THE ECOLOGICAL SOLID WASTE MANAGEMENT ACT OF 2000 (R.A 9003)

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SWMS

From tragedy to action

A garbage slide that buried and killed hundreds of waste pickers and their families

Served as a push for National law on proper waste management

Solid waste is the most visible environment problem

Generation:
Urban areas - 0.61 kg/capita/day
Rural areas - 0.30 kg/capita/day

Total annual generation (Tons/D)
= 11,823.46 tons/day (2023 Proj.)
for Metro Manila

(2023 PROJ.) 4,315,469 Tons/Year

increasing volume of waste generation due to rapid increase in population, industrialization and development in our country.

Types of Solid Waste

Discarded household materials

Non-hazardous

Institutuional / Industrial waste

Street Sweepings

Construction debris

Agricultural waste

Other non-hazardous / non-toxic

Our present system of garbage management is garbage disposal and not waste management.

This HAKOT/TAMBAK system, also known as the collect and dump system, is not ecological.

Who generates garbage?

Households

Industries/ Factories

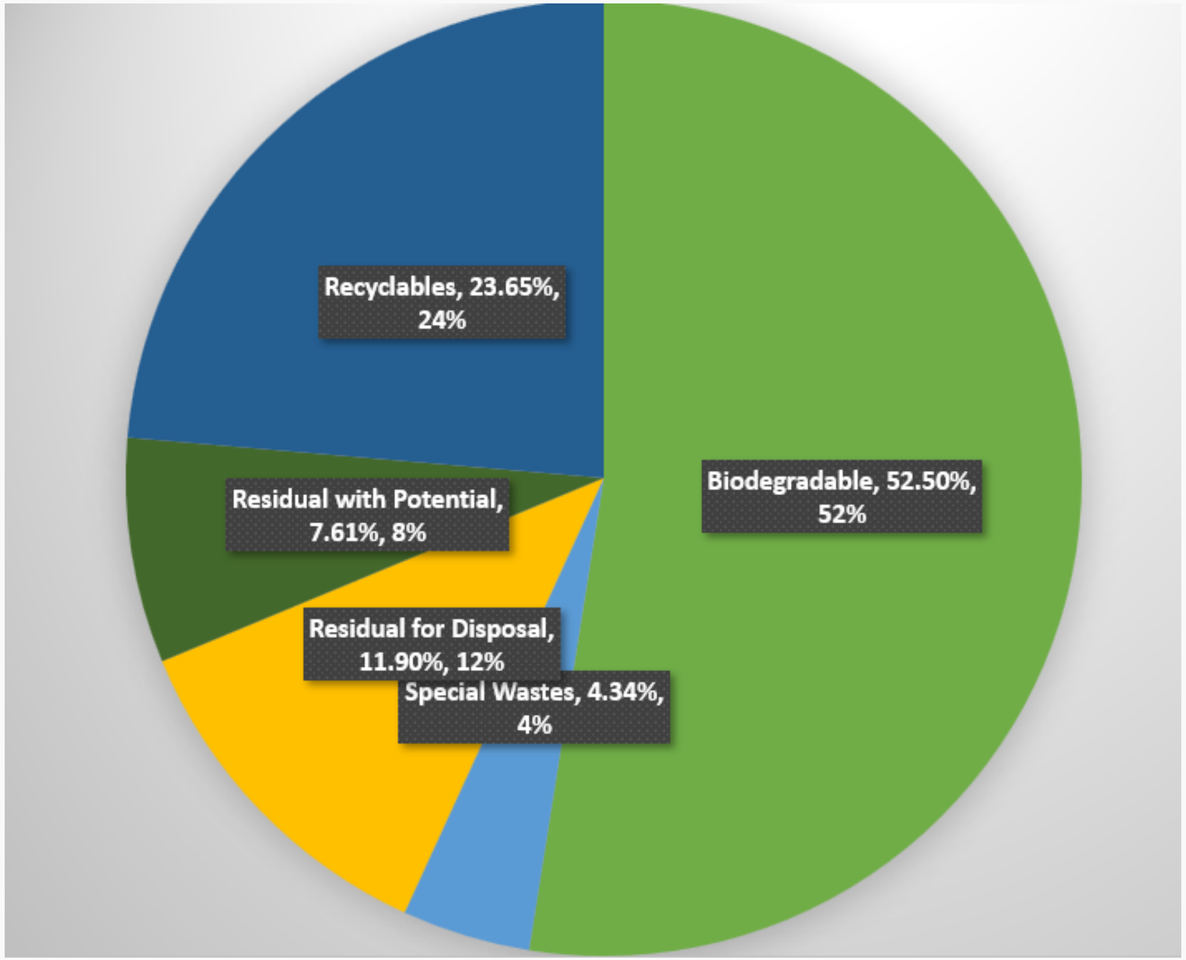
Schools

Offices, Businesses,

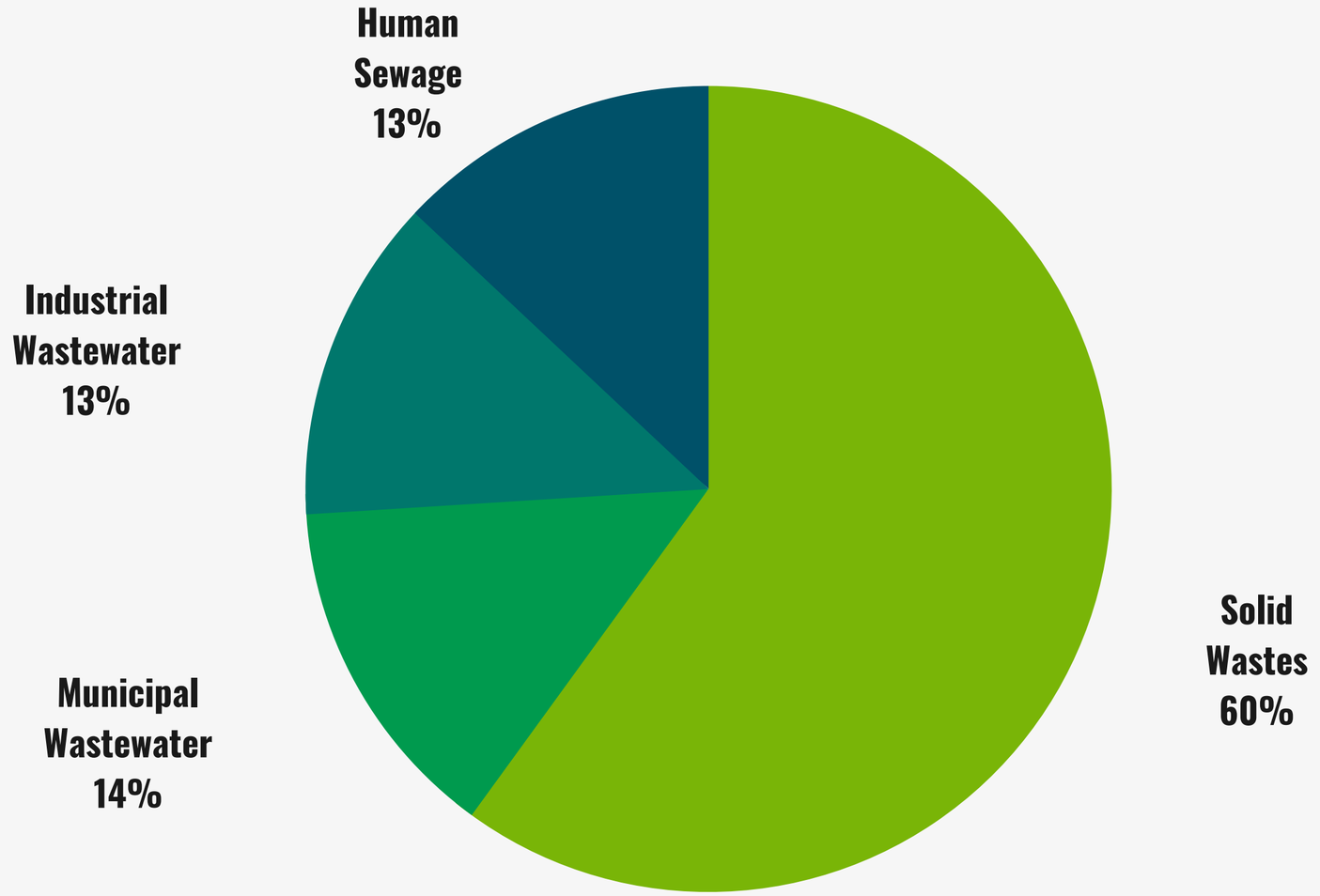
& other Establishments

Hospitals

Solid Waste Composition, 2021



GHG EMISSIONS FROM THE WASTE SECTOR



Methane Gas Emission from Garbage

CLIMATE CHANGE

"A change in climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere which is in addition to natural climate variability observed over a comparable period of time"
(United Nations Framework Convention on Climate Change)

