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GUIDELINES FOR THE DEVELOPMENT OF MUNICIPAL WASTE MANAGEMENT PLANS

Alexandre Lefèvre Jiménez,
Nelson Manda & Jakob Maag

CHEMICALS & WASTE MANAGEMENT- cwm@unitar.org



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WHAT ARE WASTE MANAGEMENT PLANS AND AND WHY SHOULD WE MAKE THEM?



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A NATIONAL PRIORITY, A LOCAL STRATEGY



Sets aims and goals, and clarifies the policy development process, and the milestones along it



Most waste management initiatives and the management of MSW tend to be more local than national.



Making waste management a national and municipal priority gives issue political and social visibility

A WASTE MANAGEMENT STRATEGY HAS OTHER ADVANTAGES

It **enhances** adequate, efficient and effective waste management activities

It **ensures** that **resources** are applied according to national and local priorities,
and flow to where they are needed

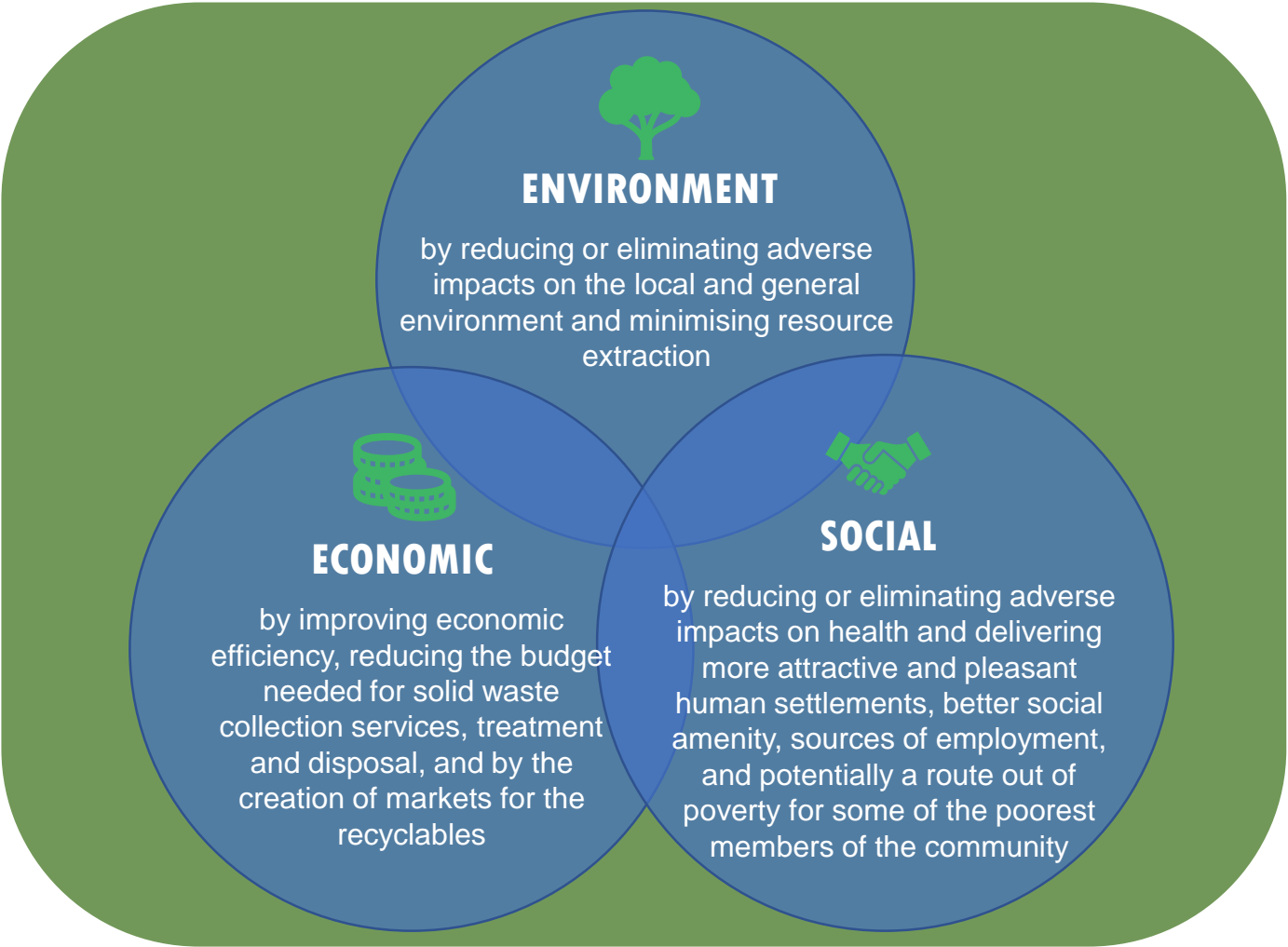
It helps **recognising** and **reconciling** contradictory and inconsistent policies

