

INSTITUTIONALIZING THE PHILIPPINE GREENHOUSE GAS INVENTORY MANAGEMENT AND REPORTING SYSTEM

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Philippine Context

In 2017, the Philippines emitted 128 million metric tons of CO₂ equivalent (Mt CO₂e), approximately 0.33% of the world total

Global Climate Risk Index (CRI) ranks the Philippines among countries most affected in terms of fatalities and economic losses

GHG inventories:

- Can serve as a decision support tool that would enable the Government to understand trends in emissions and removals
- A comprehensive database of GHG emissions and removals would facilitate tracking and monitoring the country's progress on its climate change mitigation policy goals.

Philippines' First and Second National Communications to the UNFCCC

1994 NATIONAL GHG INVENTORY²

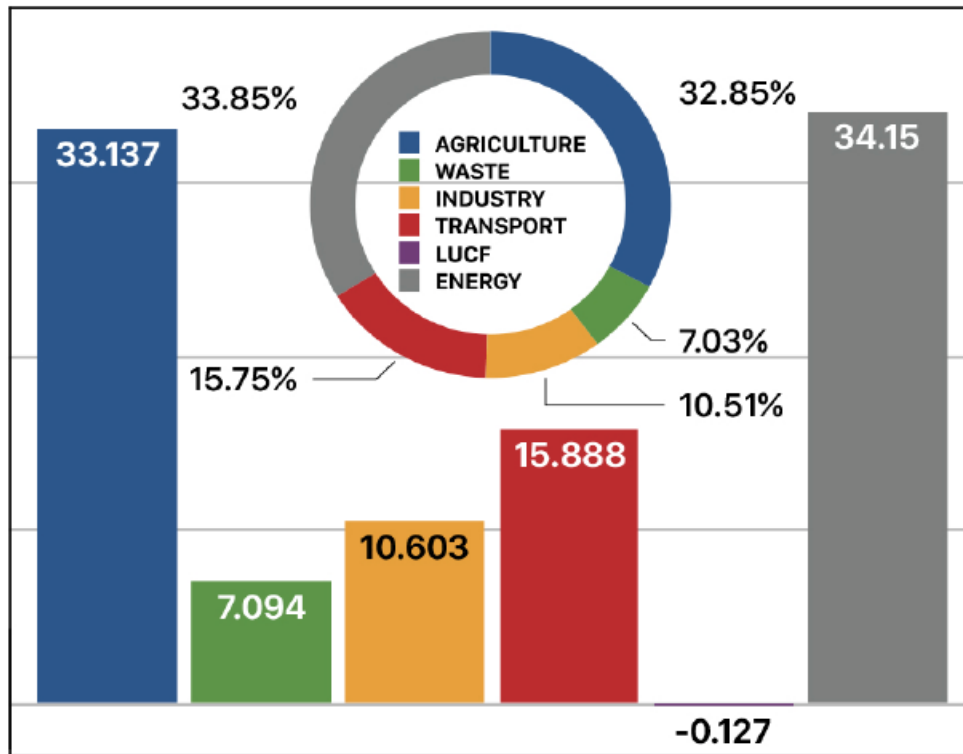
All values are in million metric tons of CO₂ equivalent (Mt CO₂e).