"Any change in climate over time, whether due to natural variability or as a result of human activity"
(Intergovernmental Panel on Climate Change (IPCC)

KNOW THE DIFFERENCE...

Environmental Impacts of Improper Solid Waste Management

Flooding

Health Hazard

Landlside

Damage to infrasrcuture

Clogging of sewerages

Environmental Impacts of Improper Solid Waste Management

- **Ground & surface water contamination**
- **Air pollution**
- **Release of greenhouse gases**
- **Foul odor**

Heath Impacts of Improper Solid Waste Management

- Murine Typhus Fever
- Infectious Jaundice Or Weil's Disease
- Food Poisoning
- Chorio-lepto Meningitis
- Trichinosis

- Summer Diarrhea
- Tuberculosis
- Anthrax
- Ophthalmia
- Intestinal Worms
- Poliomyelitis

- Typhoid Fever
- Diarrhea
- Dysentery
- Tuberculosis
- Anthrax
- Food Poisoning

- Malaria
- Yellow Fever
- Elephantiasis
- Encephalitis
- Dengue Fever

REPUBLIC ACT OF 9003

Ecological Solid Waste Management Act of 2000

- An ACT providing for an ECOLOGICAL SOLID WASTE MANAGEMENT PROGRAM, CREATING THE NECESSARY INSTITUTIONAL MECHANISMS AND INCENTIVES, DECLARING CERTAIN ACTS PROHIBITED AND PROVIDING PENALTIES, APPROPRIATING FUNDS THEREFORE, AND FOR OTHER PURPOSES

- Approved on January 26, 2001

- First law signed by former President Gloria Macapagal Arroyo

- Took Effect on February 16, 2001

OBJECTIVE OF THE LAW

The overall principle and objective of R.A. 9003 are that all waste should be brought to where they can be resources again - the recyclables to factories and the biodegradables either used as animal feed or composted for soil enhancement.

Only materials that currently cannot be composted or recycled should go to landfills.

The implementing rules and regulations of R.A. No. 9003 are contained in DENR Administrative Order No. 2001-34

CLASSIFICATION OF WASTE as defined by R.A. 9003

COMPOSTABLE WASTE

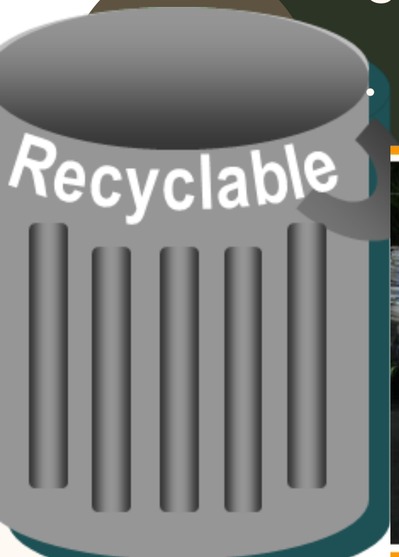
Compostable wastes are biodegradable wastes such as food waste, garden waste, and animal waste.

Examples are:
Fruit and vegetable peelings, leftover foods, vegetable trims, fish/fowl/meat/animal entrails/, soft shells, seeds, leaves, etc.,

RECYCLABLE WASTE

Recyclable materials refer to any waste material retrieved from the waste stream and free from contamination that can still be converted into suitable beneficial use.

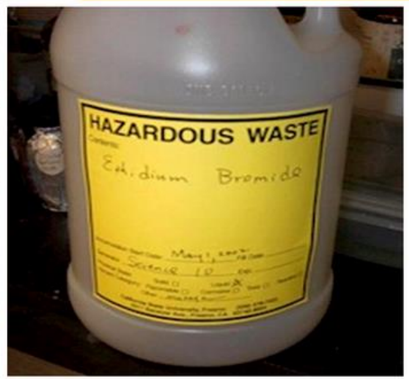
Examples are:
Newspaper, ferrous and non-ferrous scrap metals, corrugated cardboard, aluminum, tin cans, glass, papers, etc.,



SPECIAL WASTE

Special waste refers to household hazardous wastes.

Examples are:
Paints, thinner, household batteries, lead-acid batteries, spray canisters, bulky wastes, consumer electronics *(which refer to worn-out, broken and other discarded items),* white goods *(which refer to large worn-out or broken household appliances),* oil, tires, etc.,



RESIDUAL WASTE

Residual wastes are solid waste materials that are non-compostable and non-recyclable.

Examples are:
Sanitary napkins, disposable diapers, worn-out rugs, ceramics, candy wrappers/sachets, cartons which contain a plastic lining usually used for milk and juice containers, etc.,

HOUSEHOLD HEALTHCARE WASTE

Wastes that are contaminated with blood or other potentially infectious materials. These wastes can be dangerous to human health and the environment if not correctly disposed of.

Examples are:
Sharps, face masks, used syringes, gloves, expired pharmaceuital drugs, soiled dressinngs and bandages

SALIENT FEATURES OF REPUBLIC ACT OF 9003

CREATION OF:

- THE NATIONAL SOLID WASTE MANAGEMENT COMMISSION (NSWMC)
- THE NATIONAL ECOLOGY CENTER (NEC)
- THE SOLID WASTE MANAGEMENT BOARD IN EVERY PROVINCE, CITY, AND MUNICIPALITY IN THE COUNTRY