It **ensures** the needed availability of skills, knowledge, and capacity

The planning process **enhances** transparency and constructive stakeholders inclusion



SOUND WASTE MANAGEMENT CONTRIBUTES TO:



MULTIPLE FACETS INVOLVED E.G.:



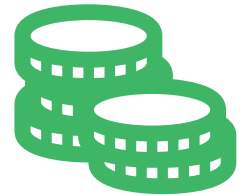
**Waste
generation**



Market size



Employment



Profitability



**Hazards &
greenhouse gases**



**Resource
savings**



Food waste

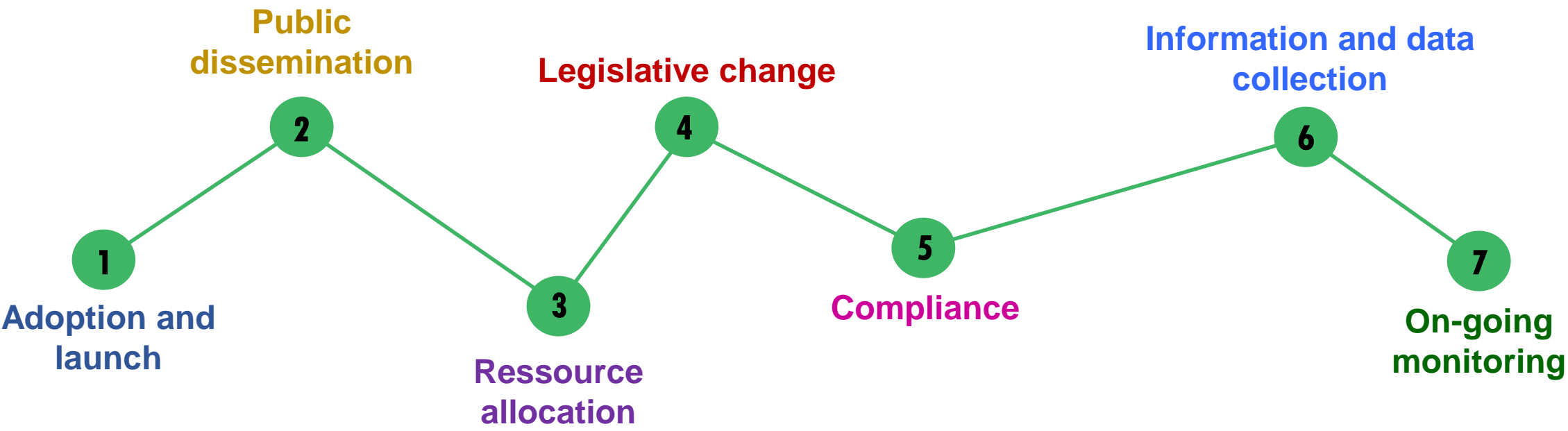
CHOISES IN A WASTE MANAGEMENT PLAN/STRATEGY

A policy choice must be made for each significant issue confronting a municipality or country

The choices made and the planned actions to implement them constitute the strategy



PLAN THE STRATEGY'S IMPLEMENTATION



ENGAGEMENT WITH ALL RELEVANT PARTIES

A wide range of stakeholders and affected groups needs to be **engaged**

The **engagement process** involves setting up forums for consultation and management

Identify who will **lead** and manage the development of the strategy

Securing political endorsement at an early stage is a critical step

GUIDANCE IS AVAILABLE



Fundamental guiding principles:

- Waste management hierarchy,
- Life-cycle concept
- Rethinking waste as a resource



Regulatory, economic, informational and other policy tools are tested and available



A wide range of information resources and successful examples are available that can be used to help make good decisions, e.g.: [ISWM Plan](#) and [Guideline for National Waste Management Strategies](#)



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WHAT IS WASTE?

AND

WHAT SHOULD WE DO WITH IT?



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WHAT IS WASTE?

Sometimes waste, sometimes raw materials!

Definitions of hazardous waste differ. It is hazardous and may be costly to manage, so set your clear definitions

Identify the waste types, streams and priorities that are important in your settings and reflect them in your strategy



WASTE COMPOSITION, AMOUNTS AND TREATMENT

Different waste **streams** are composed of different materials and therefore have different health and environmental impacts

The quantities to be managed differ among waste streams and the methods applied may vary broadly: collection, recovery, treatment, disposal

The policy adopted must recognize and take into account these differences.



