Republic of the Philippines
Department of Environment and Natural Resources
Visayas Avenue, Diliman, Quezon City 1116
Tel Nos. 9296626 to 29 ; 9296633 to 35
Website http://www.denr. gov.ph/ Emailweb@denrgov.ph

MEMORANDUM

TO : **THE DIRECTOR, EMB**
In concurrent capacity as OIC, Assistant Secretary
Luzon and Visayas

ALL EMB REGIONAL DIRECTORS

FROM : **THE UNDERSECRETARY**
Field Operations Luzon & Visayas and Environment

SUBJECT : **DATA OF 2015 AND 2020 FOR THE WASTE SECTOR FROM INDUSTRIES GREENHOUSE GAS (GHG) INVENTORY**

DATE : FEB 0 8 2023

This pertains to the Memorandum dated 06 February 2023 from Undersecretary Analiza Teh regarding the aforementioned subject.

Their Office is seeking our assistance in collecting the data for the waste sector for 2015 and 2020 from provincial governments in your respective regions. Kindly refer to the attached template letter for your reference. Take note of the deadline which is on or before 24 February 2023

For consideration.

ATTY. JUAN MIGUEL T. CUNA, *CESO I*

c.c.

Office the Undersecretary
Finance, Information System and Climate Change
ccitsd@denr.gov.ph

MEMO NO. 2023-103

Republic of the Philippines
Department of Environment and Natural Resources
Tel Nos. 929-6626 to 29; 929-6633 to 35
926-7041 to 43; 929-6252; 929-1669
Website: http://www.denr.gov.ph / E-mail: web@denrgov.ph

MEMORANDUM

FOR : **The Undersecretary**
Field Operations - Luzon, Visayas and Environment

FROM : **The Undersecretary**
Finance, Information Systems and Climate Change

SUBJECT : **DATA NEEDS OF THE WASTE SECTOR FOR THE CONDUCT OF 2015 AND 2020 GREENHOUSE GAS (GHG) INVENTORY**

DATE : February 6, 2023

This refers to the ongoing development of the 2015 and 2020 National Greenhouse Gas (GHG) Inventory and the implementation of Executive Order 174, series of 2014 on the Institutionalization of Philippine Greenhouse Gas Inventory Management and Reporting System.

The DENR serves as the lead agency to conduct, document and monitor GHG emissions of the Industrial Processes and Product Use (IPPU) and Waste sectors pursuant to Executive Order No. 174, Series of 2014. The EO provides for the institutionalization of the Philippine Greenhouse Gas Inventory Management and Reporting System that aims to support better planning, archiving, reporting, monitoring and evaluating of greenhouse gas (GHGI) emissions and sources.

The Philippine government is preparing its reporting/communication requirements to the United Nations Framework Convention on Climate Change (UNFCCC). Specifically, this will help us develop and implement the policies and measures under the Nationally Determined Contribution (NDC). Such reports to the UNFCCC entails that the GHG inventories be prepared, in consideration of the UNFCCC reporting timeframes.

In view of this, may we seek assistance from your office in collecting the data for 2015 and 2020 for the Waste Sector from Provincial Governments thru the DENR Regional Offices. Kindly refer to the attached List of the Data Needs per Category and proposed template letter to the provincial governors.

We would greatly appreciate if we can receive the requested data **on or before 24 February 2023**. For any clarification and submissions, kindly contact us through our Climate Change Service – Climate Change Information and Technical Support Division at ccitsd@denr.gov.ph.

For your consideration, please.

