Philippine GHG Inventory and Reporting Program

Framework

Philippine GHG Reporting Program

Company A — GHG Inventory
Company B — GHG Inventory
Company C — GHG Inventory
Company D — GHG Inventory

GHG Program Specifications

Philippine GHG Protocol

GHG Protocol Corporate Accounting Framework
(Standards and Tools)
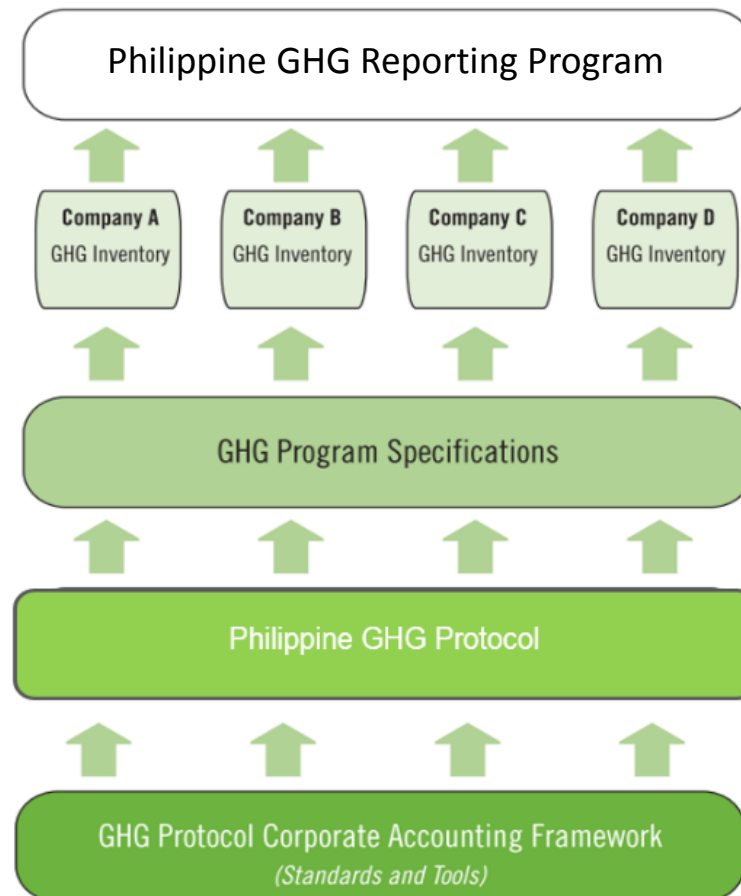
Program Objectives

1. Provide support to private companies
2. Improve quality and consistency of GHG reports
3. Provide a common baseline, updated emission factors
4. Generate information (e.g. benchmark data) useful for reporting companies to assess and improve their performance
5. Generate information needed to create enabling policies for mitigation
6. Generate credible information to enable stakeholders to make better informed decisions
7. Build and support a community of local experts

Program Design Principles

1. Ensures the consistent reporting
2. According to Standards
3. Supports the reporting of entity-, unit- and facility-level emissions
4. Provides shared benefits to both the public and the private sector
5. Considers Philippine Business objectives such as market competitiveness, efficiency and lowered climate risks
6. Considers confidentiality of certain data that may compromise any company's business interest

Accounting and Reporting Specification

1. Definition of Organizational boundary
2. Definition of operational boundary
3. Treatment of Indirect emissions
4. Base Year Criteria
5. Emissions accounting threshold
6. Sector-specific calculation tools and data specifications
7. Granularity of Data for reporting

Inventory Quality Management

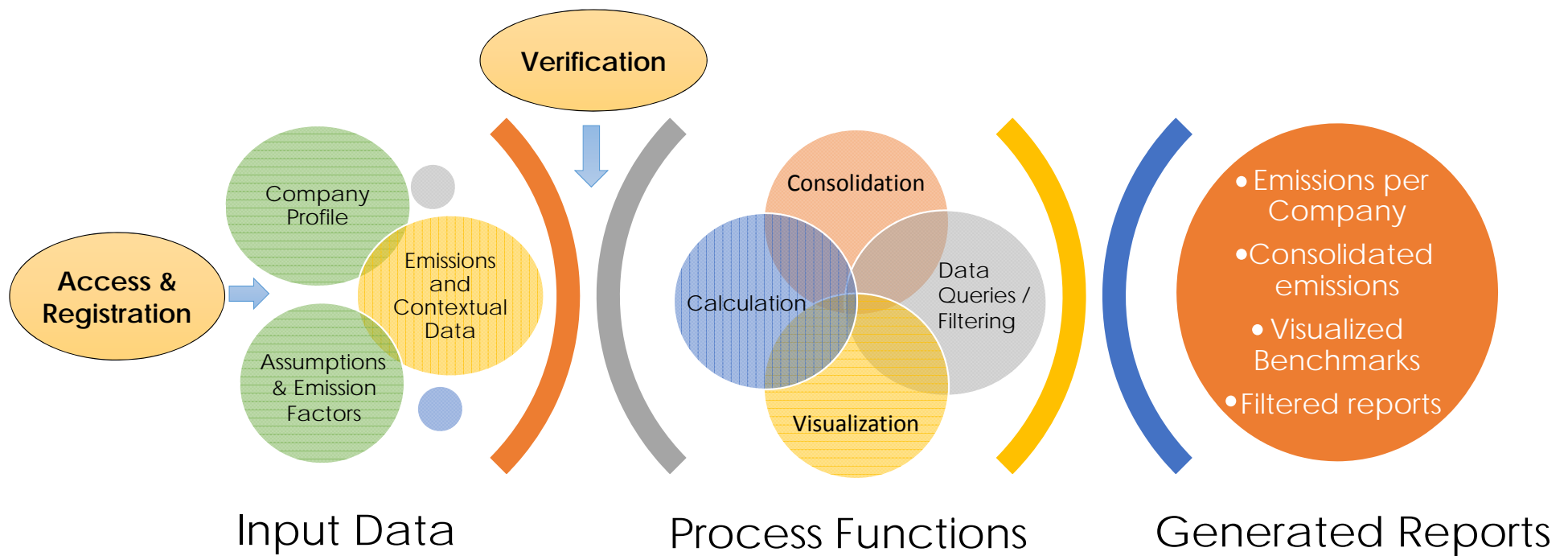- Principles
- Accepted Methodologies
  - Internal Audit
  - External Assurance
    - Moderate
    - Reasonable
- Verification requirement – for benchmarking

