



**The Republic of the Union of Myanmar**  
**Ministry of Natural Resources and Environmental Conservation**  
**Environmental Conservation Department**



# **Updates of National Regulations & Implementation Status of Basel Convention**

**With a focus on the TBM / ESM of Plastic Wastes**

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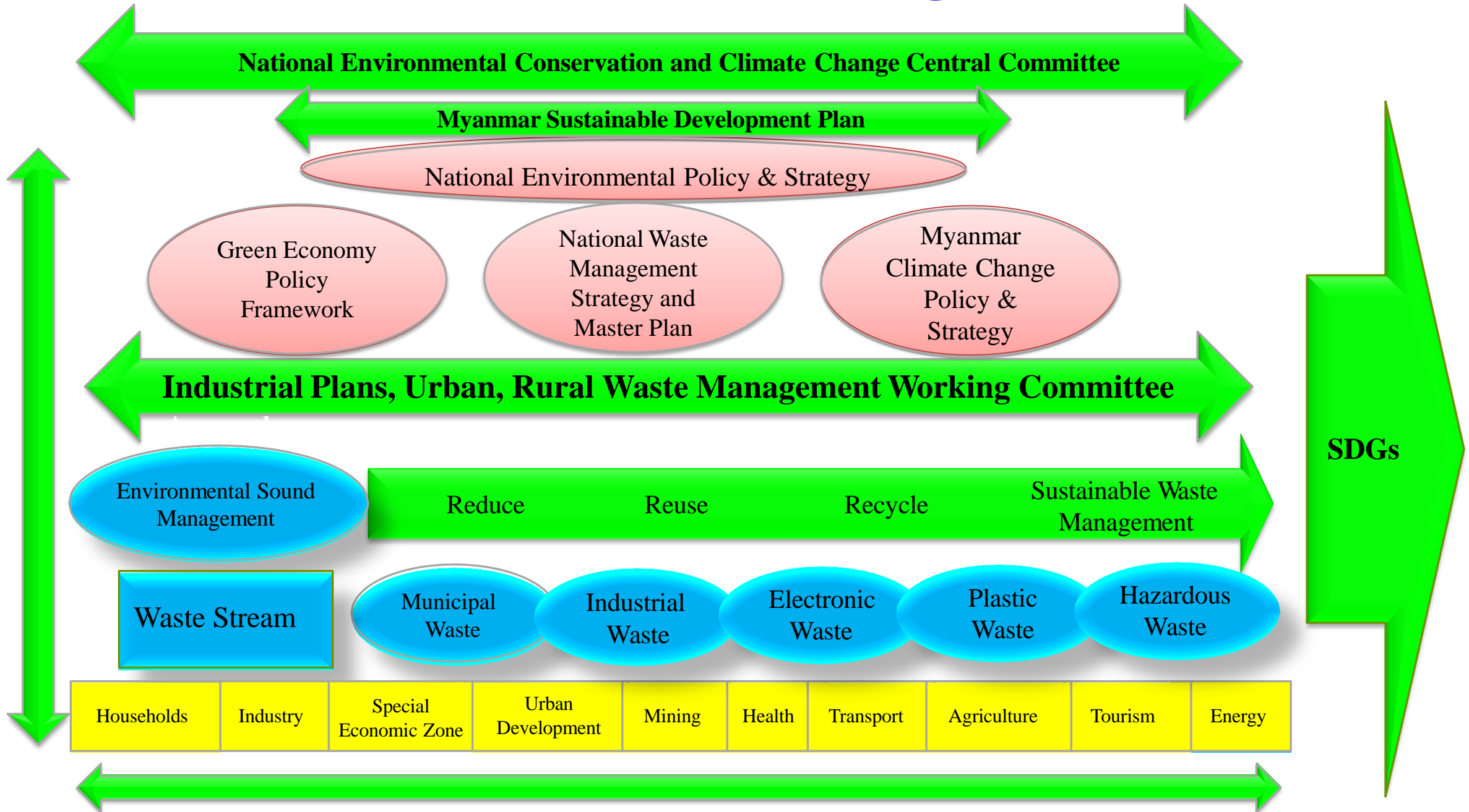
# Content

- Background
- Overview on Waste Management
- Environmental Regulations
- Myanmar's Implementation on Basel Convention
- Way Forward

# Background

- Myanmar is the developing country so that it needs to achieve harmony and balance between socio-economic, natural resources and environment through the integration of environmental considerations into the development process.
- As the developing country, Myanmar is thriving in economic, industrial, rural and urban development.
- With the increasing industrial development and other development activities, Myanmar will have to face the challenges in waste management sector.

