



CAPACITY BUILDING & COORDINATION OF 3R IN SOUTH ASIAN COUNTRIES

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3R CAPACITY GAPS IN SA

- ✘ Lack of awareness
 - + Lack of public awareness of appropriate solid waste management practices(3Rs)
- ✘ Limited Financial Resources
 - + Budget allocations is always limited
 - + Appropriate Technologies are expensive,
- ✘ Lack of trained Human Resource
 - + Lack of Technical Expertise in 3R
- ✘ Lack of Coordination
 - + Lack of coordination among countries/Stakeholders & Ministries

3R IN SOUTH ASIA - CURRENT STATUS

✘ Types of Wastes

- + Municipal solid waste
- + E-Waste
- + Waste Agricultural biomass
- + Healthcare waste
- + Used tires
- + Waste oils
- + Waste Plastics
- + Hospital Waste



✘ 3R is more active in Industry than in

Polluter Pay Principal

Pre-cautionary Principal

Cooperate Social Responsibility (CSR)

✘ Some governments have adopted 3R measures but mostly it is limited only to National Capital Cities.

✘ Recycling is predominantly in the informal sector and uses primitive technology

✘ Very little instances of promoting formal, 3R based solutions for waste crisis exist.

✘ 3R statistics in SA are

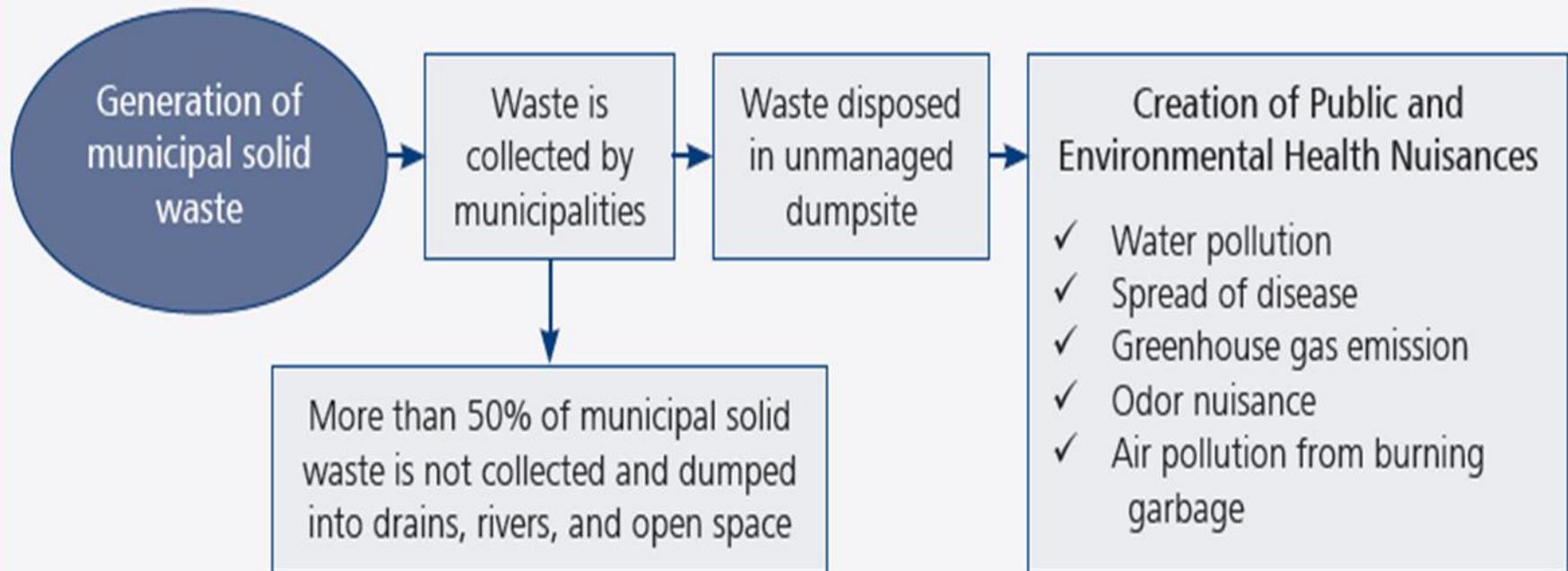
OVERVIEW OF MUNICIPAL SOLID WASTE MANAGEMENT IN SOUTH ASIA



- ✘ About **340 million tones of MSW** is generated per annum in SA.
- ✘ Per capita waste generation ranges from **0.3-0.9 kg/person/day**
- ✘ MSW is dominated by biodegradable organic waste (above 40%).
- ✘ Significant quantity of MSW is not managed and either burned openly in the streets or end up in rivers, creeks and empty lots.
- ✘ Open dumping is the most preferred disposal method of MSW.
- ✘ Small-scale composting is also preferred in SA.
- ✘ Recycling is common in informal sector waste pickers or sweepers