WASTE SOURCES AND STREAMS

Waste is generally managed as identifiable waste **streams** generated from a number of identifiable **sources**

Some **sources** generate particular waste **streams** (e.g. building and demolition operations are the main sources of construction and demolition waste)

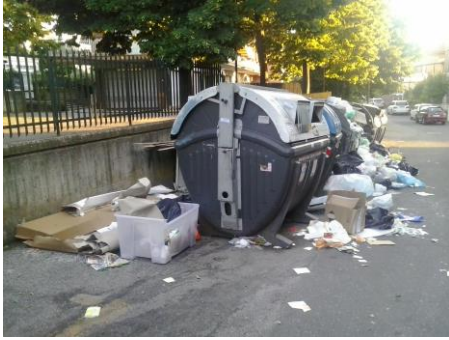
Other waste **streams** may come from **multiple sources** (e.g. packaging waste comes from households, public institutions, offices, shops, etc.)



WASTE SOURCES AND STREAMS

Waste is classified into different **streams** for the purposes of management, and these distinctions are made largely for practical reason.

In many cases there is an overlap of one **stream** with another **stream**, and different locations may use different classifications and names.



Municipal solid waste (MSW)
- often most visible



Hazardous waste

CATEGORIES OF WASTE



Industrial waste



**Waste imported from
elsewhere or intended for export**

Important guiding Principles

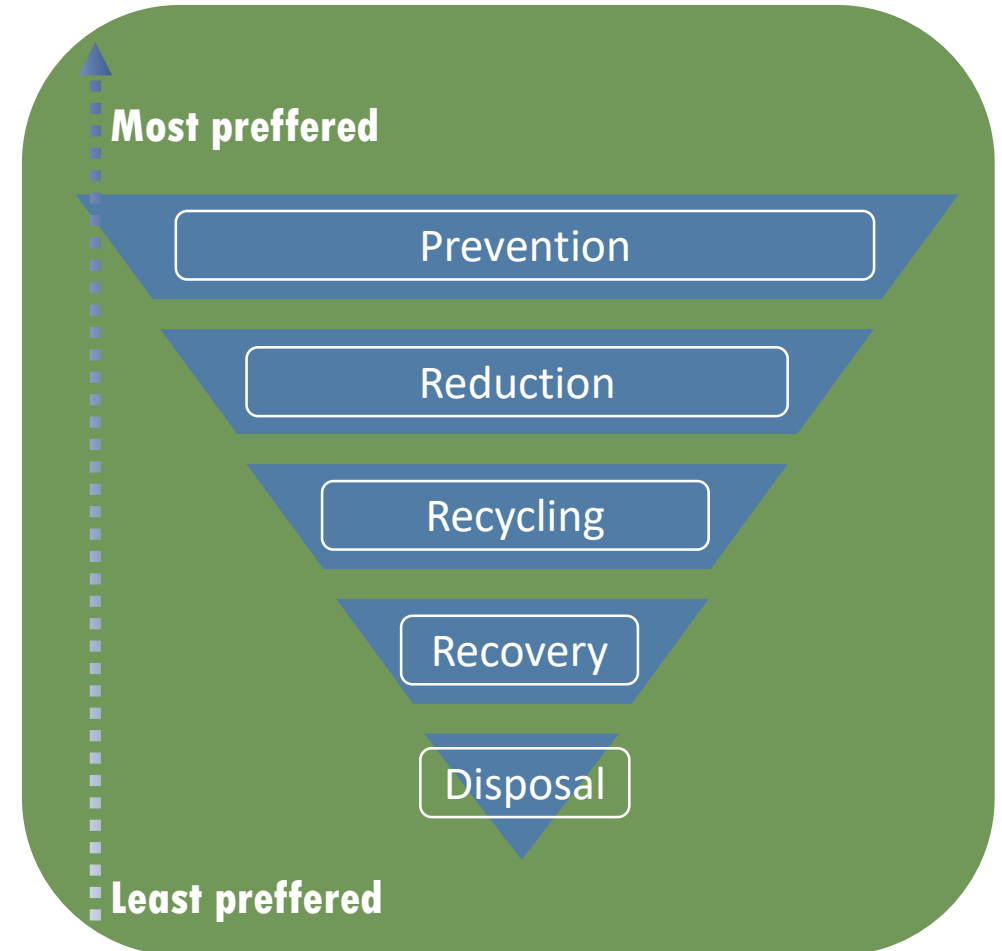
The 3Rs Waste
Management
Hierarchy

Extended
Producer
Responsibility



Important guiding Principles

The 3Rs+ Waste Management Hierarchy





MUNICIPAL WASTE MANAGEMENT PLANS

Or, the abbreviated version for communication: The «3Rs»:

REDUCE, REUSE, RECYCLE

The hierarchy represents **life cycle stages** of products/materials, including waste management and how we can influence them all:

Design – manufacturing + distribution (prevent, reduce) – use (reduce, reuse)
– options for end-of-life or «re-vitalisation» (recovery, recycling or disposal).

