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GLOBAL HEALTHCARE WASTE PROJECT

MODULE 4:

National Healthcare Waste management Planning



Module Overview

- Define the goals of national HCWM planning
- Introduce the goals and objectives of national planning
- Delineate the steps for developing a national HCWM plan
- Outline the topics of a national plan
- Delineate the steps for implementation of the national HCWM plan



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Learning Objectives

- Review international environmental principles, international laws, and WHO policies and strategies related to HCWM
- Know the goals and objectives of national HWCM planning
- Understand the basic steps of national planning
- Be able to outline the main topics in a national plan
- Understand the basic steps of plan implementation



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International Principles of Waste Management

- International principles widely recognized as underlying the effective management of wastes
 - “Polluter pays” principle
 - “Precautionary” principle
 - “Duty of care” principle
 - “Proximity” principle
 - “Prior informed consent” principle



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Stockholm Convention

- Medical Waste Incinerators are linked to global releases of dioxins & furans
- “Priority consideration” should be given to alternative technologies that avoid formation of dioxins & furans
- Section VA(ii) on Medical Waste, Guidelines on best available techniques and provisional guidance on best environmental practices, 2006



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Basel Convention

- Controls transboundary movements of hazardous waste, including medical and pharmaceutical waste
- Technical Guidelines on the Environmentally Sound Management of Biomedical and Healthcare Wastes (Y1; Y3), 2003



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World Health Organization Guiding Principles on HCWM

1. Prevent health risks to health workers and public
2. Support efforts to reduce disease from noxious emissions
3. Support the Stockholm and Basel Conventions
4. Promote practices to reduce exposures to toxic pollutants from incineration



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WHO Core Principles on HCWM

- Safe and sustainable management of healthcare waste is a public health imperative and a responsibility of all.
- Improper management of healthcare waste poses a significant risk to patients, healthcare workers, the community and the environment.
- Right investment of resources and commitment will result in a substantive reduction of the disease burden and corresponding savings in health expenditures



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WHO Recommendations

- **Governments** should:
 - allocate a budget to cover the costs of establishment and maintenance of sound healthcare waste management systems
 - request donors, partners and other sources of external financing to include an adequate contribution towards the management of waste associated with their interventions
 - implement and monitor sound healthcare waste management systems, support capacity building, and ensure worker and community health.



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WHO Strategies on HCWM

- **Short Term**

- Develop recycling options where possible
- Use PVC-free materials
- Promote small-scale non-incineration alternatives

- **Medium-Term**

- Reduce the number of unnecessary injections to reduce sharps waste
- Assess the health risks associated with incineration and exposure to healthcare waste.



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WHO Long-Term Strategy on HCWM

1. Scaled up the promotion of non-incineration technologies for the disposal of healthcare waste
2. Support the development of national guidance manuals for sound management of healthcare waste
3. Support the development and implementation of national plans, policies and legislation on healthcare waste
4. Promotion of the principles of environmentally sound management of healthcare waste as set out in the Basel Convention
5. Allocate human and financial resources to safely management healthcare waste in countries.



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Why National HCWM Planning?

- Planning is necessary to improve healthcare waste management at the national, regional and local level
- Strong political commitment is required in all areas concerned for healthcare waste management to be properly dealt with



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General Framework for National Management of HCW

- Ensure that healthcare waste management fits into the overall national planning
- Involve the ministries of health and environment, other relevant ministries, as well as professional organizations and NGOs
- Promote **participative approaches** – while more demanding than top-down approaches, participative approaches usually prove to be more effective in the end.
- Allow for periodic review to updates policies and plans



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Goals of National HCWM Planning

- To declare the government's intentions to improve healthcare waste management
- To define overall strategies for improving HCWM
- To specify the activities and timeline for implementation
- To define the roles and responsibilities of authorities and other stakeholders
- To allocate human and financial resources for successful implementation



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Specific Objectives Towards Developing a National HCWM Plan

- Six key objectives:
 - To develop the legal and regulatory framework
 - To define good HCWM practices and encourage planning in all healthcare facilities
 - To develop financial investments and resources for HCWM
 - To build capacity and launch training measures
 - To set up a monitoring plan
 - To reduce pollution associated with HCWM



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Specific Objectives Towards Developing a National HCWM Plan

- To develop the legal and regulatory framework
 - Laws and regulations are the backbone for regulating and enforcing proper HCWM.
 - National law should harmonize state and regional laws.
 - National guidelines must be practical and directly applicable and include minimum obligatory procedures for proper HCWM.
 - There should be a program of monitoring and enforcement.