# Overview on Waste Management



# Environmental Regulations

- National Environment Policy (1994)
- Myanmar Agenda 21 (1997)
- National Sustainable Development Strategy –NSDS (2009)
- Environmental Conservation Law (2012)
- Environmental Conservation Rules (2014)
- Environmental Impact Assessment Procedure (2015)
- National Environmental Quality (Emission) Guidelines (2015)

# Environmental Conservation Law

## Chapter IV

### Duties and Powers relating to the Environmental Conservation of the Ministry

#### Article 7. (g)

Specifying categories and classes of hazardous wastes generated from the production and use of chemicals or other hazardous substances in carrying out industry, agriculture, mineral production, sanitation and other activities

#### Article 7. (i)

Promoting and carrying out the establishment of necessary factories and stations for the treatment of solid wastes, effluents and emissions which contain toxic and hazardous substances

#### Article 7. (k)

Negotiating, cooperating and implementing in respect of international, regional and bilateral agreements, instruments and programmes relating to matters of environment

# Environmental Conservation Law (Contd.)

## Chapter VIII

### Management of Urban Environment

#### Article 17.

The Ministry shall, for the management of urban environment, advise as may be necessary to the relevant Government departments and Government organizations, private organizations and individuals in carrying out the following matters in accord with the guidances laid down by the Committee:

- (a) land use planning and management including zoning;
- (b) management of the construction industry in pivotal urban centres;
- (c) management of housing settlements;
- (d) **management of wastes;**
- (e) pollution control including land, water, air and noise pollution;
- (f) other necessary environmental management.

# Environmental Conservation Rules

## Chapter IX Waste Management

41. The Ministry, in carrying out industries, agricultural businesses, mineral explorations, livestock breeding and fisheries, waste disposal and other works, shall determine coordinate with the relevant Government department or organization, categories and classes of hazardous wastes, which may come out from producing or using chemicals or other hazardous materials.
42. The Ministry, to enable to promote the establishment of necessary facilities or plants for the treatment of solid waste, liquid waste and emissions which contain poisonous and hazardous materials, in cooperation with the relevant Government departments, Government organizations, experts:
- (a) shall cause to carry out waste treatment by the categories of business which emit or produce solid wastes, liquid wastes, emissions, radiations which contain poisonous and hazardous materials by establishing their own facility or centre, or collective facility or plants;
  - (b) shall determine the period to establish waste treatment facilities or plantss by the businesses which are established before the issue of these rules and which are responsible to establish their own or collective waste treatment facility or plants;
  - (c) may assign duty to the Department to inspect and report whether or not comply with as contained in sub-rule (a) relating to the waste treatment by the relevant businesses.



# Environmental Conservation Rules (Contd.)

## Chapter IX Waste Management

43. The Ministry:
- (a) may determine terms and conditions for treatment of effluent in industrial areas, special economic zones and other necessary areas and buildings, and terms and conditions of emissions of machine, vehicle and machineries;
  - (b) may prescribe manners for supervision relating to confiscation, storing, keeping safety measures, transport, import, export of disposed hazardous material, management, treatment and disposal of such material by high technology;
  - (c) may adopt necessary better measures relating to the maintenance, store, transport and destruction of solid waste in coordination with the relevant Government departments and Government organizations;
  - (d) may adopt manners for cleaner production mechanisms and recycling of natural resources and wastes in industries and businesses.
44. The Department shall prepare, in coordination with the relevant Government departments, Government organizations, if it is necessary, suitable non-governmental organizations, in accord with the guidance of the Ministry, the categories and classes of hazardous wastes which may come out from producing or using chemicals or other hazardous materials in industry, agricultural business, mineral exploration, livestock breeding and fishery, waste disposal and other works, and submit to the Ministry.

# Environmental Conservation Rules (Contd.)

## Chapter IX Waste Management

45. The Department shall inspect whether or not the businesses which are responsible to establish waste treatment facility or plant under rule 42 comply with the stipulations relating to waste treatment and carry out, and submit in accord with the guidance of the Ministry.
46. The Department:
- (a) shall prepare terms and conditions for treatment of effluent in industrial areas, special economic zones and other necessary areas and buildings, and terms and conditions relating to emissions of machine, vehicle and machineries and submit to the Ministry;
  - (b) shall prepare manners for supervision relating to confiscation, storing, keeping safety measures, transport, import, export of disposed hazardous materials, management, treatment and disposal of such material by advanced technology and submit to the Ministry;
  - (c) shall cause to implement and supervise the measures adopted by the Ministry for the better management of the destruction, store, and transport of solid waste;
  - (d) shall submit to the Ministry after inspecting whether or not the manners adopted by the Ministry for cleaner production mechanisms and recycling of natural resources and wastes are complied with and applied in industries and businesses.