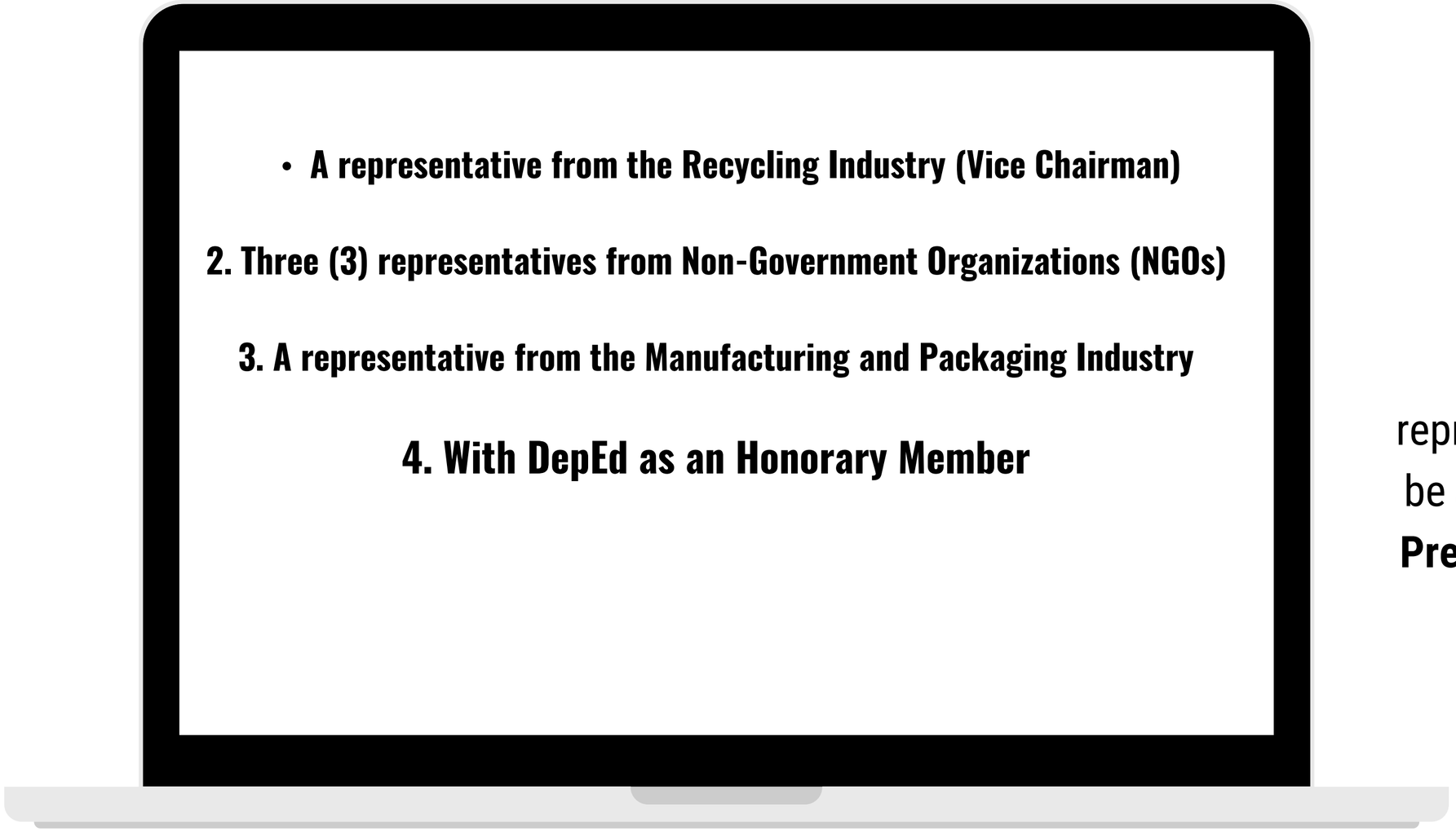
The National Solid Waste Management Commission (NSWMC)

- Created under the Office of the President
- EMB provides secretariat support
- Oversees the implementation of SWM plans
- Prescribe policies to achieve the objectives of the Act
- Composed of 17 members (14 from Government Sector and 3 from Private Sector)

GOVERNMENT SECTOR

DENR - Chairman
DILG
DOST
DOH
DTI
DA
MMDA
League of Provinces

NSWMC Members
(5 from the Private Sector)



Private sector representatives shall be **appointed by the President for a term of 3 years**

Other agencies involved in the campaign and implementation of R.A 9003

Local Government (city and municipality)

CHED

Office of the Press Secretary

Kapisanan ng mga Brodkaster ng Pilipinas

National Press Club

Philippine Press Institute

PNP

DND

PCG

Creation of National Ecology Center - Sec. 7 of RA 9003

There shall be established National Ecology Center which shall provide consulting, information, training, and networking services for the implementation of the provisions of this Act.

Facilitate a training and education in integrated ESWM

Establish & manage a solid waste mgt. information database, in coordination with the DTI & other concerned agencies.

Promote the development of a recycling market through the establishment of a national recycling network that will enhance the opportunity to recycle.

Provide or facilitate expert assistance in pilot modeling of solid waste mgt. facilities.

Develop, test, and disseminate model waste minimization and reduction auditing procedures for evaluating options.

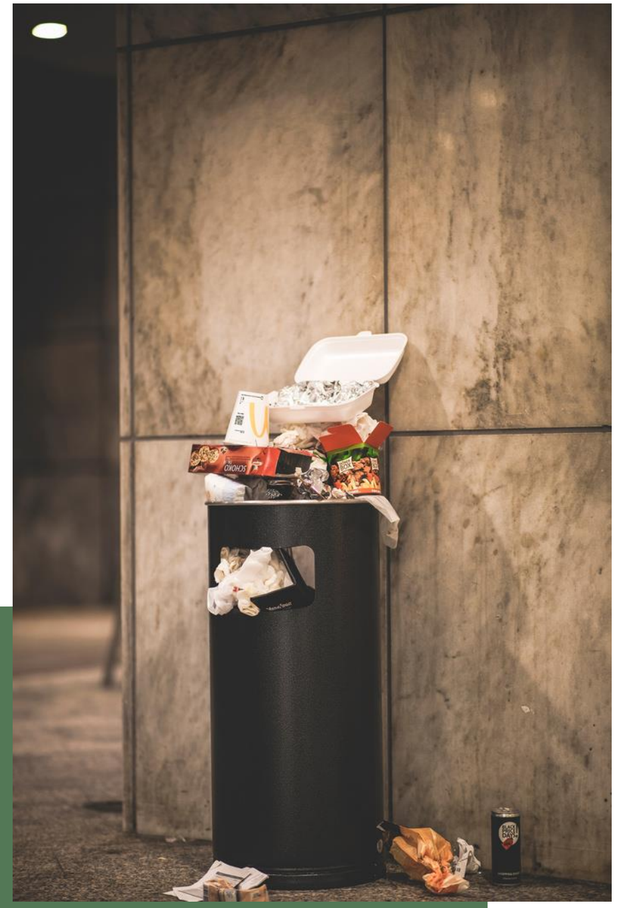
LOCAL SWM BOARDS

- **Creation of Provincial, City, and Municipal Solid Waste Management Boards**

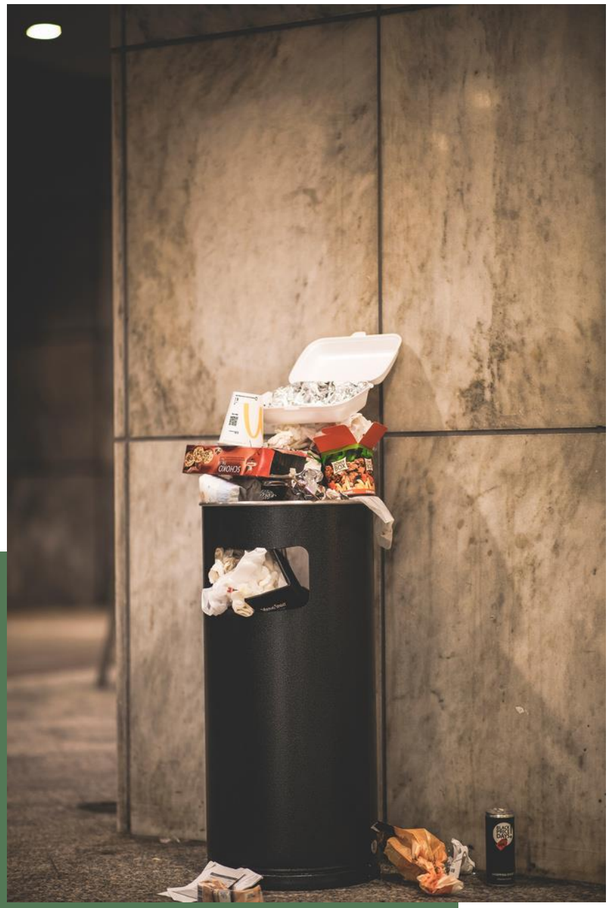
(Section 11 and 12 of RA 9003) that shall prepare, submit and implement a plan for the safe and sanitary management of solid waste generated in areas under its geographic and political coverage.