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Specific Objectives Towards Developing a National HCWM Plan

- To define good HCWM practices and encourage planning in all healthcare facilities
 - Guidance should be provided for the establishment of HCWM plans in healthcare facilities.
 - District/regional planning should be encouraged.
- To develop financial investments and resources for HCWM
 - Specific budget lines for HCWM are essential at all levels.
 - Cost recovery mechanisms are needed to sustain HCWM.



Specific Objectives Towards Developing a National HCWM Plan

- To build capacity and launch training measures
 - Technical advice and resources should be provided.
 - Training programs should be set up, including Training of Trainers (TOT).
 - National awareness-raising campaigns for target groups can be helpful.
 - Medical, dental, nursing and other health professional schools should be encouraged to include HCWM in their curricula.



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Specific Objectives Towards Developing a National HCWM Plan

- **To set up a monitoring plan**
 - Define indicators of achievement or performance.
 - Set up a simple, regular reporting system.
 - Conduct field visits and inspections.
- **To reduce pollution associated with HCWM**
 - Develop model hospitals and model rural health facilities to demonstrate best practices and new technologies.
 - Establish management structures to ensure implementation of policies and best practices.



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Steps for Developing a National HCWM Plan

- 1. Establish policy commitment and responsibility for HCWM**
 - The Ministry of Health or Ministry of Environment usually serves as the principal authority
 - The principal authority should work closely with other ministries, health organizations, private sector service providers, non-governmental organizations and professional bodies



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Steps for Developing a National HCWM Plan

2. Conduct a national assessment

- Conduct an inventory of existing healthcare facilities and central treatment plants for healthcare waste
- Analyze existing legislation, local regulations and internal rules used by facilities
- Characterize healthcare waste production nationwide
- Conduct a national survey of existing HCWM practices
- Assess availability of training at national & local levels
- Analyze institutional capacities at multiple levels



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Assessment Tools

Some Tools for conducting a national assessment

- **WHO Rapid Assessment Tool (RAT)**

The RAT gathers data from national stakeholders and a sampling of healthcare facilities in 7 to 15 days to provide decision-makers with data and analysis at a national level so as to develop a national plan.

- **UNDP GEF Individualized Rapid Assessment Tool (I-RAT)**

The I-RAT gathers data in 1 day at an individual healthcare facility so as to obtain an indication of the level of HCWM, identify problems, and calculate a score. It can be used by to compare and rank healthcare facilities in order to prioritize interventions.

- **WHO Expanded Cost Analysis Tool (ECAT)**

The tool estimates costs related to HCWM at a healthcare facility, central treatment facility or cluster, and national levels.



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Steps for Developing a National HCWM Plan

3. Develop national policy & guidelines

- Define a general framework and scope
- Organize technical and advisory committees with participation of other ministries, local governments, health groups, private sector, NGOs and professional bodies
- Work with the committees to formulate a national policy document and a technical guidance document
- Employ a transparent, participative process involving public notice of proposed rules, request for public comment, formal response to comments, and publication of final rules.



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Policy Document

- Outlines the rationale for the law and describes national goals and key steps essential for achieving the goals
 - Describes the health and safety risks resulting from mismanagement of healthcare waste;
 - Gives reasons for the importance of sound and safe HCWM practices in healthcare facilities;
- Provides a definition of healthcare waste and its categories
- Outlines the basic steps of HCWM: minimization, segregation and containerization, transport, storage, treatment and final disposal of waste; approved methods of treatment and disposal; unsafe HCWM practices that should be avoided;
- Defines the legal obligations of the healthcare waste producer;
- Promulgates rules governing protection of workers' health and safety;



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Policy Document

- Delineates management responsibilities within and outside healthcare establishments;
- Sets up a monitoring and documentation system;
- Requires record-keeping and reporting;
- Clarifies the jurisdictions of national, regional, provincial and district authorities
- Sets up an inspection system to ensure enforcement of the law, and specifies penalties to be imposed for contravention;
- Designates courts responsible for handling disputes arising from enforcement of or non-compliance with the law.
- Assesses the costs of HCWM;
- Establishes training requirements at healthcare facility, municipal, regional and national levels.



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Technical Guidance Document

- Links HCWM with hospital hygiene, infection control, and occupational health & safety (environmental limits of air emission and wastewater releases may be addressed here or in other national guidelines);
- Defines the responsibilities of public health authorities, national environmental protection body, heads of HCFs, smaller producers of HCW; and heads of private or public waste disposal agencies;
- Provides detailed requirements of HCWM classification, minimization, segregation, containerization, color-coding, handling, on-site and off-site transport, storage, treatment and final disposal of waste;
- Recommends treatment/disposal methods for each HCW category, options for centralized, cluster or decentralized treatment, testing requirements, and design guidelines for storage and treatment plants;
- Give examples of signs, markings, segregation posters, labeling, etc.
- Provides record-keeping and reporting requirements.