# Environmental Impact Assessment Procedures

No.	Type of Economic Activity	Criteria for IEE Type Economic Activities	Criteria for EIA Type Economic Activities
103.	Non-Hazardous Waste Disposal Facilities	Landfills < 10 t/d and total capacity < 25,000 t Others < 50 t/d	Landfills $\geq$ 10 t/d or total capacity $\geq$ 25,000 t Others $\geq$ 50 t/d
104.	Non-Hazardous Waste Incinerators	< 3 t/h	$\geq$ 3 t/h
105.	Non-Hazardous Waste Recycling, Recovery or Reuse Facilities	< 50 t/d	$\geq$ 50 t/d
106.	Hazardous Waste Disposal Facilities	-	All Sizes
107.	Hazardous Waste Recycling, Recovery or Reuse Facilities	< 10 t/d	$\geq$ 10 t/d

# National Environmental Quality (Emission) Guidelines

## 2.4 Waste Management

### 2.4.1 Solid Waste Management Facilities

This guideline applies to the management of municipal solid waste and industrial waste including waste receipt, unloading, processing, and storage; landfill disposal; physico-chemical and biological treatment; and incineration. Industry-specific waste management activities (e.g. medical waste) are covered in the relevant industry guidelines. Applicable effluent and emission levels are as follows:

Effluent Levels (for landfills)

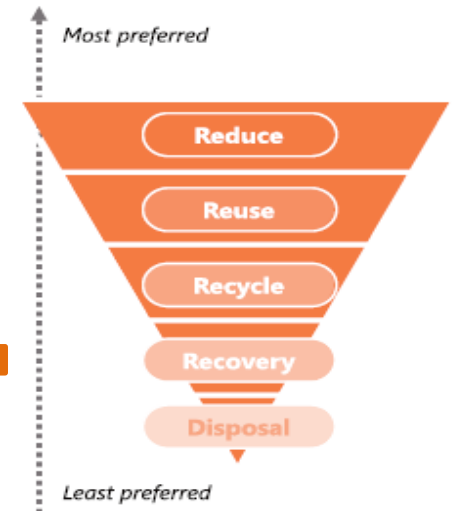
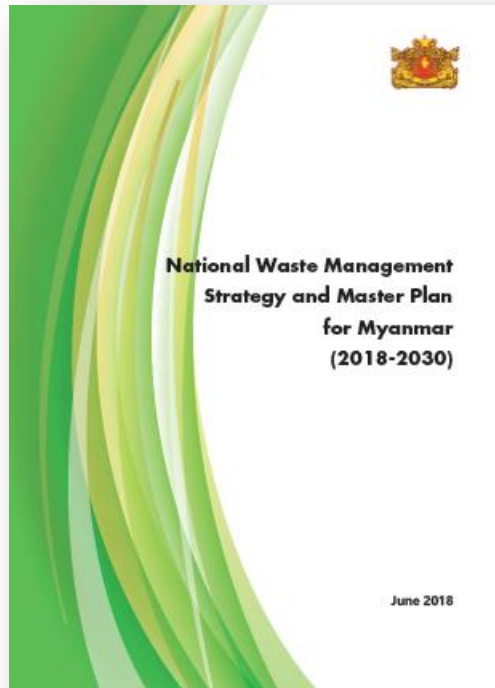
Parameter	Unit	Guideline Value			
		Hazardous Waste Landfills		Municipal Solid Waste Landfills	
		Daily Max.	Monthly Average	Daily Max	Monthly Average
5-day Biochemical oxygen demand	mg/l	220	56	140	37
Ammonia	mg/l	10	4.9	10	4.9
Aniline	mg/l	0.024	0.015	-	-
Arsenic	mg/l	1.1	0.54	-	-
$\alpha$ -Terpineol	mg/l	0.042	0.019	0.033	0.016
Benzoic acid	mg/l	0.119	0.073	0.12	0.071
Chromium (total)	mg/l	1.1	0.46	-	-
Naphthalene	mg/l	0.059	0.022	-	-
p-Cresol	mg/l	0.024	0.015	0.025	0.014
pH	S.U. <sup>a</sup>	6-9	6-9	6-9	6-9
Phenol	mg/l	0.048	0.029	0.026	0.015
Pyridine	mg/l	0.072	0.025	-	-
Total suspended solids	mg/l	88	27	88	27
Zinc	mg/l	0.535	0.296	0.2	0.11

Air Emission Levels (from incinerators)

Parameter	Unit	Guideline Value
Cadmium	mg/m <sup>3</sup>	0.05-0.1 (0.5-8 hour average)
Carbon monoxide	mg/m <sup>3</sup>	50-150
Hydrochloric acid	mg/m <sup>3</sup>	10
Hydrogen fluoride	mg/m <sup>3</sup>	1
Mercury	mg/m <sup>3</sup>	0.05-0.1 (0.5-8 hour average)
Nitrogen oxides	mg/m <sup>3</sup>	200-400 (24 hour average)
Polychlorinated dibenzodioxin and dibenzofuran	ng TEQ/m <sup>3</sup>	0.1
Sulfur dioxide	mg/m <sup>3</sup>	50 (24 hour average)
Total metals	mg/m <sup>3</sup>	0.5-1 (0.5-8 hour average)
Total suspended particulates	mg/m <sup>3</sup>	10 (24 hour average)

Incinerator bottom ash and other solid residue from industrial or medical hazardous wastes should be treated and disposed as hazardous waste unless it can be demonstrated to be not hazardous.