- **Creation of a Barangay Solid Waste Management Committee**

(Rule VI. Section 6, IRR of RA 9003) that shall, among others, Formulate a Solid Waste Management program consistent with the City/Municipal Solid Waste Management Plan, segregate and collect biodegradable, compostable, reusable wastes, and establish a Materials Recovery Facility



LGU 10-YEAR SWM PLANS - SEC. 16



The province, city, or municipality, through its local SWM boards, shall prepare its respective **10-year Solid Waste Management Plans** consistent with the National Solid Waste Management Framework.

Provided, that the waste management plan shall:

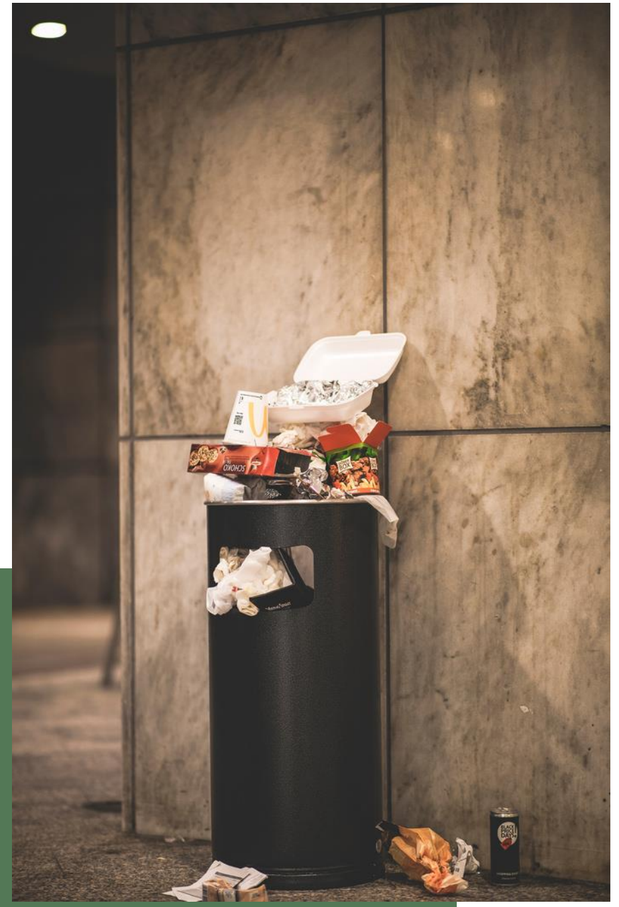
- be for the **re-use, recycling, and composting** of wastes generated in their respective jurisdictions; and

- ensure the efficient management of solid waste generated within its jurisdiction.

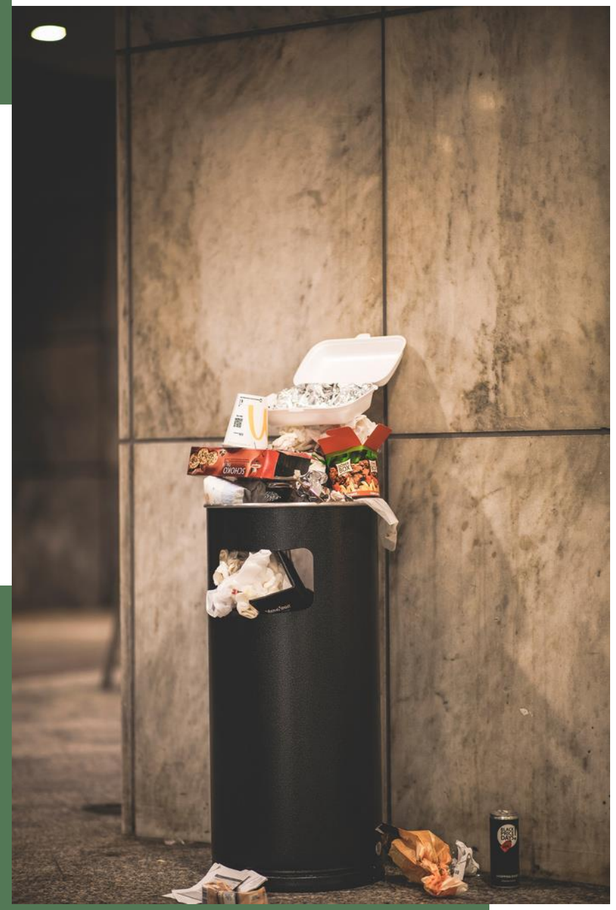
10-YEAR SWM PLANS

- contain all the components provided in Section 17 of this Act and a timetable for the implementation of the solid
- **be reviewed and updated every year** by the provincial, city, or municipal solid waste management board.

<u>All local government solid waste management plans shall be subjected to the approval of the Commission.</u>



MANDATORY SEGREGATION OF SOLID WASTE. – (SEC. 21)



The LGUs shall evaluate alternative roles for the public & private sectors in **providing collection services, type of collection system, or combination of systems, that best meet their needs:** Provided, that **segregation of waste shall be conducted primarily at the source** such as household, institutional, industrial, commercial and agricultural sources; Provided further, that wastes shall be segregated into the categories provided in Sec. 22 of this Act.

Setting minimum requirements to ensure systematic collection and transport of wastes and the proper protection of the health of garbage collectors. (Sec. 23 & 24).

- Personnel dealing directly w/collection of solid waste shall be equipped with **personal protective equipment.**
- Necessary **training** for the collectors & personnel to ensure the **safe & efficient collection & transport** of solid waste.
- The vehicle shall be designed to consider r**oad size, condition, and capacity.**
- The compartment should be covered to ensure the containment of waste while in transit.

Establishment of reclamation programs and Buy-Back Centers for recyclable and toxic materials - Sec. 28

NEC shall assist LGUs in establishing & implementing deposits or reclamation programs in coordination with manufacturers, recyclers, and generators to provide separate collection systems or convenient drop-off locations for recyclable materials and particularly for separated toxic components of the waste.

Promotion of eco-labeling in local products and services - Sec. 27

DTI shall formulate and implement a coding system for packaging materials and products to facilitate waste recycling and re-use (Sec. 27)

PROHIBITION ON NON-ENVIRONMENTALLY ACCEPTABLE PRODUCTS AND PACKAGING (NEAPP) - SEC. 30

No person owning, operating, or conducting a commercial establishment in the country shall sell or convey at retail or possess with the intent to sell or convey at retail any products that are placed, wrapped, or packaged in packaging which is not environmentally acceptable packaging.

ESTABLISHMENT OF LGU MATERIALS RECOVERY FACILITY - SEC. 32

- The facility shall be established in a barangay-owned or leased land or any suitable open space to be determined by the barangay through its Sanggunian.
- The barangay or cluster of barangays shall allocate a certain parcel of land (50-100sqm) for the MRF.
- The MRF shall receive mixed waste for final sorting, segregation, composting, and recycling.
- The resulting residual wastes shall be transferred to a long-term storage or disposal facility or sanitary landfill.

TWO (2) MAIN PHYSICAL COMPONENTS OF AN MRF

Eco-shed or warehouse

TWO (2) MAIN PHYSICAL COMPONENTS OF AN MRF

Composting area

TYPES OF COMPOSTING

Tire
Composting

Box Composting

Pot Composting

Jeans/Denim Composting

Jeans/Denim Composting

GLASS
METAL
PLASTIC
MRF

Does the operation of MRFs and controlled dumpsites require the issuance of an Environmental Compliance Certificate (ECC)?

The establishment of MRFs would not require an ECC considering the minimal negative impact of these facilities on the environment.

However, this does not apply to facilities processing more than 15 tons/day or producing 10,000 bags or more of compost (at 50 kg each) per year.