-0.127 Mt CO₂e

LUCF Net Uptake

100.87 Mt CO₂e

Non-LUCF Emissions



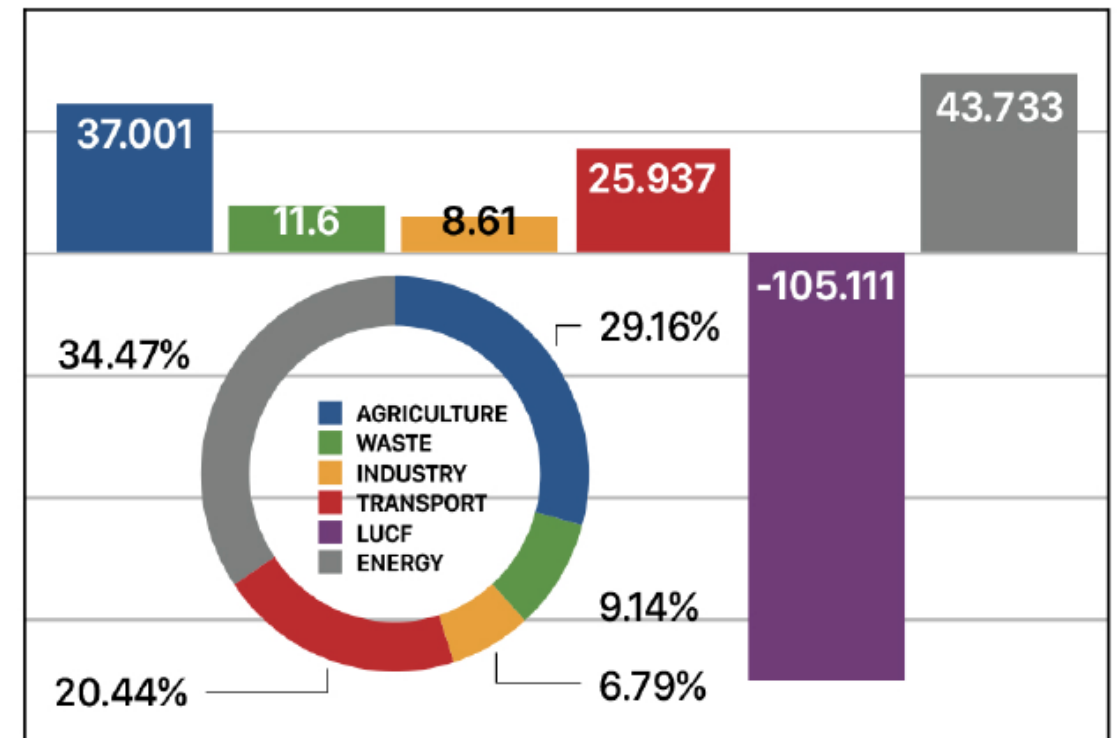
2000 NATIONAL GHG INVENTORY²

-105.11 Mt CO₂e

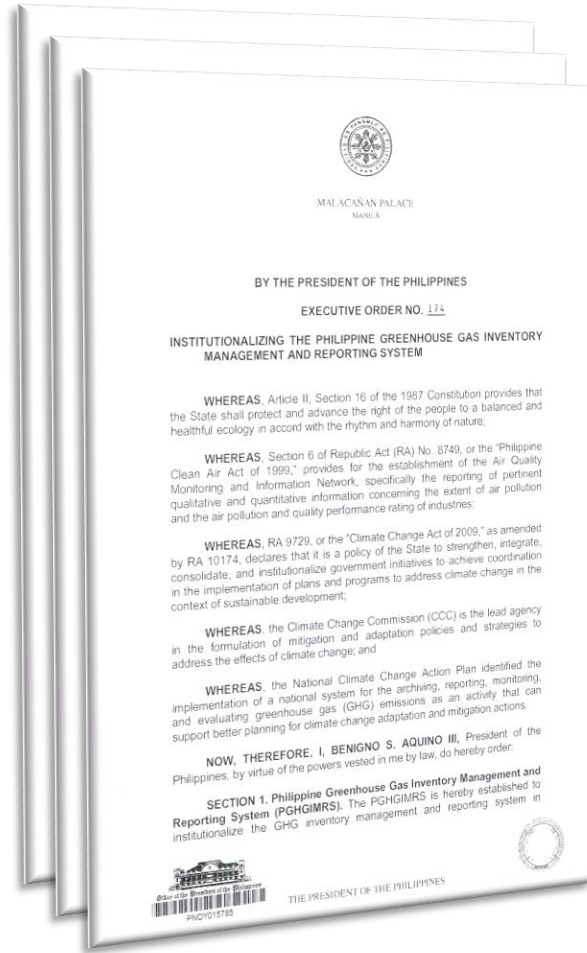
LUCF Net Uptake

126.88 Mt CO₂e

Non-LUCF Emissions



Executive Order 174: Institutionalization of the National GHG Inventory



To institutionalize the GHG inventory management and reporting system in relevant government agencies to enable the country to transition towards a climate-resilient pathway for sustainable development