# National Waste Management Strategy and Master Plan



**Waste Management Hierarchy**

**Guiding Principles**

# National Waste Management Strategy and Master Plan (2018-2030)

## Vision

Sustainable, Green, Clean and Healthy Environment towards a Brighter Future for Myanmar

## Mission

To develop and implement the holistic / integrated waste management strategy based on principles of inclusiveness, zero waste and circular economy to achieve a greener, cleaner and healthier environment

## Objectives

Goal A	Extending sound waste collection service to all citizens and eliminate uncontrolled disposal and open burning as a first step towards environmentally sound waste management
Goal B	Extending sustainable and environmentally sound management of industrial and other hazardous wastes
Goal C	Substantively prevent waste through 3Rs (reduce, reuse, recycling) and thereby establish a resource circular society
Goal D	Ensure sustainable financing mechanisms
Goal E	Awareness Raising, Advocacy and Capacity Building
Goal F	Compliance, Monitoring, Enforcement and Recognition

# Myanmar's Implementation on Basel Convention

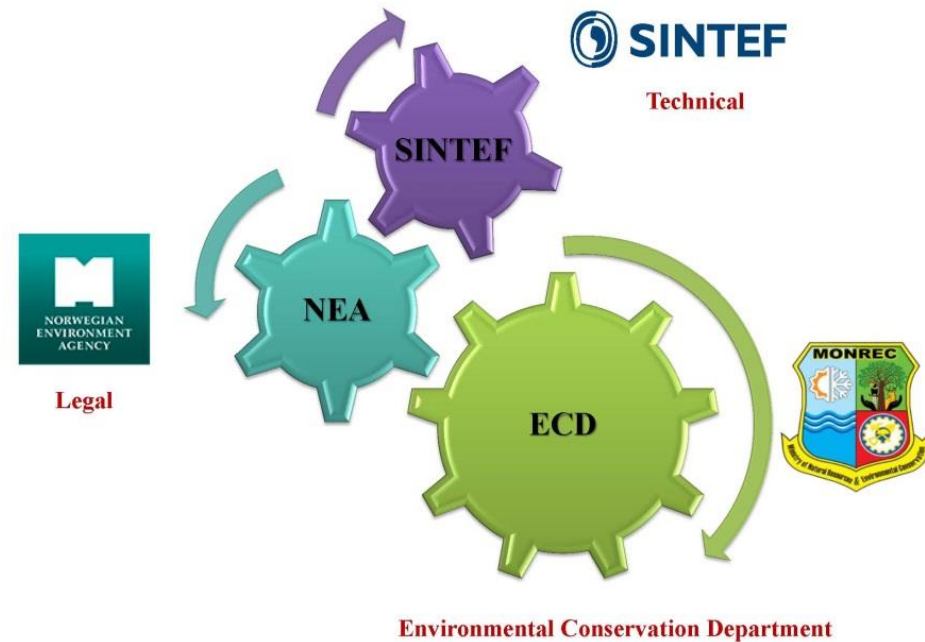
- **Myanmar's Ratification the Basel Convention - 6 January 2015**
- **Entered into force - 6 April 2015**
- **Focal Ministry for Implementation of Basel Convention in Myanmar – Ministry of Natural Resources and Environmental Conservation (MONREC)**
- **Competent Authority of Myanmar for Basel Convention**  
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Director  
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# Project on Hazardous Waste Management

- Cooperation with Ministry of Natural Resources and Environmental Conservation (Myanmar) & Norwegian Environment Agency (Norway)
- Project Period – (3) years (1<sup>st</sup> April 2016 to 31<sup>st</sup> March 2019)

## Objective of the Project

- Improved management of hazardous waste
- Proposed regulatory framework for the management of hazardous waste in Myanmar,
- Prepare National Implementation Plan for the implementation of the Basel Convention
- Proposed Master Plan for Hazardous Waste in Myanmar