The operation of a controlled dumpsite does not also require an ECC. This is because of the interim nature of a controlled dumpsite and considering that its conversion from an open dumpsite is actually part of an environmental enhancement activity

PROHIBITION AGAINST THE USE OF OPEN DUMP - SEC.37

3 years after the effectivity of this act (February 16, 2004)

All open dumpsites should be closed or converted to controlled disposal sites in accordance with the guidelines set in Sec. 41; then, 5 years following the effectivity of this act that no controlled dumps shall be allowed.

Environmental Education

To incorporate ecological waste management in school systems at all levels

Agencies involved: DepEd, TESDA, CHED & DENR

INSTITUTIONAL STRUCTURE

National Solid Waste Management Commission
(Policy Making)

DENR-EMB-NSWMC/S
(Technical Support and Enforcement)

Ecological Solid Waste Management Act

Local Government Units
(Implementation)

Waste Generators/Citizens

Role of the DENR as lead agency of the NSWMC - Sec. 8

- Provide technical and other capability-building assistance and support to LGUs.
- Recommend policies to eliminate barriers to waste reduction programs.
- Issue rules and regulations.
- Exercise visitorial and enforcement powers to ensure strict compliance.

Role of the LGUs in Solid Waste Management - Sec. 10 of RA 9003

Section 10 of R.A. 9003, in its IRR, and in pursuant to the relevant provisions of R.A. No. 7160, otherwise known as the local Government Code, the Local Government Units (LGUs) shall be the primary responsible for the implementation and enforcement of the provisions of this Act within their respective jurisdiction

Visitorial Powers of the DENR - Sec. 9

- The Department (thru EMB) or its duly authorized representative shall have access to, and the right to copy therefrom, the records required to be maintained

- The Secretary or the duly authorized representative shall likewise have the right to enter the premises of any generator, recycler or manufacturer, or other facilities at any time to question any employee or investigate any fact, condition, or matter which may be necessary to determine any violation, or which may aid in the effective enforcement of this Act and its implementing rules and regulations.

Business Industry Role- Sec. 57

The Commission shall encourage commercial and industrial establishments, through appropriate incentives other than tax incentives to:

- initiate, participate, and invest in integrated EWM Projects
- manufacture of environment-friendly products
- introduce, develop, and adopt innovative processes
- recycle and reuse materials
- conserve raw materials and energy
- reduce waste
- prevent pollution
- undertake community activities to promote and
- propagate effective SWM practices

DISPOSAL FACILITIES

NAVOTAS SANITARY LANDFILL

6 CONTROLLED DUMPSITES IN NCR

- Catmon CDF- Sitio 6, Brgy Catmon, Malabon City
- Dona Petra CDF- Brgy Conception Uno Marikina City
- Lingunan CDF- Rubber Master Road, Brgy Lingunan, Valenzuela City
- Payatas CDF- Area 2, Brgy. Payatas, Quezon City
- Pulang Lupa CDF- Pulang Lupa Dos, Las Pinas City
- Navotas CDF- Brgy. Tanza, Navotas City

6 CONTROLLED DUMPSITES IN NCR

PAYATAS CONTROLLED DUMPSITE

LINGUNAN CONTROLLED DUMPSITE

CATMON CONTROLLED DUMPSITE

DONA PETRA CONTROLLED DUMPSITE

NAVOTAS CONTROLLED DUMPSITE

13 TRANSFER STATIONS IN NCR

- Caloocan TS- 162, Tullahan Road, Brgy. 162, Caloocan City
- Caloocan TS 185, Gumamela St., Brgy. 185, Caloocan City
- Las Pinas TS- Coastal Road, Pulang Lupa, Las Pinas City
- Lingunan TS- Rubbermaster Road, Brgy. Lingunan, Valenzuela City
- Mandaluyong TS-457 J.P. Rizal, Brgy. Vergara, Mandaluyong City - **CLOSED**
- Marikina TS/MRF- Gil Fernando Ave., Brgy. Sto. Nino, Marikina City
- Muntinlupa TS- Km 23, Lot 35G, West Service Road, Brgy. Cupang, Muntinlupa City
- Paranaque TS- Coastal Road, Paranaque Exil Toll Gate, Brgy. Don Galo, Paranaque City - **CLOSED**
- Pasay TS-240 C. Jose St., Malibay, Pasay City - **CLOSED**
- Pasig TS- Sandoval Ave., Brgy., Pinagbuhatan, Pasig City
- Pier 18 TS- Brgy. 105, Vitas, Tondo, Manila
- Taguig TS- C6 Road, Brg. Wawa, Taguig City
- Tugatog TS- #3 Dr. Lascano St., Brgy. Tugatog, Malabon City

13 TRANSFER STATIONS IN NCR

Pasay City Garbage Transfer Station

Pier 18 Transfer Station

Pasig City Garbage Transfer Station

Parañaque City Transfer Station

Taguig Transfer Station

Muntinlupa City Transfer Station

WASTE GENERATION BY CITY/MUNICIPALITY, 2022

City/Municipality/Brgy	No.of Population (Projected 2016)	Waste per Capita/kg/day	Waste Generation/tons/day 2017
Caloocan City-188	1,714,151	0.57	795.97
Las Pinas City-20	644,653	0.57	635.59
Makati City-33	569,134	0.79	409.05
Malabon City-21	362,335	0.83	515.81
City of Manila-897	1,860,613	0.61	1,949
Mandaluyong City-27	345,443	0.74	344.63
Marikina City-16	537,193	0.84	416.38
Muntinlupa City-9	516,447	0.54	109.55
Navotas City-14	249,113	0.30	132.41
Paranaque City-16	717,324	0.98	819.30

WASTE GENERATION BY CITY/MUNICIPALITY

City/Municipality/Brgy	No.of Population (Projected 2016)	Waste per Capita/kg/day	Waste Generation/tons/day
Pasay City-201	470,716	0.67	402.70
Pasig City-30	793,244	0.494	393.84
Pateros City-10	64,747	0.31	30.23
Quezon City-142	2,761,720	1.11	3,682.16
San Juan City-21	123,265	0.4	60.66
Taguig-28	781,263	0.27	246.56
Valenzuela-33	626,878	0.34	248.90
Total-17/1,706 Source: Approved LGUs 10 Year ESWM Plan		0.61	11,192.74

PROHIBITED ACTS

Violation	Fines/Penalties
Littering, throwing and dumping of waste matters in public places and water	P 300 – P 1,000 or Community service between 1 to 15 days
Open burning of solid waste	P 300 – P 1,000 or Imprisonment of 1 to15 days
Collection and transport of non-segregated or unsorted waste	P 1,000 but not more than P 3,000 or imprisonment of 15 days to 6 Months
Squatting in open dumpsite and landfills	
Open dumping, burying of biodegradable & non-biodegradable materials in flood prone areas	
Unauthorized removal of recyclable materials for collection by authorized persons	

