CLIMATE AND CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

Background and inset photos source: Stratus Consulting

Integrated Solid Waste Management: Key Concepts and Benefits

Integrated solid waste management (ISWM) involves using a comprehensive approach to managing all aspects of municipal solid waste in a manner that accounts for local needs and conditions across a wide range of sectors. An effective ISWM program can help overcome the many financial, demographic, and other challenges to waste management, and result in numerous human health, environmental, economic, and social benefits for cities and national governments.

The Challenges of Solid Waste Management

The immense financial, technological, and capacity demands of managing solid waste make proper municipal solid waste (MSW) management a significant challenge for many cities. This challenge is complicated by a number of external stressors. For example, economic growth leads to increased consumption and waste generation. In addition, economic growth often leads to consumption of new types of goods such as electronics that are difficult to recycle. Population growth also leads to increased waste generation. In addition, this growth often occurs in densely populated areas of cities, which can exacerbate difficulties in collecting waste.

Integrated Solid Waste Management: Addressing Challenges and Achieving Benefits

Integrated solid waste management (ISWM) involves carefully evaluating local needs and conditions to determine the most suitable options for all aspects of waste management, including generation, segregation, collection, transportation, sorting, recovery, treatment, and disposal. Because it is based on local needs and conditions, ISWM can be an effective policy tool in all cities, regardless of their level of development and existing waste management practices. Through careful planning, ISWM can help mitigate the influence of external stressors (e.g., economic and population growth) on waste management, and contribute numerous benefits, including to:

- **Human health.** ISWM can help improve air quality (e.g., by reducing open garbage burning) and water quality (e.g., by managing leachate from open dumps and landfills), and reduce the spread of disease (e.g., by improving pest management).
- **Climate change and the environment.** A major benefit of ISWM is the mitigation of emissions of short-lived climate pollutants (SLCPs) that have a warming influence on the climate, including methane from landfills and black carbon from open burning. In addition, ISWM reduces the environmental impacts that result from poor waste management practices (e.g., land degradation from dump sites and landfills).
- **The economy.** Waste management can be one of the most expensive aspects of local government operations. ISWM can help reduce costly inefficiencies (e.g., overconsumption of waste collection vehicle fuel), encourage the development of new markets (e.g., for energy and compost), and lead to job creation.
- **Social benefits.** ISWM results in other benefits to society, including reducing bad odors and improving the quality of life for marginalized groups, such as the informal recycling sector (i.e., "pickers").

Resources

CCAC MSW Knowledge Platform

http://waste.ccac-knowledge.net

United Nations Environment Programme (UNEP) – ISWM Portal

http://www.unep.org/gpwm/FocalAreas/IntegratedSolidWasteManagement/tabid/56457/Default.aspx

International Solid Waste Association – Solid Waste: Guidelines for Successful Planning

http://www.iswa.org/index.php?eID=tx_iswaknowledgebase_download&documentUid=2512

UNEP – Guidelines for National Waste Management Strategies

http://www.unep.org/ietc/InformationResources/Events/GuidelinesfortheDevelopmentofNationalWasteM/tabid/104470/Default.aspx

UNEP – Developing Integrated Solid Waste Management Plans: Training Manual

http://www.unep.org/ietc/InformationResources/Publications/tabid/56265/Default.aspx

For more information on the CCAC

Visit the CCAC web site:
www.unep.org/ccac

Contact the CCAC Secretariat:
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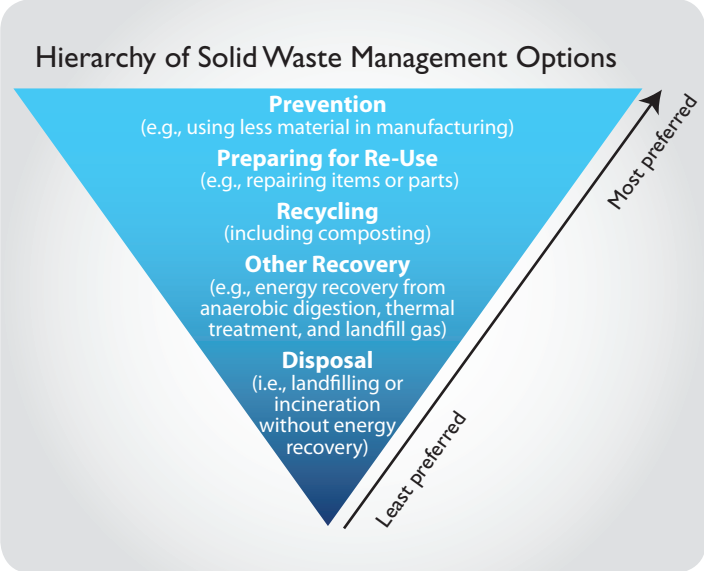
Developing an ISWM Plan: Key Considerations

Developing an ISWM plan requires careful assessment of numerous issues. Key considerations when developing an ISWM plan include:

- **Analyze weaknesses, strengths, and capacities.** Completing an analysis of the weaknesses, strengths, and capacities of their waste management activities will help cities identify the most suitable waste management options and effectively and efficiently implement an ISWM plan.
- **Conduct triple-bottom line assessment.** A robust assessment of the economic, environmental, and social impacts of waste management options can help inform decisions about which options to pursue.
- **Consider all aspects of waste.** To maximize the efficiency of a waste management program, an ISWM plan should account for all aspects of waste, including generation, segregation, collection, transportation, sorting, recovery, treatment, and disposal.
- **Involve stakeholders.** Involving all stakeholders, especially the public, in developing and implementing an ISWM plan will enhance its efficacy (e.g., by engaging support for the program).
- **Select suitable waste management options.** Waste management options should be based on local needs and conditions. Cities should identify opportunities to use environmentally preferable waste management options (e.g., waste prevention and reduction) whenever possible.



- **Coordinate with the national government.** National governments play a key role in waste management, especially in establishing and enforcing waste management policies. Cities should work closely with national governments to clarify their respective roles and identify opportunities for mutual support.
- **Identify sustainable sources of funding.** An ISWM plan must include reliable sources of funding (e.g., user fees) to sustain waste programs. Incorporating the private sector into waste management activities can offer a way to reduce the costs of managing waste while also leveraging private sector expertise.

Taking Action: The Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants

The Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants (CCAC) is a partnership of governments, intergovernmental organizations, the environmental community, and other groups that is dedicated to catalyzing rapid reductions in SLCPs to protect human health and the environment now, and to slow the rate of climate change within the first half of this century.

One of the CCAC's focal areas is the *Mitigating SLCPs from Municipal Solid Waste Initiative*, where the CCAC works to enable cities, with the support of their regional and national governments, to move along the waste hierarchy in a coordinated and cohesive manner in order to mitigate methane and black carbon emissions. Information on actions that cities can take to improve waste management and reduce SLCP emissions is available through the CCAC MSW Knowledge Platform (**http://waste.ccac-knowledge.net**).