Executive Order 174: Institutionalization of the National GHG Inventory



CCC – Overall lead

- Provide direction and guidance in the accounting and reporting
- Develop a system for archiving, reporting, monitoring, and evaluating
- Provide and facilitate continuous capacity building

Lead agencies to conduct and monitor sector specific GHG inventory; report GHG inventory to the CCC based on agreed reporting scheme

EO 174 LEAD AGENCY	SECTOR
Department of Environment and Natural Resources (DENR)	Waste, Industry, Forestry and Other Land Use
Department of Energy (DOE)	Energy
Department of Transportation (DOTr)	Transport subsector
Department of Agriculture (DA) and the Philippine Statistics Authority (PSA)	Agriculture

Implementation of the Executive Order 174

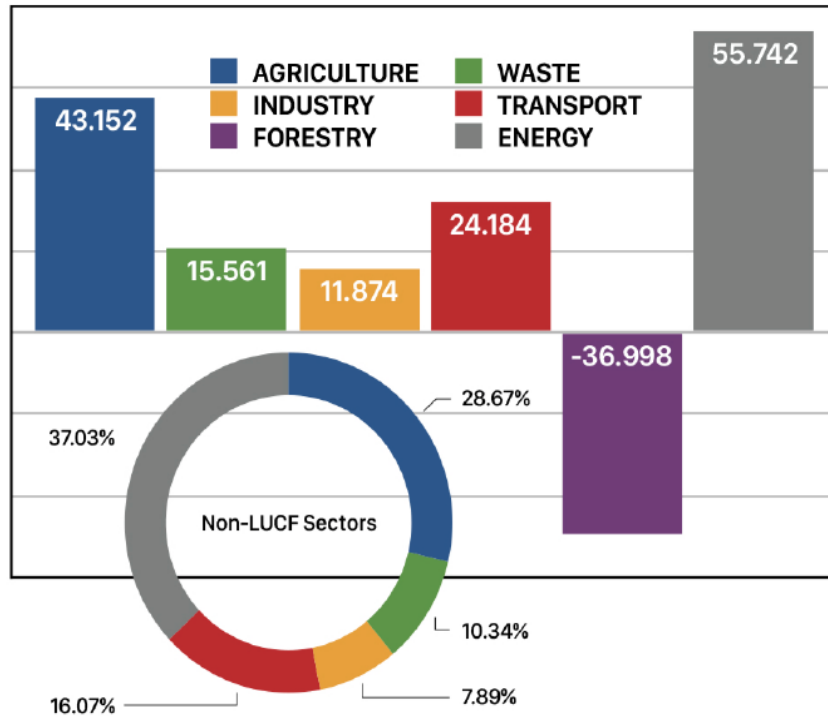
Agency	Sector	DO/SO	Description	Approval Date
DENR-EMB	Waste, Industry	SO No. 2016-297	Creation of the EMB GHGI Team for the Implementation of EO 174 Institutionalizing the PGHGIMRS	July 14, 2016
DENR-FMB	Forestry and Other Land Use	SO No. 2016- 154	Creation of a TWG Integrating Work in the Preparation of Technical and Reporting Requirements to all Forest-related UNFCCC-COP Decisions and Agreements	May 27, 2016
DOE	Energy	DO No. 2018-03-005	Institutionalization of the GHG Inventory Team of the Energy Sector	March 27, 2018
<u>DOTr</u>	Transport	DO No. 2018-001	Institutionalization of the GHG Inventory Team of the Transport Sector (Air, Rail, Water, and Road)	January 10, 2018
PSA	Agriculture	SO No. 2017-10NS-1499	Reconstitution of the GHG Inventory Team	October 4, 2017

Preliminary Results of the 2010 National GHG Inventory

2010 NATIONAL GHG INVENTORY¹

All values are in million metric tons of CO₂ equivalent (Mt CO₂e).