ATTY. ANALIZA REBUELTA-TEH

LIST OF THE DATA NEEDS OF THE WASTE SECTOR PER CATEGORY

a. Solid Waste sub-sector

Categories	Data Needs
Solid Waste Disposal Site Disaggregated (per Disposal Site) (For years: 2010 – 2020; priority on 2015 and 2020)	Amount of municipal solid waste generation (metric tons/year)
	Amount of industrial solid waste generation (metric tons/year)
	Solid Waste Disposal Site 1
	SWDS Classification (RA 9003)
	Amount of waste entering disposal site (metric tons per year)
	% by weight of generated municipal solid waste going to SWDS
	% by weight of generated industrial solid waste going to SWDS
	Composition of waste entering disposal site, %
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Plastics
	- Glass
	- Metal
	- Residual waste
	- Hazardous waste
	- Healthcare waste
	- Bulky waste
	Methane recovery at SWDS
	Oxidation factor (status of soil or eco-efficient soil cover)
Solid Waste Disposal Site Aggregated (per City/Municipality/Province) (For years: 2010 – 2020; priority on 2015 and 2020)	Population
	Per capita waste generation (metric tons/year)
	% by weight of generated municipal solid waste going to Solid Waste Disposal Sites (SWDSs)
	% by weight of municipal solid waste delivered to different types of SWDS
	- un-managed shallow
	- un-managed deep
	- managed shallow
	- managed deep
	- uncategorized
	Amount of industrial solid waste generation (metric tons/year)
	% by weight of generated industrial solid waste going to SWDS
	% by weight of industrial solid waste delivered to different types of SWDS
	- un-managed shallow
	- un-managed deep
	- managed shallow
	- managed deep
	- uncategorized
	Composition of waste entering disposal sites, %
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Plastics
	- Glass
	- Metal
	- Residual waste
	- Hazardous waste
	- Healthcare waste
	- Bulky waste
	Methane recovery at SWDS
	Oxidation factor (status of soil or eco-efficient soil cover)
Biological Treatment of Waste (Composting) (for 2015 and 2020)	Amount (tons) waste composted
	Fractions of waste composted
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Residual waste
	Other waste composted (e.g. healthcare waste)

Biological Treatment of Waste (Anaerobic Digestion) (for 2015 and 2020)	Amount (tons) waste treated
	Fractions of waste treated
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Residual waste
	Other waste composted (e.g. healthcare waste)
Incineration (per Facility) For 2015 and 2020	Amount (tons) waste incinerated
	Fractions of waste incinerated
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Plastics
	- Glass
	- Metal
	- Residual waste
	Other waste incinerated
	- Liquid fossil
	- Healthcare
	- Hazardous
Open Burning (per Province) For 2015 and 2020	Population
	% population practicing open burning
	frequency of open burning (per week)
	Amount waste open-burned (kg/week)
	Fractions of waste open-burned
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Plastics
	- Glass
	- Metal
	- Residual waste
	Other waste (e.g., healthcare) open-burned

b. Wastewater sub-sector

Domestic Wastewater Data Needs

Region:	Population	
No. of cities/municipalities:	2015	2020
Urban population		
Rural population		
Complete Name of Water Concessionaire/Water Utility with Wastewater Treatment Facility/System 1		
Cities/Municipalities Covered by the Water Utility		
Is the Water Concessionaire/Utility managed by LGU? (Yes or No)		
Is industrial wastewater also discharged in domestic sewers? (Yes, No or N/A)		
Type of Wastewater Treatment (Sewerage or Septage?)		
Specific wastewater treatment technology used [Centralized, aerobic treatment plant (Specify if well-managed or not well managed or overloaded);Anaerobic digester for sludge; Anaerobic reactor; Anaerobic lagoon (Specify if shallow (Depth less than 2 meters) or deep (Depth more than 2 meters), Septic System. If other, please specify]		
Is the Water Concessionaire/Utility managed by LGU? (Yes or No)		
Is industrial wastewater also discharged in domestic sewers? (Yes, No or N/A)		
Details of Contact Person (Complete Name, Position, Email Address and Telephone Number)		
2006 IPCC GL Data Requirements	2015	2020
Total population of the Cities/Municipalities Covered by the Water Utility/Facility		
Population served by the wastewater treatment facility		
Wastewater treated (cu.m/year)		
Total organic loading in wastewater (kg BOD/year)		
Per capita organic loading (kg BOD/capita/year)		
Sludge removed (kg BOD/year)		
Influent BOD (mg/L)		
Effluent BOD (mg/L)		
Amount of Methane Recovered/Flared (kg methane/year)		

