average life span of informal waste workers?

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

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

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

- Implementation of Government policies to increase Compliance with International Labour Standards in Pakistan
- Mass Awareness

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

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

PAKISTAN

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

- Strengthening Labour Inspection System for Promoting Labour Standards and Ensuring Workplace Compliance in Pakistan – ILO project (to be completed in 2018)

- LWMC is working on the subject to identify the informal waste pickers and engage them to raise their living standard, thereby expanding LWMC and streamlining the waste management processes.This will be achieved through the implementation of cooperative(coop) model. For this LWMC is conducting various studies with the help of Urban Unit.Source: LWMC

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.

Women play vital role at household level, and they can be engaged in awareness activities and programmes in terms of kitchen and other household waste reduction. A segregated waste release from kitchen can play a vital role in 3R.

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

- Public behavior
- No dedicated law/policy for enforcement

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

- Lahore Waste Management Company (LWMC) signed an MOU on 14th December 2012 with World Wildlife Fund (WWF) in order to aware the school going children about the New Solid Waste System and habits of proper disposal of waste.
- According to MOU, WWF had to run its Spellathon Program 2013 on the theme of LWMC's improved system of Solid Waste Management and related concepts like disposal of waste, waste recycling etc. MOU also states that WWF had to publish 10,000 booklets on abovementioned themes. This program was a huge success.
- Similarly, LWMC is going to sign it's MOU with Kulshif, Care Foundation and All Pakistan Women Association (APWA) in order to tap their schools and to impart awareness of SWM practices and engage the students in activities revolving around3R .
- Women in Nature Conservation Award by WWF Pakistan

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

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