SOLID WASTE MANAGEMENT IN SOUTH ASIA

Figure 2 Typical Scenario of Solid Waste Management in South Asia



CHALLENGES FOR WM IN SOUTH ASIA

- ✘ Lack of data & Standard Methodology
- ✘ Policies, Plans, Strategies are mostly not existing or very weak and redundant
- ✘ The present system is highly labor oriented and no organized system exists,
- ✘ Recycling is done without compliance with regulatory environmental requirements,
- ✘ unhygienic working conditions at recycling factories
- ✘ Lack of market based solution of solid waste

CONTRIBUTORS TO 3R IN SOUTH ASIA



Informal sector

- ✘ Scavengers, middleman, waste dealers,
- ✘ cottage or small-scale recyclers



Formal sectors

- ✘ Municipalities, NGOs
Community Based Organizations
- ✘ International Organizations & Private Agencies





EXISTING POLICIES, LAWS AND REGULATIONS ON MUNICIPAL WASTE IN SA

Country	Policies/Laws /Regulations
Afghanistan	The Environmental Protection Act(2007)
Bangladesh	National 3R strategy (2009) Environment Conservation Act(1995), Environment Conservation Rules (1997)
Bhutan	The Waste Prevention and Management Regulation, 2012 Waste Prevention and Management Act (2009), National Strategy on Integrated Solid Waste Management (2007)
India	Municipal Solid waste (Management & Handling) Rules 2000, Draft Municipal Solid Waste (Management and Handling) Rules 2013 National Environment Policy(2006)
Maldives	National Solid Waste Management Policy (2008)
Nepal	The Solid Waste Management Act of 2011
Pakistan	The Pakistan Environmental Protection Act 1997, National Environment Policy of Pakistan(2005)
Sri Lanka	The National Environmental Act(1980), National Policy on Slid Waste Management (2007)

STRATEGIC ACTIONS FOR THE 3R



International level

- ✘ Great deal of commitment exist in support of 3R
- ✘ Capacity is the most important single factor as identified:
 - + **Paris Declaration on “Aid effectiveness-2005,**
 - + UNEP-GEF guidelines of indicators for capacity development
 - + **Bali Strategic Plan for Technology Support and Capacity Building (BSP), 2005.**

STRATEGIC ACTIONS FOR 3R

Regional and Sub-regional Levels

- ✘ Establish a network of new and existing regional 3R centers of information, best practices, knowledge sharing and technical support.
- ✘ Development of training programme/guideline on 3R.
- ✘ Enhanced coordination and networking among public sector, Private Sector and Civil Society for sharing of experiences and institutional development in SA.
- ✘ Link with existing regional networks and programs that are already working at some level of 3R—e.g., cleaner production, green productivity, etc.

STRATEGIC ACTIONS FOR 3R

National Level

- Develop and strengthen 3R-related policies, strategies and plan.
- Develop, update and Implement legislation on the 3Rs
- Develop market based waste recycling enterprises as it contain three marketable products
- Establish clear targets for waste reduction and recycling for key waste areas.
- Establish clear guidelines for implementing 3R programs.
- Development capacity of national and community governments to implement 3R.
- Create awareness and promote collaboration among municipalities, the business sector, and NGOs/CSOs.

Local Level

- Establish 3R-related demonstration projects in key waste sectors and include waste reduction through resource efficiency.
- Involve the informal sector as a stakeholder.
- Disseminate existing success stories on the 3Rs to local agencies.
- Build public awareness of the environmental and health risks from wastes and the options for mitigation of risks through the 3Rs.

SOUTH ASIA COOPERATIVE ENVIRONMENT PROGRAMME (SACEP)



- ✘ Established in 1982, SACEP is an inter-governmental organization of eight member states:
- ✘ Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka



- ✘ Apart from the programme and project activities, SACEP priority areas are:
 - + Waste Management
 - + Adaptation to Climate Change
 - + Data base and Information Management

THANK YOU

SOLID WASTE 3R STATISTICS IN SA

Country	Average MSW generation (Tons/years)	Quantity of E-waste Generation (kilotons)k t	Biomedical waste (Tons/year)	Quantity of agricultural biomass generation (tons/year)	Percentage of waste Recycled
Afghanistan	109,500 (Kabul City)	9	9855	6,802,511	-
Bangladesh	4,866,180	126	12,271	30,000,000	15%
Bhutan	43,700	3	73	384,782.80	-
India	68,802,500	800	330,000	900,000,000	20.7% by informal sector
Maldives	344,000	2	-	-	4.9 %
Nepal	524,000	15	365	19,400,000	5% (Kathmandu)
Pakistan	20,440,000	266	250,000	10, 942,000	20-30%
Sri Lanka	2,336,000	87	6,600(in Colombo)	2,874	

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