Reporting Platform Architecture

Verification

Access & Registration

Company Profile

Emissions and Contextual Data

Assumptions & Emission Factors

Consolidation

Calculation

Data Queries / Filtering

Visualization

- Emissions per Company
- Consolidated emissions
- Visualized Benchmarks
- Filtered reports

Input Data

Process Functions

Generated Reports

Input Data

Entity	Food Manufacturing, Inc.	
Facilities	South Luzon Manufacturing Plant	Makati Head Office
Sources	Line 1 & Line 2 Boilers — Purchased electricity	Company Vehicles — Purchased Electricity
Activity Data	Coal — Bunker Fuel — Electric Bill	Purchased Gasoline — Electric Bill

Input Data: Energy-Related Emissions

Table 1. Activity Data Inputs for Energy-Related Emissions

Activity Data		Emission Factors	Emissions in Tonnes (t)						
Fuels Used	Quantity (t)		CO2	CH4	N2O	HFCs	PFCs	SF6	NF3
Stationary									
e.g. Coal									
Bunker Fuel									
Mobile									
Gasoline									
Diesel									
Total (t of gas)									
Total (t CO2e)									

Input Data: Process and Product Use Emissions and Waste

Table 2. Activity Data Inputs for Process and Product Use Emissions and Waste

Activity Data for Industry Process Emissions & Product Use		Emission Factor	Emissions in Tonnes (t)						
Process / Product	Quantity (t)		CO2	CH4	N2O	HFCs	PFCs	SF6	NF3
Process									
e.g. Clinker Production									
Steel production									
Product Use / Fugitive Emissions									
e.g. Refrigerants									
Waste									
Total (t of gas)									
Total (t CO2e)									

Input Data: Emission Reduction Initiatives

Table 4. Emission Reduction Initiatives

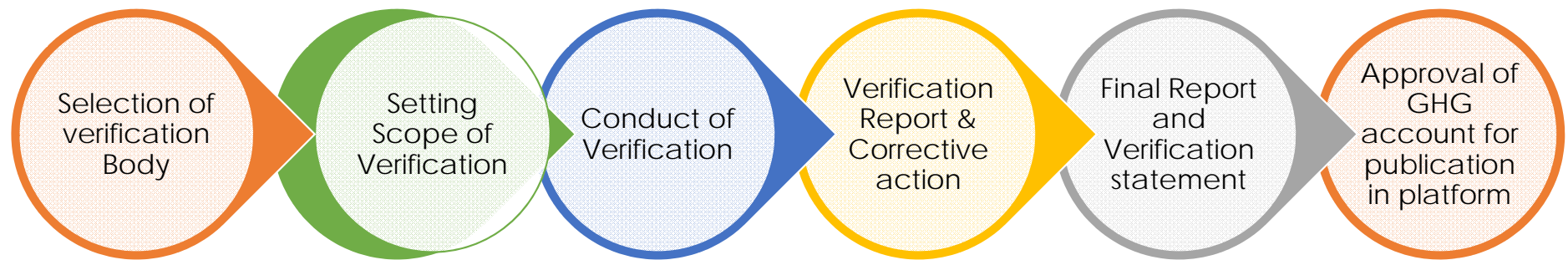| Mitigation Initiatives	Investment Cost (PhP)	GHG Avoidance per year (t CO2e)	Savings in operating cost per year (PhP)

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Generated Reports

Third-Party Verification

Selection of verification Body → Setting Scope of Verification → Conduct of Verification → Verification Report & Corrective action → Final Report and Verification statement → Approval of GHG account for publication in platform

Process Functions:

- Consolidation
- Data Filtering & Query
- Calculation and Benchmarking
- Visualization