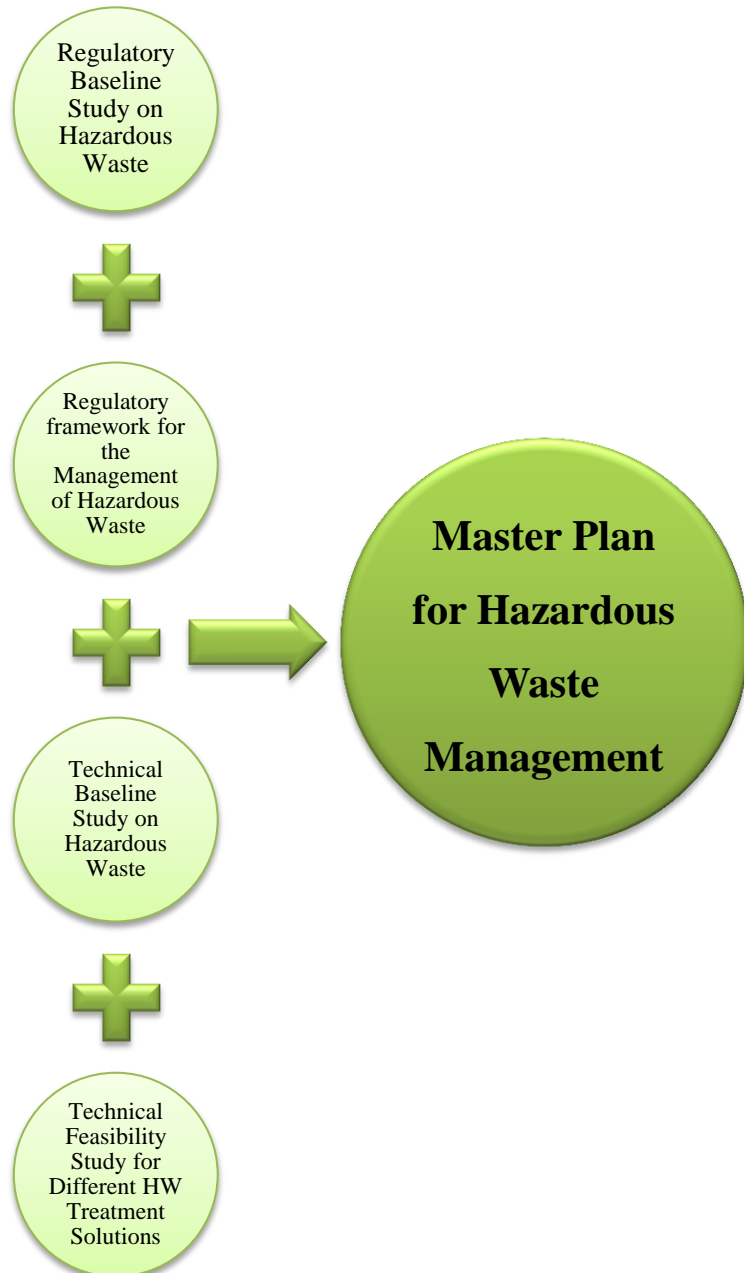


# Reports / Regulations by Project on Hazardous Waste Management

(Cooperation between ECD & NEA)

No.	Report / Regulation Name	Version
1.	Master Plan for Hazardous Waste Management in Myanmar	1 <sup>st</sup> Draft
2.	Baseline Report on Existing Policies, Legislation and Institutional Arrangements for Hazardous Waste in Myanmar	3 <sup>rd</sup> Draft
3.	Notification on Specifying Types of Hazardous Wastes	Final Draft
4.	Procedure on Transboundary Movement of Hazardous Wastes	2 <sup>nd</sup> Draft
5.	Typical Wastes Generated by Industry Sectors	2 <sup>nd</sup> Draft
6.	Healthcare Waste Management in Myanmar	1 <sup>st</sup> Draft
7.	Waste Inventories	1 <sup>st</sup> Draft
8.	Evaluation of feasible treatment options for hazardous wastes	2 <sup>st</sup> Draft
9.	Report of Capacity Building by Project on Hazardous Waste Management	1 <sup>st</sup> Draft

# Master Plan for Hazardous Waste Management (1<sup>st</sup> Draft)



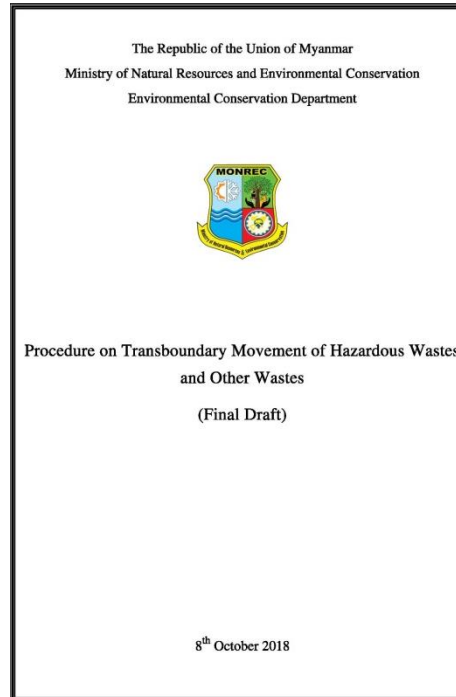
**“Cooperation between ECD, MONREC & NEA, SINTEF”**

- Relevant policy and strategies
- Current Management of Waste
- Current industrial and hazardous waste generation and management practices
- Current regulatory framework and institutional arrangements
- Possible waste treatment options
- Cost recovery and financing
- Recommendations for an improved hazardous waste management system in Myanmar

# Procedure on Transboundary Movement of Hazardous Wastes and Other Wastes (Final Draft)

## Objectives

- To control the transboundary movement of hazardous wastes & other wastes
- To control the impacts on human health and environment
- To implement on the obligations of the Basel Convention



