

# **Solid Waste Management in Nepal**

## **Current Status and Policy**

### **Recommendations**

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# Contents of Publication

- Results of a SWM baseline survey undertaken in April-May 2012 to derive systematic and comprehensive data and information on SWM, including the quantity and composition of municipal solid waste (MSW) and other factual information on the state of SWM in all 58 municipalities of Nepal
- Comparison of Nepal's SWM status with that of other countries
- Identify challenges and policy recommendations

# Key findings

- Average per capita household waste generation rate was 170 grams (g)/capita/day.
- The average MSW generation was found to be 317 g/capita/day. (1,435 tons/day and 524,000 tons/year in the 58 municipalities)
- Household waste composition: organic waste 66%, plastics 12%, paper and paper products 9%.
- Average collection efficiency was 62%.

# Key findings

- Only 6 municipalities use sanitary landfill sites for final disposal, and 45 are practicing open dumping.
- Roadside pickup from open piles is still being practiced by 49 municipalities.
- Municipalities spend an average of 10% for SWM, of which 60%–70% is used for street sweeping and collection, 20%–30% on transport, and any remaining small amount for final disposal.
- Collection, transport, and disposal of waste cost about \$30 per ton.

**Table 3: Per Capita Waste Generation of Selected Countries in Asia**

Country	Gross National Product per Capita (2011)	Waste Generation Rate (kilograms/capita/day)			
		World Bank (1999)	Visvanathan and Glawe (2006)	Agamuthu et al. (2010)	World Bank (2012)
Bangladesh	780	0.49	0.1–0.5	0.25	0.43
India	1,420	0.46	0.3–0.9	...	0.34
Indonesia	2,940	0.76	...	0.76	0.52
Lao PDR	1,130	0.69	...	0.55	0.70
Malaysia	8,770	0.81	...	1.3	1.52
Nepal	540	0.50	0.25–0.5	0.40	0.12
Philippines	2,210	0.52	...	0.52	0.50
Sri Lanka	2,580	0.89	0.4–0.9	0.2–0.9	5.10 <sup>a</sup>
Thailand	4,440	1.10	...	0.64	1.76
Viet Nam	1,270	0.55	...	0.67	1.46

**Table 4: Waste Composition of Municipal Solid Waste in Nepal and Other Selected Countries (%)**

Country or Region	Source	Contents of Municipal Solid Waste					
		Organic	Plastics	Paper	Glass	Metal	Others
Nepal	This survey	56	16	16	3	2	7
	1	80	3	7	3	1	7
Low-income countries	1	64	8	5	3	3	17
South Asia	1	50	7	4	1	1	37
Bangladesh	1	71	7	5	–	–	16
Indonesia	2	55.4	13.3	20.6	1.9	1.1	7.9
	1	62	10	6	9	8	4
Sri Lanka	3	63	6	6	2	3	20
	1	76	6	11	1	1	5
Thailand	4	64	17	8	3	2	6
	1	48	14	15	5	4	14

# Policy Recommendations

- (i) development of policy, strategy, and guidelines
- (ii) promotion of 3R
- (iii) strengthening the capacity of local bodies
- (iv) public participation and consultation
- (v) cost recovery
- (vi) improvements toward integrated management
- (vii) public–private partnership
- (viii) data management, updating, and dissemination