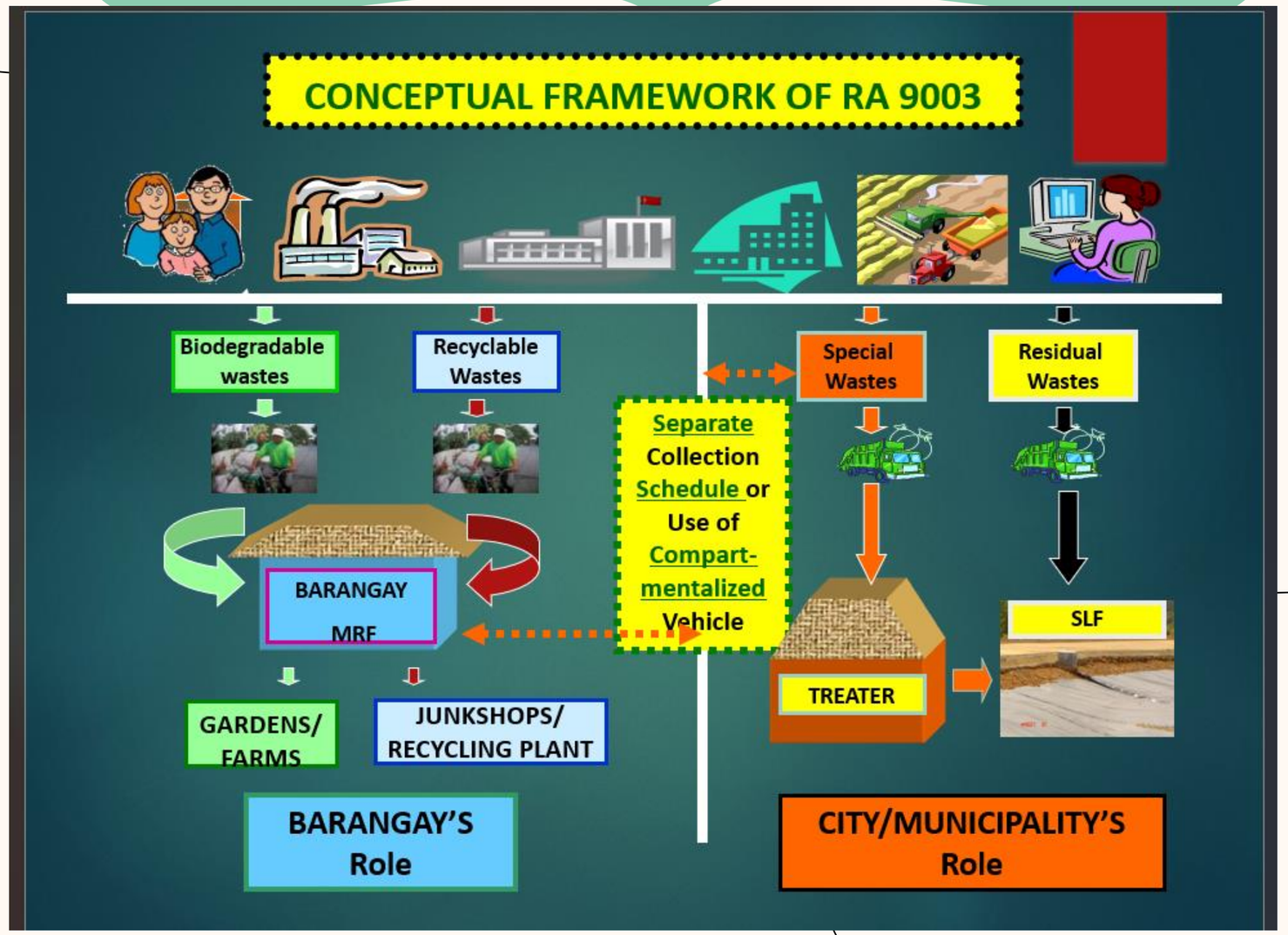
PROHIBITED ACTS

Violation	Fines/Penalties
Operation of open dumpsites	P 500,000.00 or Imprisonment of 1 to 3 years
Manufacture, distribution or use of non-environmentally acceptable packaging materials	
Importation of consumer products packaged in non-environmentally acceptable materials	
Importation of toxic wastes misrepresented as “recyclable” or “with recyclable content”	P 10,000 – P 200,000 or Imprisonment of 30 day to 3 years
Transportation and dumping in bulk of collected domestic, industrial, commercial and institutional wastes in areas other than centers or facilities prescribed by law	

PROHIBITED ACTS

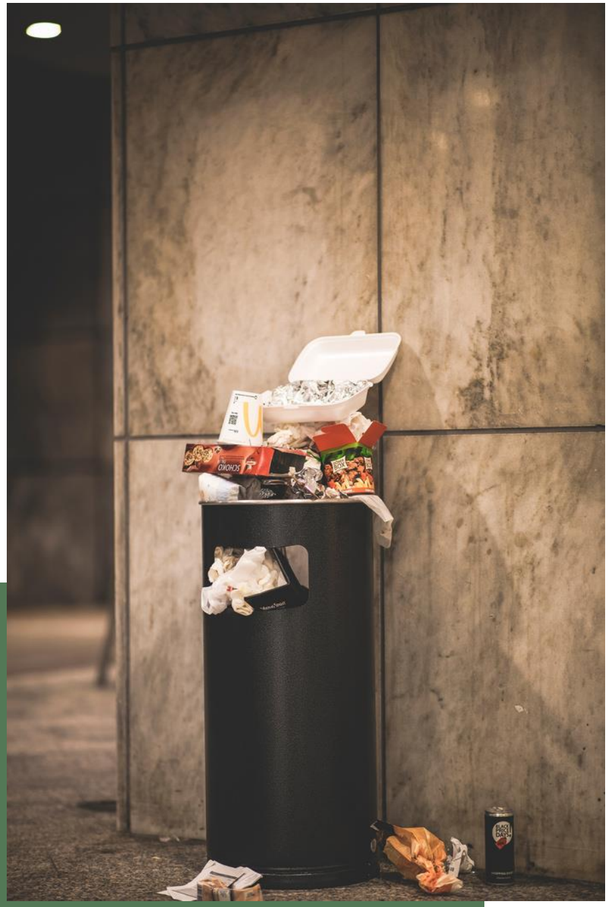
Violation	Fines/Penalties
Construction, expansion or operation of waste management facilities without an Environmental Compliance Certificate	P 100,000 – P 1M or Imprisonment of 1 to 6 years
Construction of any establishment within the 200 meters from open or controlled dump sites and sanitary landfills	
Construction or operation of landfills or any waste disposal facility within or near an aquifer, groundwater reservoir or watershed	

CONCEPTUAL FRAMEWORK OF RA 9003



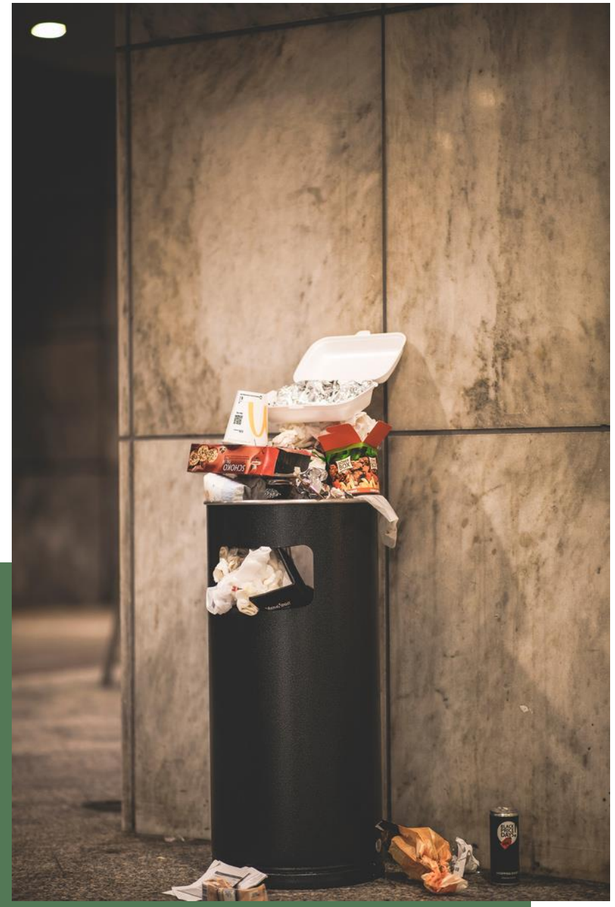
RESPONSIBILITIES UNDER A CENTRALIZED SYSTEM

HOUSEHOLD	BARANGAY (Village)	CITY
SEGREGATE; SELL RECYCLABLES; COMPOST ORGANICS	COLLECT SEGREGATED WASTES; SELL RECYCLABLES; COMPOST ORGANICS	COLLECT RESIDUAL/ SPECIAL WASTES



TYPICAL WASTE STREAM

ORGANICS		RECYCLABLE				RESIDUALS	SPECIAL		
FOR FEEDS TOCK	FOR COMPO STING	GLASS	PLASTIC	PAPER	METAL	PLASTIC BAGS/ PACKAGING COMPOSITES	SANIT ARY	TOXIC/ HAZARD OUS	BULKY



Waste Hierarchy

- Avoid Producing Waste
- Minimize the amount of waste produced
- Use Materials repeatedly
- Use Materials to make new products
- Compost Biodegradables
- Hazardous & Infectious Waste Treatment
- Ènergy Recovery
- Final Disposal in Sanitary Landfill

WHAT OFFICES/ESTABLISHMENTS CAN DO?