-36.998 Mt CO₂e **150.51 Mt CO₂e**
LUCF Net Uptake *Non-LUCF Emissions*



Land-use change and forestry (LUCF) sector is a net sink (-37 Mt CO₂e).

Energy, Agriculture and Transport sectors account for ~82% of total non-LUCF emissions.

Sample Data Tree: Agriculture Sector

Categories	Activity Data	Possible Data Sources
3 - Agriculture, Forestry, and Other Land Use		
3.A - Livestock		
3.A.1 - Enteric Fermentation		
3.A.1.a - Cattle	Animal Population	PSA, BAI, PCC, DA-Livestock Development Council, FAOStat
3.A.1.b - Buffalo	Animal Population	PSA, BAI, PCC, DA-Livestock Development Council, FAOStat
3.A.1.c - Sheep	Animal Population	PSA, BAI, PCC, DA-Livestock Development Council, FAOStat
3.A.1.d - Goats	Animal Population	PSA, BAI, PCC, DA-Livestock Development Council, FAOStat
3.A.1.e - Camels	N/A	-
3.A.1.f - Horses	Animal Population	PSA, BAI, PCC, DA-Livestock Development Council, FAOStat
3.A.1.g - Mules and Asses	N/A	-
3.A.1.h - Swine	Animal Population	PSA, BAI, PCC, DA-Livestock Development Council, FAOStat
3.C - Aggregate sources and non-CO2 emissions sources on land (2)		
3.C.1 - Emissions from biomass burning		
3.C.1.b - Biomass burning in croplands	Area and mass burnt	Crops Statistics Division - PSA, SRA
3.C.1.c - Biomass burning in grasslands	Area and mass burnt	Crops Statistics Division - PSA, SRA
3.C.2 - Liming	Amount of limestone and dolomite applied to soils	Crops Statistics Division - PSA, MGB - DENR, DTI, PFFA
3.C.3 - Urea application	Amount of urea fertilizer applied to soils	BPI-DA, PFFA, Crops Statistics Division - PSA
3.C.4 - Direct N2O Emissions from managed soils (3)	Amount of synthetic and organic fertilizers applied to soils, urine and dung deposited on pasture, area of managed organic soils	CSD-PSA, BAI, PCC, DA-Livestock Development Council, FAOStat, SRA, MGB-DENR, DTI, PFFA, PhilRice, BSWM, BMB
3.C.5 - Indirect N2O Emissions from managed soils		
3.C.6 - Indirect N2O Emissions from manure management		
3.C.7 - Rice cultivations	Harvested Area	Crops Statistics Division - PSA, PhilRice

Challenges and Opportunities

Challenges

- Relatively high turnover rate of technical personnel within relevant national authorities
- Limited financial capacity to undertake continuous in-depth training sessions on the use of the 2006 IPCC Guidelines and its associated software
- Relatively limited technical capacity to fully understand the intricacies of the Guidelines
- Lack of a coherent operationalization document for E.O. 174, or proper enforcement thereof

Challenges and Opportunities

Challenges

- Unavailability of some activity datasets, or lack of data collection, processing, and/or management approaches
- Limited extent to which activity data needs are aligned to the IPCC's comprehensive sectoral data frameworks
- Lack/limited data sharing arrangements within and among implementing institutions, especially the private sector.

Challenges and Opportunities

Opportunities

- The Philippine Statistical Development Program (PDSP) will be used as an avenue to expand the institutional reach of the CCC and the lead sectoral agencies.
- Under the Interagency Committee on Environmental and Natural Resources Statistics (IACENRS), a Technical Working Group on Climate Change-Related Statistics (TWG-CCS) will be created to explicitly identify and involve government agencies and academic institutions in the process of collecting, processing, managing, and archiving data and information on climate change.
- Development of country-specific emission factors – will aid in the advance characterization of emissions sources and removals.



THANK YOU

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