## Content of Procedure on Transboundary Movement of Hazardous Wastes and Other Wastes (Final Draft)

- Exporting Hazardous Wastes and Other Wastes
- Importing Hazardous Wastes and Other Wastes
- Transshipment of Hazardous Wastes and Other Wastes through the Republic of the Union of Myanmar
- Illegal Transboundary Movement of Hazardous Wastes and Other Wastes
- Export to or import from states which are not parties to the Convention (non-parties)
- Inspection and Monitoring
- Prohibitions and Taking Actions
- Miscellaneous

# Current Situation for Plastic Wastes Management

- No specific regulations for plastic waste management
- Preparing to formulate specific regulation for plastic waste management & TBM of plastic wastes
- TBM of Plastic Wastes – Following the Basel Convention Procedure
- Import & Export of Plastic Wastes
  - Based on ESM & Environmental Management Plan
  - Coordination with Ministry of Commerce and Custom Department (e.g Specific Regulations, Import & Export Procedure, Issuing Import & Export License)

# Procedure on Transboundary Movement of Hazardous Wastes and Other Wastes (Final Draft) related with TBM of Plastic Wastes

## Chapter V

### Importing Hazardous Wastes and Other Wastes

13. (a) All import of hazardous wastes and other wastes which are included in Annex “A” into Myanmar is prohibited until the Ministry decides otherwise;
- (b) The Ministry shall permit the import of hazardous wastes and other wastes into the Republic of the Union of Myanmar **if the importer can be disposed of hazardous wastes and other wastes in an environmentally sound manner in the Republic of the Union of Myanmar;**
- (c) **When hazardous wastes and other wastes may be imported into Myanmar, based on the decision by the Ministry, this Procedure shall apply.**
14. **The importer who want to import hazardous wastes and other wastes shall import hazardous wastes and other wastes may be imported if the waste can be disposed of in an environmentally sound manner in the Republic of the Union of Myanmar.**
15. The importer who want to import hazardous wastes and other wastes shall obtain the permission of the Ministry before applying the import license from the relevant ministry.