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Steps for Developing a National HCWM Plan

4. Draft a national HCWM plan with stakeholder participation

- Organize a national HCWM planning committee with broad representation
- Review policy & guidance documents, and present the results of the national assessment and recommendations
- Work with the committee to draft a national plan with input from other stakeholders
- Present the draft plan at regional consultation workshops and obtain feedback
- Revise the national plan based on comments obtained



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Contents of a National HCWM Plan

- Overview of legal and regulatory framework; summary of technical guidelines
- Results of a situational analysis or SWOT analysis
- Scope and objectives of the national plan
- Administrative framework for implementing the national plan, including a clear definition of roles and responsibilities
- Strategic (long-term) vision for HCWM in the country
 - E.g., green procurement; recycling infrastructure; system of waste collection and transport; a network of central treatment facilities combined with treatment clusters and on-site treatment; national capacity for maintenance and repair of treatment technologies; sanitary landfills; national training infrastructure; public-private partnerships; etc.
- Priority concerns and priority geographical areas



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Contents of a National HCWM Plan

- Overall phases of implementation including start date, milestones and evaluation criteria
- Roadmap to achieve the strategic vision
 - Subdivide the work into manageable components
 - Defined the scope and outcomes of each component
 - List activities for each component, as well as sequencing and estimated duration of activities, required human resources, budget, measurable indicators, entities responsible for implementation and supervision
 - Present an activity timeline (e.g., Gantt chart, milestones chart)
- List of measurable indicators of achievement
- System of monitoring, evaluation, and reporting



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Contents of a National HCWM Plan

- Plans and standards for procurement of technologies and services
- Plans for institutional capacity building
 - Building planning capacity at the regional, provincial & district levels
 - Development of training programs
 - Networking and partnership arrangements, institutional support
- Financial plans
 - National and local budget allocations
 - Cost recovery mechanisms
 - Bilateral and multilateral assistance
 - Foundation grants, endowments
 - Leveraging other sources, such as support from volunteer and service organizations, NGOs, and the private sector
- Mechanism for periodic review and updating of the national plan



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Sample of a Gantt Chart for Implementation

Actions	Phase I												Phase II							
	Year 1				Year 2				Year 3				Year 4				Year 5			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
First national stakeholder consultation	█																			
Formalize Natl HCWM planning organizn	█																			
Complete review of legal framework		█																		
Complete RAT and overall assessment		█																		
Complete IRAT and HCWM survey			█																	
Policy work group recommendations			█																	
Assessment of treatment options		█	█																	
Technical work group recommendations			█																	
Finance work group recommendations			█																	
Draft of national HCWM plan			█	█																
Regional stakeholder consultations				█	█															
Revision of draft national HCWM plan					█															
Second national stakeholder meeting					█															
Institutional capacity building						█	█													
Set-up of financing mechanisms						█	█	█												
Complete PPP agreements							█													
Set-up of regional TOT programs						█	█	█	█											
Technology procurements for priority 1						█	█	█	█	█	█									
Regional and local implementation						█	█	█	█	█	█	█								
Installations in priority 1 areas												█	█							
First monitoring & evaluation													█	█						
Review by Natl HCWM Committee															█	█				
Technology procurements for priority 2																█	█	█	█	



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Implementing a National HCWM Plan

Institutional framework to implement the national plan

- A national steering committee supervises the overall implementation of the national HCWM plan and meets on a regular basis (every quarter).
- Different institutions should be involved in the committee to obtain broad consensus on the implementation.
- The assistance and involvement of bilateral and multilateral agencies can be obtained.
- Outside expertise can support implementation if needed.



