

Improving solid waste management for environmentally sustainable cities in Vietnam: Opportunities and challenges

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Municipal solid waste in Vietnam

- Solid waste: 15 mil. tonnes/year (80% domestic, 18% industrial, 2% hazardous)
- Population of large cities makes up 25% of the national population but produces more than 50% total solid waste.
- About 0.7 kg/person/day in urban areas and 0.3 in rural areas.

Municipal solid waste in Vietnam

- Limited collection: 70% in big cities, 20% in rural areas
- Few sanitary landfills: 15%
- Limited recycling: 10-12% (while 30% waste is recyclable)
- Composting: 2%



Private sector involvement in solid waste treatment

- Remains limited
- Only some small scale models
- Some pilot 3R projects in Hanoi and Ho Chi Minh city



Opportunities

- Legal framework and policy have been established:
 - Law on environmental protection 2005
 - Strategy (2009) on integrated management of solid waste till 2025
 - Tax policy to encourage investment in waste treatment

Opportunities

- Vietnam Climate Change Strategy
- Co-benefits:
 - Potential emission reduction with improved solid waste management:
 - Composting: 4.7 MtCO₂e/yr
 - Landfill gas to energy: 2.3 MtCO₂e/yr

Challenges

- Increasing population/industrial activities and hence increasing waste generation (15% per year)
- Low awareness on 3R and source segregation
- Limited human capacity and access to technology

Challenges

- Policy is recent and not yet effective
- Overlap and gap in agency responsibilities
- Competing land use alternatives
- Trade off between development and conservation
- Not yet criteria for environmentally sustainable cities

Moving forward

- Clear responsibilities/tasks among government agencies
- Promote 3R
- Mechanism to increase private sector/community participation
- Develop and promote a standard/guideline for environmentally sustainable cities

An example: Hanoi city

Clean and green land indicators for Hanoi

No	Purpose	% of completed	Performance (20-100)				
			1-15	>15-30	>30-45	>45-60	>60
1	% waste at source that is store in dedicated holding areas/receptacles before being disposed promptly		100	80	60	40	20
2			Performance (1-100)				
	% waste collected from door to door collection point		1-15	>15-30	>30-45	>45-60	>60
	% waste transported in covered vehicles on a daily basis		20	40	60	80	100
	Overall recycling rate performance		20	40	60	80	100
	% reduction in total waste generated a year		20	40	60	80	100
			Performance (20-100)				
3	Green area protection	% green area from total area of the city	1-7	>7-15	>15-23	>23-30	>30
			20	40	60	80	100
			Performance (20-100)				
4	Green area protection	% area that comply the stipulated spatial plan of the city	1-20	>20-40	>40-60	>60-80	>80
			20	40	60	80	100

Total performance score: 280/700

→ long way to go

Thank you for your attention!