___ February 2023

Governor_____
Provincial Government of _____

SUBJECT : **Data Needs of the Waste Sector for the conduct of 2015 and 2020 Greenhouse Gas (GHG) Inventory**

Dear **Gov.** _____:

Republic of the
Department of Environment
Tel Nos. ____
Website: ____ / E-n

This refers to the ongoing development of the 2015 and 2020 National Greenhouse Gas (GHG) Inventory and to the implementation of Executive Order 174, series of 2014 on the Institutionalization of Philippine Greenhouse Gas Inventory Management and Reporting System.

The DENR serves as the lead agency to conduct, document and monitor GHG emissions of the Industrial Processes and Product Use and Waste sectors (solid waste and wastewater) pursuant to Executive Order No. 174, Series of 2014. The EO provides for the institutionalization of the Philippine Greenhouse Gas Inventory Management and Reporting System that aims to support better planning, archiving, reporting, monitoring and evaluating of GHG Inventory emissions and sources and to enable the country to transition towards a climate-resilient pathway for sustainable development.

The Philippine government is preparing its reporting/communication requirements to the United Nations Framework Convention on Climate Change (UNFCCC). Specifically, this will help us develop and implement the policies and measures under the Nationally Determined Contribution (NDC). Such reports to the UNFCCC entail that the GHG inventories be prepared, in consideration of the UNFCCC reporting timeframes.

Data gathering and consolidation is a critical, as well as the most challenging part in the GHG inventory process which needs improvement according to the 2010 GHG Inventory Exercise conducted in 2018. LGUs are the main implementers and data sources for the solid waste and wastewater sub-sectors.

With this, may we request the needed data requirements for the Waste Sector from the Provincial level for the years 2015 and 2020. Kindly see attached Annex for the list of the data needs per category for the 2015 and 2020 National Greenhouse Gas (GHG) Inventory.

We would greatly appreciate if we can receive the requested data **on or before 17 February 2023.** After the data collection, the data needed will still undergo consolidation, cleansing and analysis before subjecting to calculations. Please submit through the following: DENR Climate Change Service – Climate Change Information and Technical Support Division at ccitsd@denr.gov.ph, aamagalang@denr.gov.ph, roabadjr@denr.gov.ph and lcsilva@denr.gov.ph, and DENR Region _ at email address_____

We highly appreciate your positive feedback on this request.

Very truly yours,

_____

DENR Regional Executive Director

Annex
WASTE SECTOR DATA NEEDS

a. Solid Waste sub - sector

Categories	Data Needs
Solid Waste Disposal Site Disaggregated (per Disposal Site) (For years: 2010 – 2020; priority on 2015 and 2020)	Amount of municipal solid waste generation (metric tons/year)
	Amount of industrial solid waste generation (metric tons/year)
	Solid Waste Disposal Site 1
	SWDS Classification (RA 9003)
	Amount of waste entering disposal site (metric tons per year)
	% by weight of generated municipal solid waste going to SWDS
	% by weight of generated industrial solid waste going to SWDS
	Composition of waste entering disposal site, %
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Plastics
	- Glass
	- Metal
	- Residual waste
	- Hazardous waste
	- Healthcare waste
	- Bulky waste
	Methane recovery at SWDS
	Oxidation factor (status of soil or eco-efficient soil cover)
Solid Waste Disposal Site Aggregated (per City/Municipality/Province) (For years: 2010 – 2020; priority on 2015 and 2020)	Population
	Per capita waste generation (metric tons/year)
	% by weight of generated municipal solid waste going to Solid Waste Disposal Sites (SWDSs)
	% by weight of municipal solid waste delivered to different types of SWDS
	- un-managed shallow
	- un-managed deep
	- managed shallow
	- managed deep
	- uncategorized
	Amount of industrial solid waste generation (metric tons/year)
	% by weight of generated industrial solid waste going to SWDS
	% by weight of industrial solid waste delivered to different types of SWDS
	- un-managed shallow
	- un-managed deep
	- managed shallow
	- managed deep
	- uncategorized
	Composition of waste entering disposal sites, %
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Plastics