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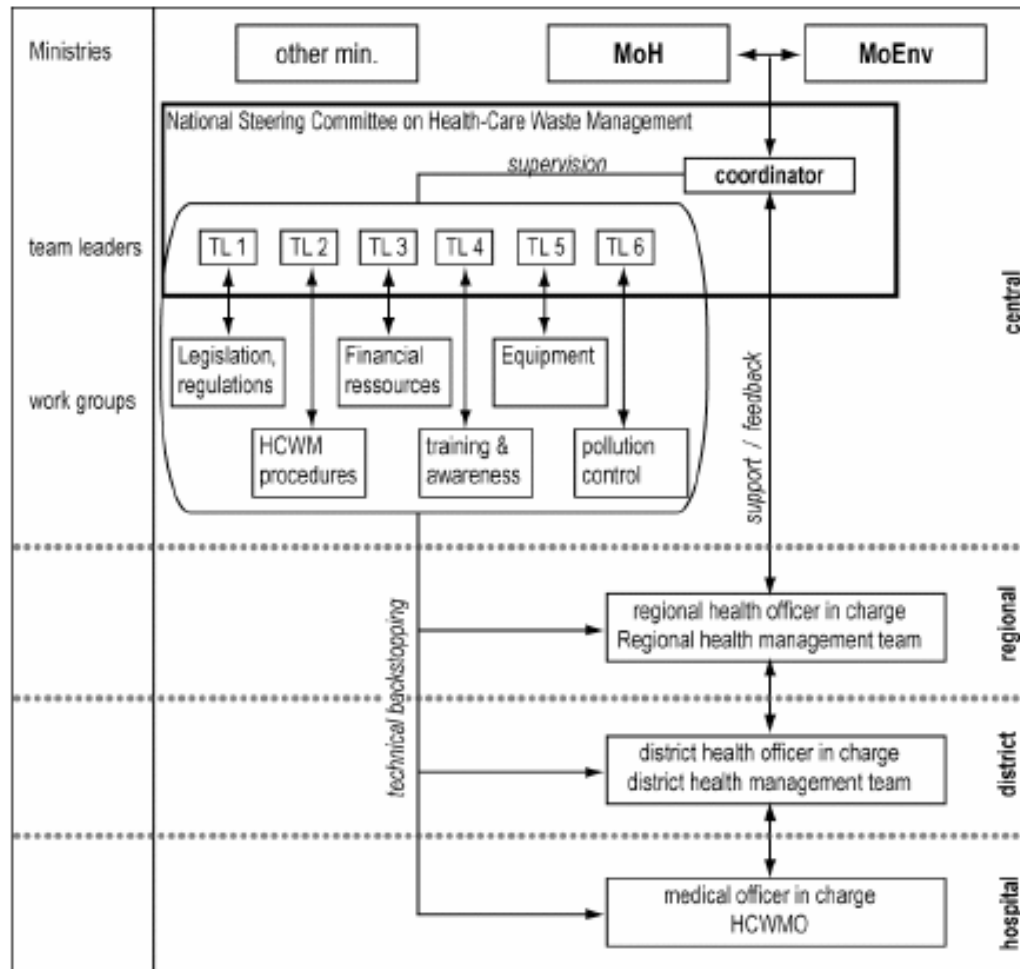
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Implementing a National HCWM Plan

Example of an institutional framework for implementation



Implementing a National HCWM Plan

- Funding
 - Estimate required funds, update costs based on actual data
 - Include financing for monitoring and evaluation
 - Set up a specific budget line
 - Seek additional funds
 - Ensure financial sustainability
 - Create financial incentives
- Inform national, regional and local authorities in charge of implementation of the start of the implementation
- Promote coordinated regional approaches



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Implementing a National HCWM Plan

- Conduct regular monitoring and evaluation of the implementation of the national HCWM plan
- Carry out audits of healthcare facilities and treatment plants
- Create a system to monitor and analyze injuries and exposures related to HCWM
- Review and improve recommended practices for HCWM to minimize injuries and exposures
- Monitor the usage and maintenance of technologies, identify new technologies
- Keep up with evolving international standards on HCWM practices and technologies
- Enhance or reinforce laws and regulations as needed