SETTING UP YOUR SWM PROGRAM

Preparation of Policy and Organization

Secure management policy and guidelines

- Board Resolution
- Memorandum Circular
- Building Rules
- Sanctions and Rewards

SETTING UP YOUR SWM PROGRAM

Form a strong lead group (SWAT)

- Assign a program coordinator and support staff
- Must be part of the job description, a clear definition of functions
- Handles day-to-day program implementation

2. CONDUCT SITUATIONAL ANALYSIS

- WASTE AUDIT AND CHARACTERIZATION

- SET MINIMUM REQUIREMENTS

BIO BIODEGRADABLES

RECYCLABLES

PAPER

PLASTICS

GLASS

METALS

This chart gives representative examples and is not meant to be an exhaustive list.
For more details, refer to the NSWMC website for the updated approved list of recyclables.

RESIDUALS

Recyclables not salable in local junk shops or recycling markets should be classified under "residuals with potential for recycling."

The volume of residual waste that ends up in our landfills can be greatly reduced by treatment technologies.

RESIDUALS with POTENTIAL FOR RECYCLING

RESIDUALS for DISPOSAL

WACS (Waste Analysis and Characterization Study) SOLID WASTE CATEGORIES

SPECIAL WASTE

HAZARDOUS WASTE

Hazardous wastes are covered under Republic Act 6969 (Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990) and its related policies, such as Department Administrative Order 2013-22. Industrial, commercial and institutional establishments that generate hazardous waste must be registered with DENR-EMB and obtain the necessary permits.

HEALTHCARE WASTE from HOSPITALS

Healthcare waste must be properly disposed of by hospitals, clinics and other health institutions. Guidelines for their proper disposal are covered by the Healthcare Waste Management Manual published by the Department of Health.

BULKY WASTE

Bulky wastes require separate hauling arrangements with the Local Government Units (for Households) or Contracted Parties (for Commercial, Industrial, and Institutional Sources.) Proper treatment or disposal of waste must be ensured.

A standardized and mandatory guide for Philippine Local Government Units and Solid Waste Management Practitioners based on the WACS Guidelines approved by the National Solid Waste Management Commission, Office of the President, Republic of the Philippines.

JICA IGES Institute for Global Environmental Strategies

SEGREGATION MUST CONFORM WITH THE BUILDING STANDARDS

ENSURE EFFICIENT SEGREGATION OF MATERIALS

Recyclables

Residual

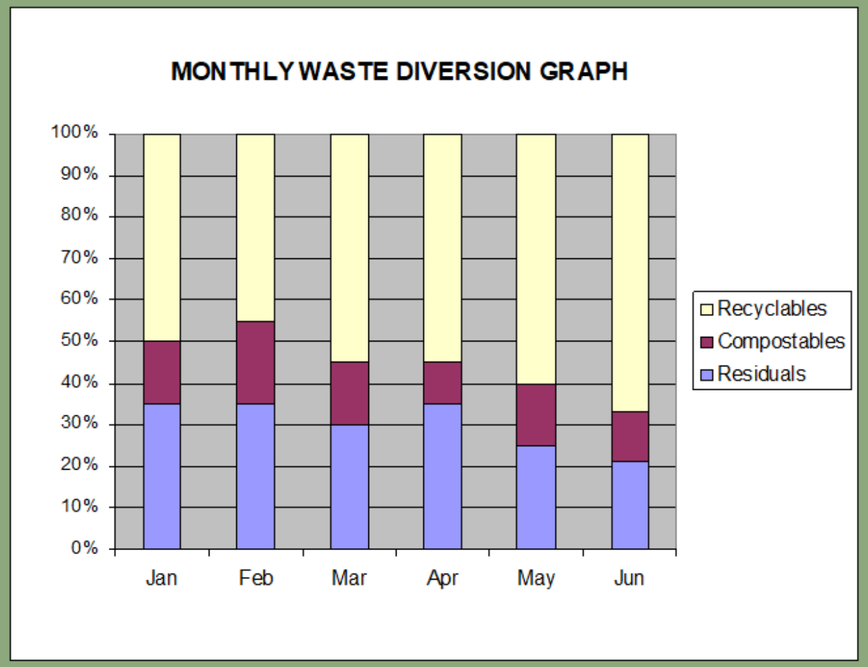
Special Wastes

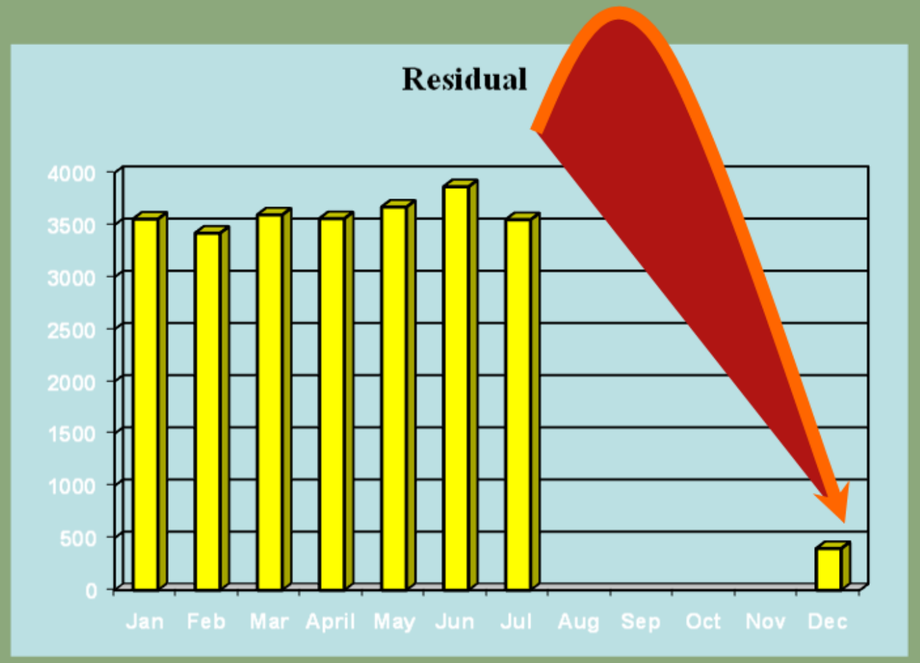
Compostables

3. FORMULATE A PLAN

Set your goals

- % reduction of residual waste – waste avoidance plan
- % increase in recovery of recyclables – waste diversion plan
- % compliance of tenants/occupants – IEC plan
- % decrease in solid waste handling cost – maximum use of resources