**(Note – Annex A “Types of Hazardous Wastes, Hazardous Characteristics and Other Wastes”)**



# Environmental Challenges at Waste Management Sector



**Opening Dumping Site in Myanmar**



**Burning at the opening dumping Site  
(Htain Pin , Hlaing Thar Yar township,  
Yangon)**



**Uncontrolled dumping at the house hold area  
(Yangon)**



**Discharging industrial waste water to the river  
without treatment (Mandalay)**



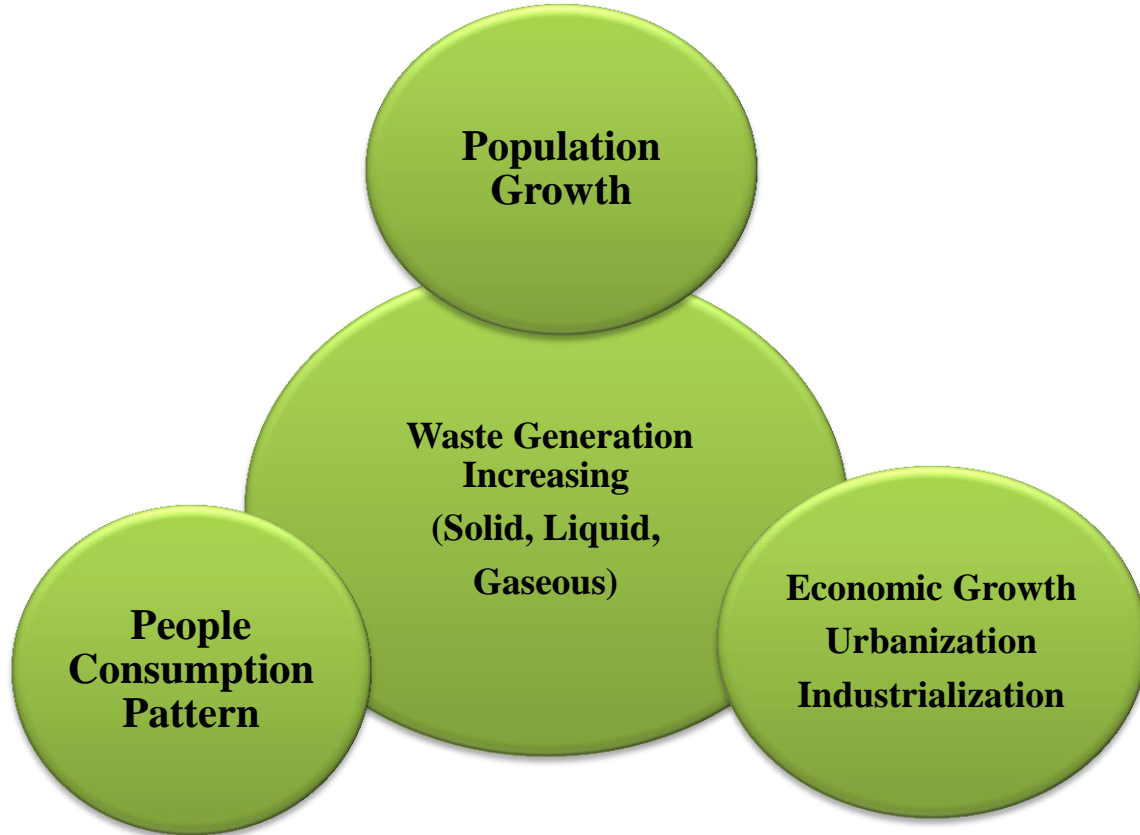
**Water Pollution by Plastic Wastes**



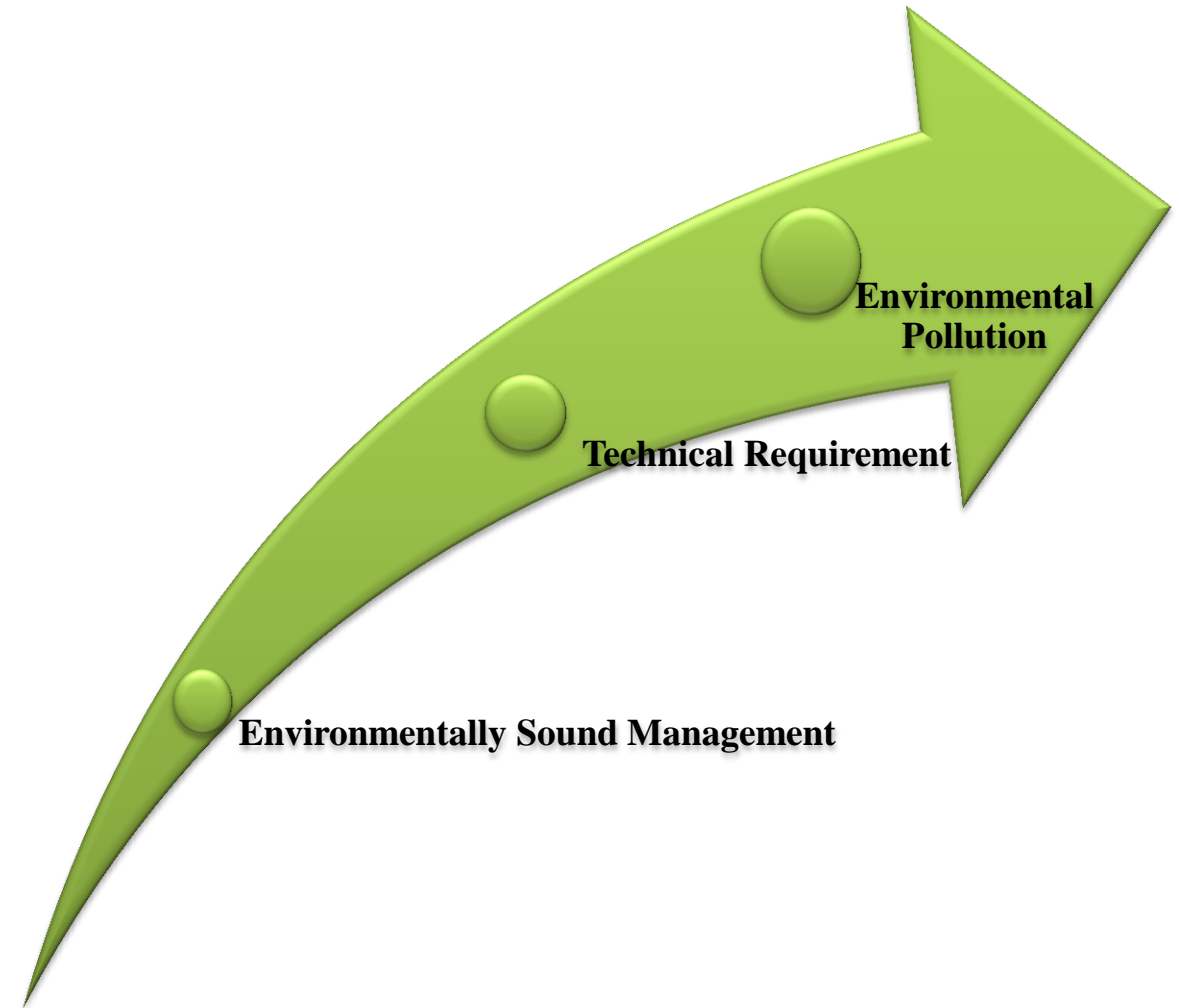