	- Glass
	- Metal
	- Residual waste
	- Hazardous waste
	- Healthcare waste
	- Bulky waste
	Methane recovery at SWDS
	Oxidation factor (status of soil or eco-efficient soil cover)
Biological Treatment of Waste (Composting) (for 2015 and 2020)	Amount (tons) waste composted
	Fractions of waste composted
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Residual waste
	Other waste composted (e.g. healthcare waste)
Biological Treatment of Waste (Anaerobic Digestion) (for 2015 and 2020)	Amount (tons) waste treated
	Fractions of waste treated
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Residual waste
	Other waste composted (e.g. healthcare waste)
Incineration (per Facility) For 2015 and 2020	Amount (tons) waste incinerated
	Fractions of waste incinerated
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Plastics
	- Glass
	- Metal
	- Residual waste
	Other waste incinerated
	- Liquid fossil
	- Healthcare
	- Hazardous
Open Burning (per Province) For 2015 and 2020	Population
	% population practicing open burning
	frequency of open burning (per week)
	Amount waste open-burned (kg/week)
	Fractions of waste open-burned
	- Kitchen waste
	- Garden waste
	- Agricultural waste
	- Livestock waste
	- Paper
	- Plastics
	- Glass
	- Metal
	- Residual waste
	Other waste (e.g., healthcare) open-burned

b. Wastewater sub-sector

Domestic Wastewater Data Needs

Region:	Population	
No. of cities/municipalities:	2015	2020
Urban population		
Rural population		
Complete Name of Water Concessionaire/Water Utility with Wastewater Treatment Facility/System 1		
Cities/Municipalities Covered by the Water Utility		
Is the Water Concessionaire/Utility managed by LGU? (Yes or No)		
Is industrial wastewater also discharged in domestic sewers? (Yes, No or N/A)		
Type of Wastewater Treatment (Sewerage or Septage?)		
Specific wastewater treatment technology used [Centralized, aerobic treatment plant (Specify if well-managed or not well managed or overloaded);Anaerobic digester for sludge; Anaerobic reactor; Anaerobic lagoon (Specify if shallow (Depth less than 2 meters) or deep (Depth more than 2 meters), Septic System. If other, please specify]		
Is the Water Concessionaire/Utility managed by LGU? (Yes or No)		
Is industrial wastewater also discharged in domestic sewers? (Yes, No or N/A)		
Details of Contact Person (Complete Name, Position, Email Address and Telephone Number)		
2006 IPCC GL Data Requirements	2015	2020
Total population of the Cities/Municipalities Covered by the Water Utility/Facility		
Population served by the wastewater treatment facility		
Wastewater treated (cu.m/year)		
Total organic loading in wastewater (kg BOD/year)		
Per capita organic loading (kg BOD/capita/year)		
Sludge removed (kg BOD/year)		
Influent BOD (mg/L)		
Effluent BOD (mg/L)		
Amount of Methane Recovered/Flared (kg methane/year)		

Industrial Wastewater Data Needs

INDUSTRY 1 (Select from drop-down list below)		
Dairy Products		
Name of Company/Establishment		
Location of Establishment		
Details of Contact Person (Complete Name, Position, Email Address and Telephone Number)		
Remarks (Data Uncertainty/Assumptions)		
DATA NEEDS (Based on the 2006 IPCC Guidelines)	**2015**	**2020**
Total industry product (tons product/year)		
Wastewater generated (m3/ton product)		
Influent Chemical Oxygen Demand (COD) (kg/m3)		
Wastewater treatment technology used (Select from dropdown list. Include all treatment technology/system use)		
If other, please specify		
Sludge Removed (kg COD/year)		
Methane Recovered (kg CH4/year)		