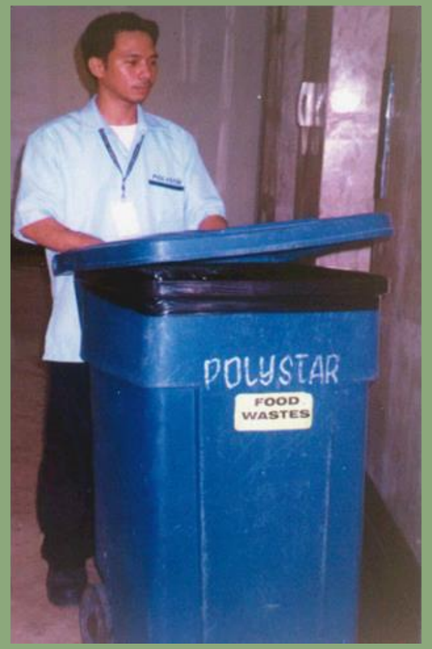




4. DRY RUN AND IMPLEMENT THE PLAN

- **Adopt an appropriate segregation scheme**

- **Devise a systematic collection of segregated materials**



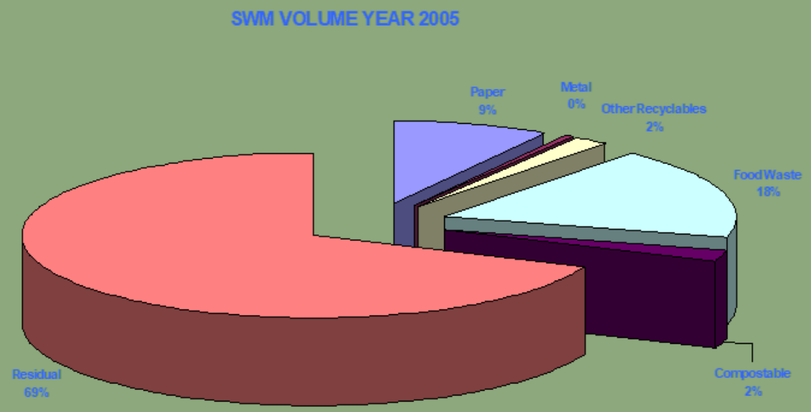
4. DETERMINE DISPOSAL OF SEGREGATED MATERIALS

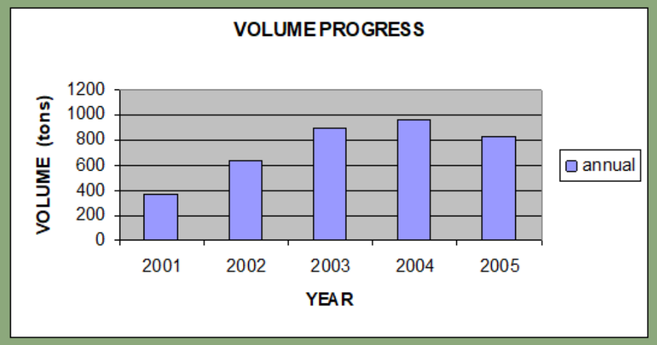
4. CONDUCT INFORMATION EDUCATION CAMPAIGN

5. MONITORING AND EVALUATION

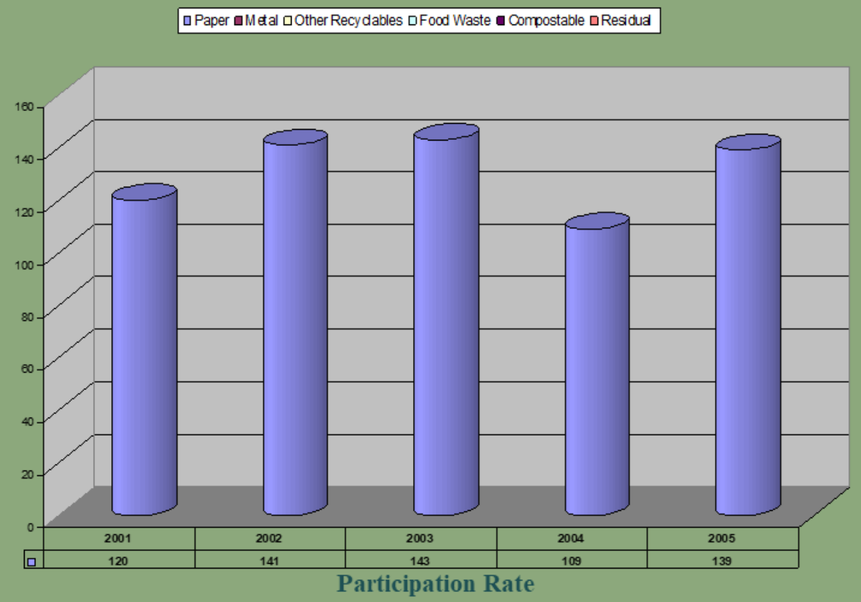
SOLID WASTE MANAGEMENT PROGRAM				
MONTHLY COLLECTION REPORT OF RECYCLABLE MATERIALS				
For the month of _____				
Name of Building: _____				
MATERIALS	Volume (kilos)	Unit Price	Amount	
A. Recyclables				
Bottles				
a. softdrinks				
b. beer				
c. catsup/patis/vinegar				
d. medicine				
e. bubog				
f. others				
Plastics				
a. gallon				
b. spoon/fork/cup				
c. bags				
d. PET				
e. hard plastic				
Paper				
a. continuous form				
b. white				
c. waste				
d. newspaper & magazine				
e. kraft/cartons				
Metals				
a. aluminum cans				
b. hard aluminum				
c. aluminum jalousy				
d. scrap metal				
Others				
Car battery				
Ballast				
Printer ink jet				
Total Recyclables				%
B. Food Waste				%
C. Residual Waste				%
D. Special Waste				%
Grand Total				100%
Accomplished by:	_____			
Designation:	_____			
Date:	_____			

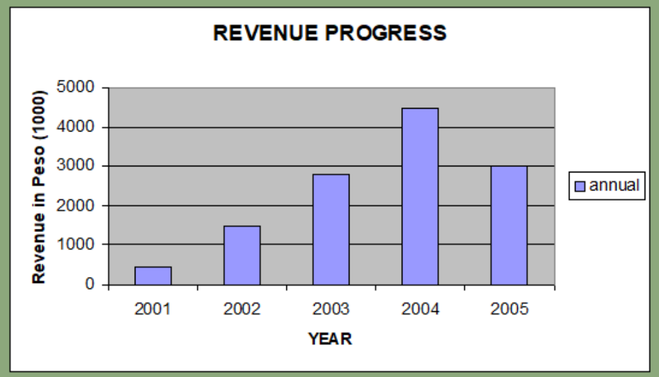
5. PREPARE REPORTS





2001	2002	2003	2004	2005
363 tons	635 tons	891.2 tons	965 tons	836.4 tons





2001	2002	2003	2004	2005
P0.432M	P1.5M	P2.796M	P4.493M	P3.018M

The problem with waste management is not the system, but the BEHAVIOR!

Lack of Political Will

Lack of Discipline & Wrong Attitude

Lack of Implementation of the LAW

Inadequate IEC down to the Barangay level

CAUSES AND EFFECT

Strong Political Will

Discipline & Right Attitude

Adequate IEC down to the Barangay level

Strict Implementation of the LAW

CONCLUSION

Philippines generates approximately 30,000 tons of solid wastes per day that threatens the health and safety of the people and the environment. It emits about 675 tons of methane everyday into the atmosphere.

As the population increases, the amount of waste generated also rises. Solid waste decomposition in landfills produces methane (CH4). It is the second most common greenhouse gas, 21 times the potency of carbon dioxide.
By reducing waste generation through proper management, the amount of organic waste sent to landfills decreases, leading to lower methane emissions and reduced contribution to climate change.

Effective solid waste management necessitates a two-pronged approach: behavioral change and political will. While behavioral change emphasizes individual responsibility and conscious consumption habits, political will is essential for creating an enabling environment through policy, regulation and investment.

By combing these efforts, we can create a cleaner and more sustainable future for generations to come.

END OF PRESENTATION

THANK YOU!

MARIA CRISTINA F. EVA, ENP

"INVEST IN OUR PLANET"