Each stage of the life-cycle offers opportunities for policy intervention.



Important guiding Principles

Extended
Producer
Responsibility

- A company puts a product on the market (production or import)
- They add to their price the costs of proper collection and disposal /treatment /recycling of the spent product
- They set up a system to handle collection and disposal /treatment /recycling
- Financed by the fee they added to the price



Other important concepts in waste management planning:

- **Resource efficiency:** Make the best of all resources

- **Environmentally sound management:** Prevent or minimize emissions and releases from waste management



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STEPS IN THE DEVELOPMENT OF A MUNICIPAL WASTE MANAGEMENT PLAN



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Step 1: Initiate the Planning Process

- Initiate the plan update
- Establish planning teams and committees
- Design the consultation process
- Develop the budget for the planning process and get it adopted



Step 2: Set the Plan Direction

- Identify principles, goals and targets for potential prioritisation
- Prepare background information (details below)
- Assess the current solid waste management system (if any) and situation
- Consider trends affecting solid waste management
- Consult relevant stakeholders for input and reactions



Step 3: Evaluate Options

- Develop potential strategies
- Assess the financial and administrative implications
- Consult relevant stakeholders for input and reactions on the options



Step 4: Prepare and Adopt the Plan

- Prepare a draft waste management plan
- Prepare draft implementation plan
- Consult the stakeholders on the draft plan
- Prepare final draft for submission
- Review and approve by responsible authorities
- Final adoption



Overall outline of a waste management plan:

- Background; existing framework and priorities
- Current status as regards waste management in the area covered
- Planning, projections and assessment
- Implementation plan
- Monitoring and evaluation



Background

- Overall waste problematic for target area
- Identify linkages to other plans and areas of local and national policy
- National legislation + municipal by-laws
- Description of national waste policy and prevailing principles
- Description of objectives set in specific areas
- Inputs from the consultation process



Current status of waste management

1. Waste assessment and composition, e.g.:
 - a) waste sources and streams
 - b) amount of wastes and types
 - c) waste management options
2. Waste collection and treatment for the above
3. Waste generation trends and projections
4. Organisation and financing
5. Socio-economic projections
6. Assessment of previous objectives (if any)
7. Strong and weak points



Waste assessment and composition study (WACS)

- A WACS, also called a waste characterization study, allows the municipality to better know the composition of the waste and manage it.
- It should be carried out at source: Households, shops/companies, institutions
- and at dumpsites.
- The difference can indicate the level of informal waste picking/recycling.



Waste assessment and composition study (WACS)

WACS at source:

1. Select the sampling area and, within it, the number of households, shops and institutions to be sampled .
2. Organize sampling groups for each area.
3. Collect the waste bins from each selected household/shop/institution
4. Segregate and weigh the different types of waste (kitchen waste, paper, plastics, etc.) and organize the results in tables where the weight of each component of the waste is noted



Waste assessment and composition study (WACS, cont.)

At dumpsite:

1. Offload selected sample trucks
2. Segregate and weigh the different types of waste
3. Organize the results in tables where the weight of each component of the waste is noted

Based on the waste sorting results, estimate the total amounts of waste

- from each **source type**,
- in each **waste stream**,
- through extrapolation to the whole "population" of each **source type** (inhabitants, shops, institutions, etc., as relevant)



Planning, projections and assessment

1. Assumptions for planning
2. Forecast in terms of waste generation, total and per waste stream
3. Determination of objectives for forecasted:
 - a) Waste streams
 - b) Waste sources
 - c) Waste management options
 - d) Collection systems
 - e) Waste management facilities
 - f) Responsibilities
 - g) Economy and financing



Planning, projections and assessment

4. Plan of actions, including measures for achieving objectives
5. Assess available capacities (especially in terms of human resources), and identify capacity gaps
6. Estimate expected costs and benefits
7. Identify options for financing costs



Implementation plan

1. Establish instruments for the implementation of a waste management plan
 - Policy/legal instruments
 - Economic instruments
 - Environmental agreements / partnerships
 - Public awareness & communication, stakeholders
 - Planning in involved institutions
2. Implementation programme, timing



Monitoring & evaluation:

- Select and describe the actions/initiatives to be monitored
- Define the means and right indicators to measure the performance of the applied SWM system
- Plan the timing of the monitoring and evaluation activities

GUIDELINES FOR THE DEVELOPMENT OF NATIONAL WASTE MANAGEMENT STRATEGIES

THANK YOU FOR YOUR ATTENTION!

**Nelson Manda, Jakob Maag
and Alexandre Lefèvre Jiménez**