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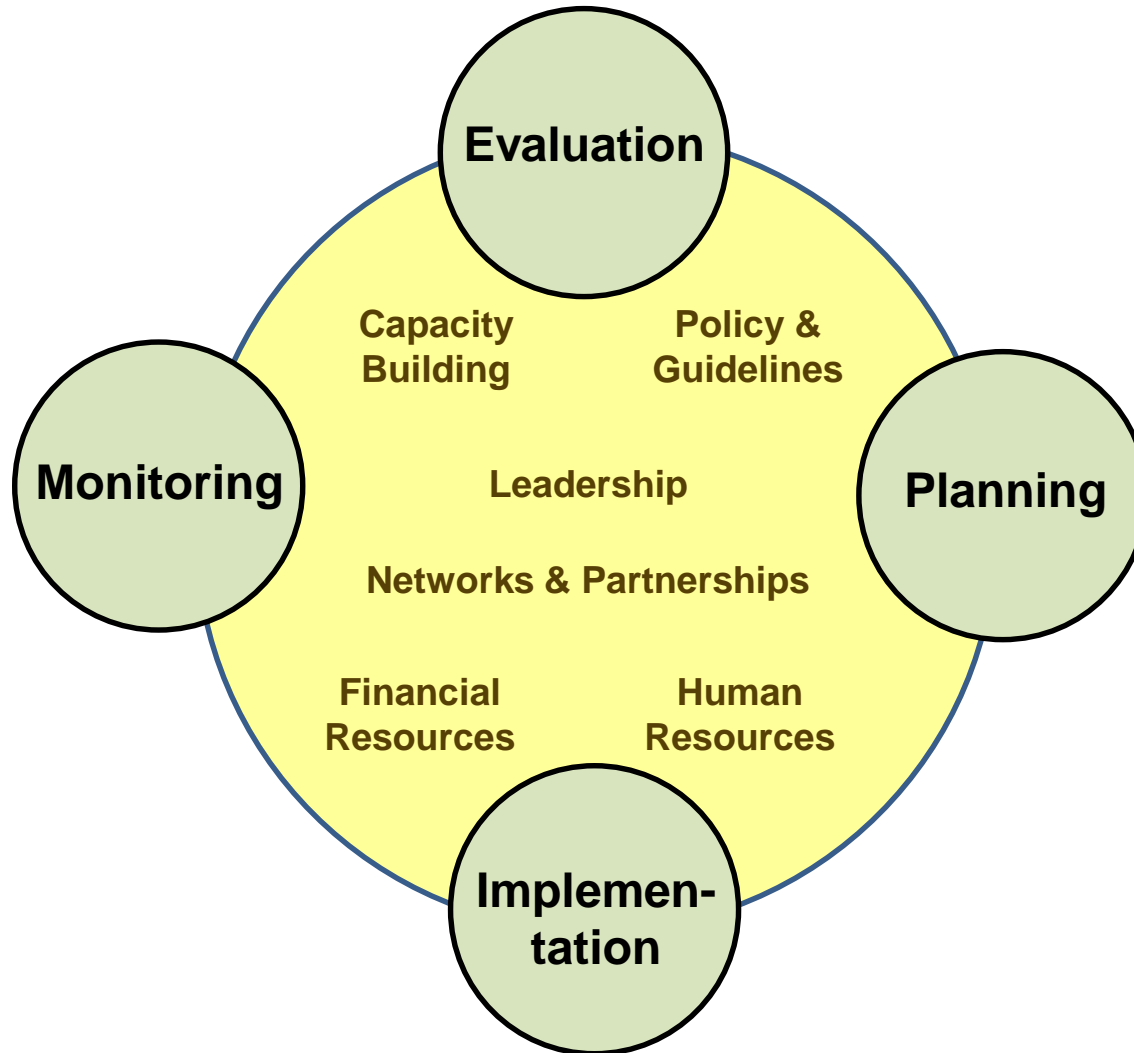


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Planning is an Evolving and Adaptive Process



HCWM Training

- Raising the level of awareness should occur at all levels
- Most efforts with regards to HCWM will have to be made at the level of healthcare facilities
- Raising public awareness about HCW risks is also important
- Ensure that curricula of medical, nursing and other health professional schools include HCWM
- Ensure that waste workers (waste collectors, transporters, treatment plant and landfill workers, treatment plant and landfill managers, etc.) get appropriate training and support



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HCWM Technologies

- Develop guidelines and standards for HCWM technologies
 - Take into account both national legislation as well as international legally-binding Conventions.
- Consider bulk purchasing of certain items for HCWM at national level to reduce costs
 - Ensure that products meet quality standards
 - Incorporate environmentally preferable (green) purchasing
- Assess treatment options
 - Decentralized treatment avoids the risks associated with transport of infectious wastes
 - Centralized treatment take advantage of the economies of scale but require a safe and efficient infrastructure of collection and transport.
 - Recycling options should be incorporated whenever possible



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Summary of National Assessment or National Survey



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Status of the Country-Specific HCWM Program



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Discussion

- Do you know if there is an initial assessment or national survey for your country?
- What do you consider as the most important aspects when creating an effective national healthcare waste management program?
- Who are the key stakeholders or players in your national program? If you do not have a team, who should these players and stakeholders be?
- What are some of the obstacles to successful implementation of a national HCWM program?
- Given some of the monitoring indicators for an effective HCWM program, do you think the current national program is working? If not, what are the limitations or barriers and how can we overcome them?



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