**Plastic Waste Pollution**

# Challenges

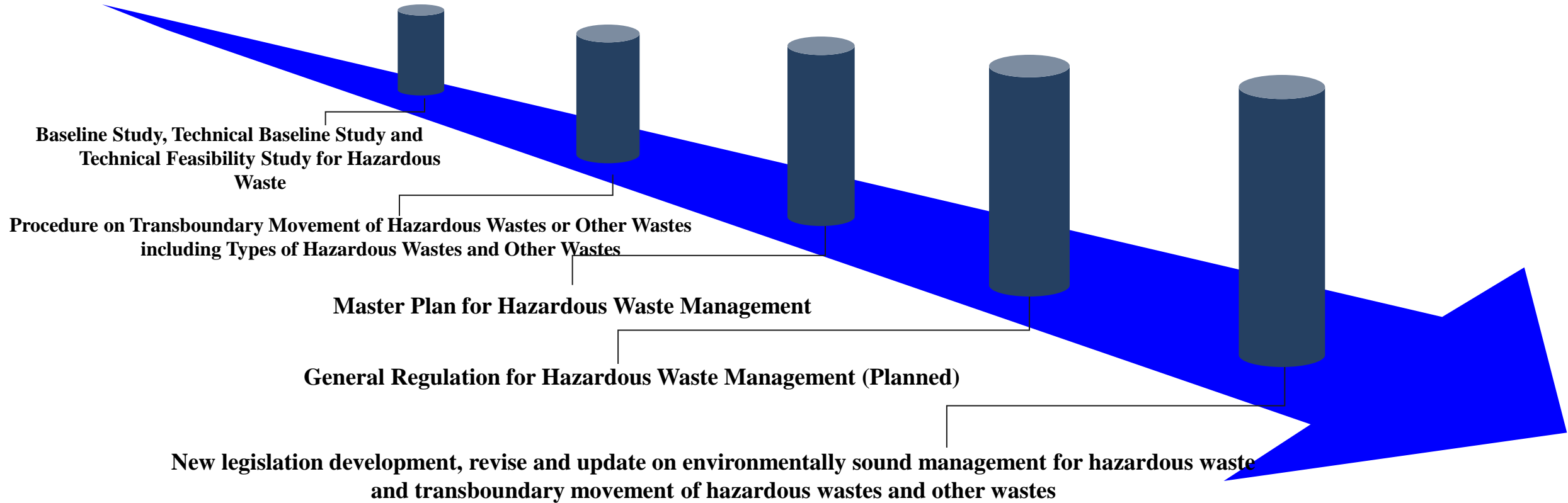
## Challenges for Waste Management



## Challenges for Plastic Waste Management

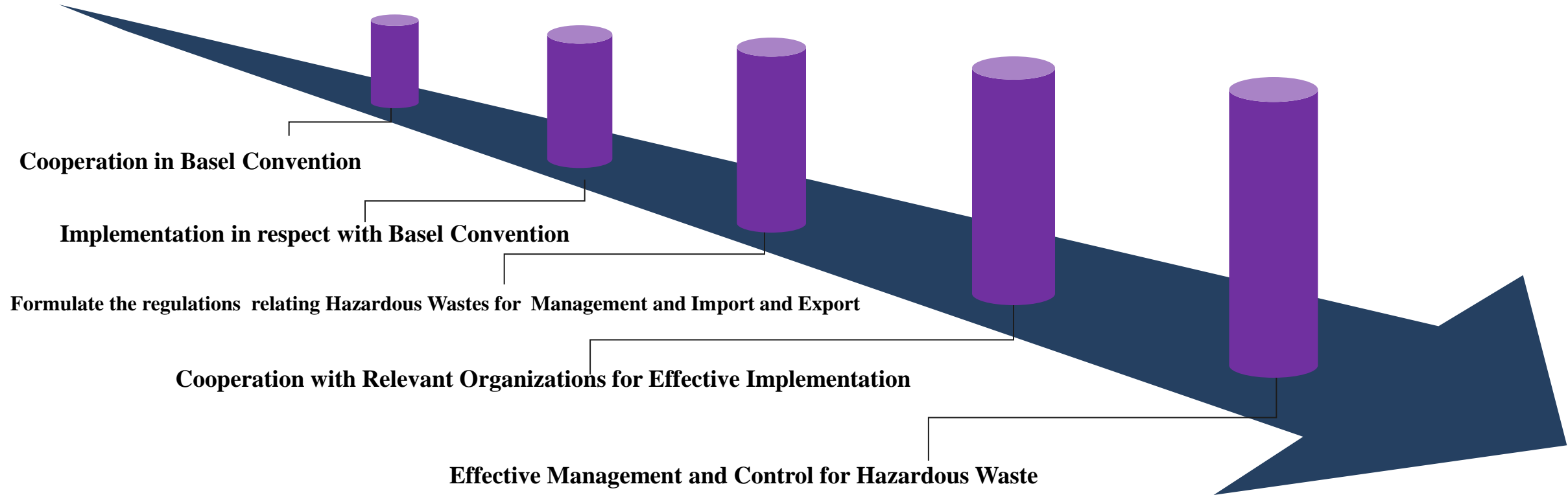


# Way Forward for Regulations for Hazardous Waste & Other Wastes Management





# Way Forward for Implementation on Basel Convention & Hazardous Waste Management





*Thank you for your time and kind attention!*

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