Process Functions: Company Data Visualization (Sample)

Consolidation / Distribution (Sample)
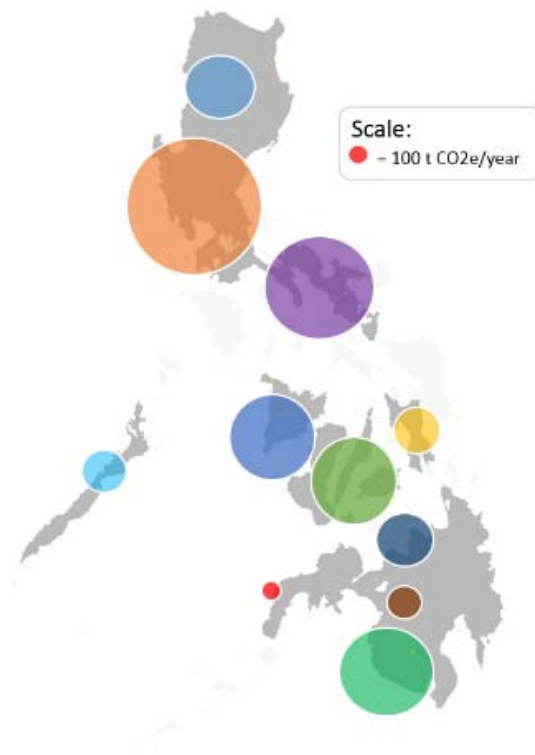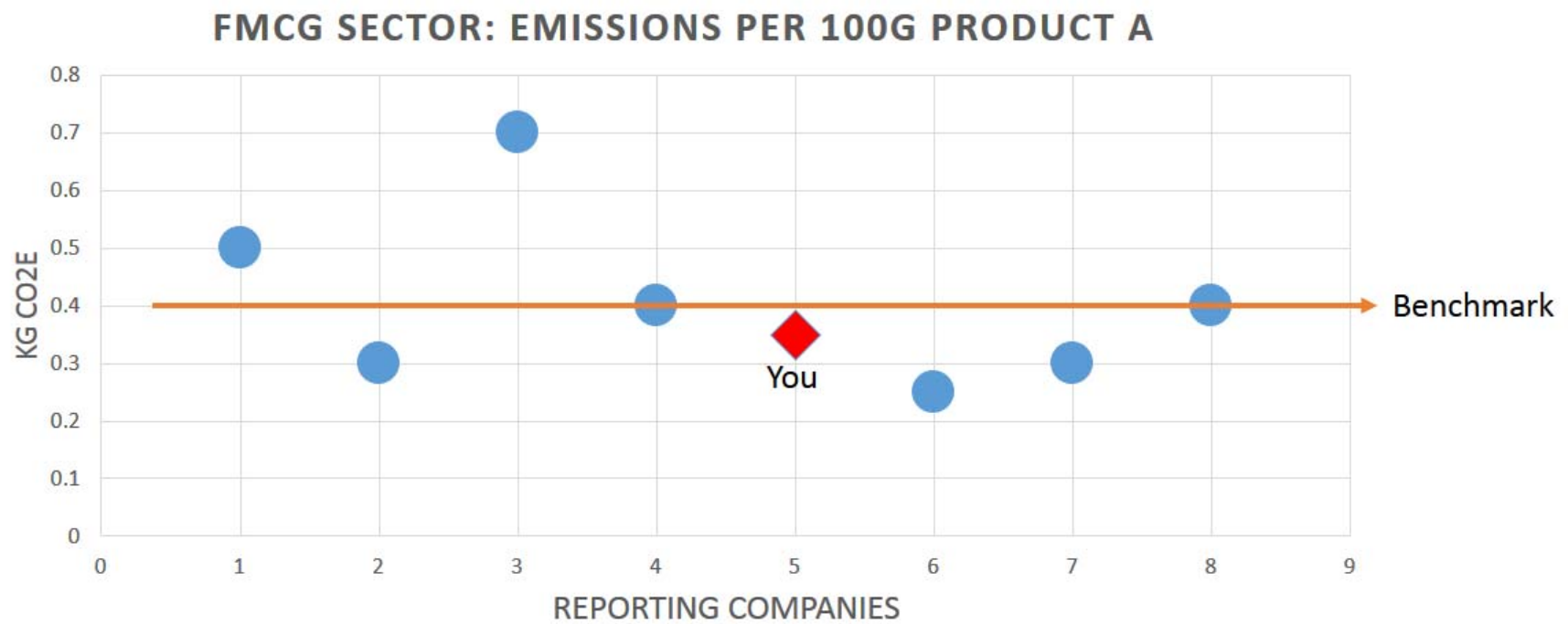

GEOGRAPHIC DISTRIBUTION OF GHG EMISSIONS

Scale:
● ~ 100 t CO2e/year

- North Luzon — 13%
- Central Luzon — 18%
- South Luzon — 16%
- Estern Visays — 6%
- Western Visayas — 7%
- Central Visayas — 14%
- Northern Mindanao — 7%
- Central Mindanao — 5%
- Southern Mindanao — 14%
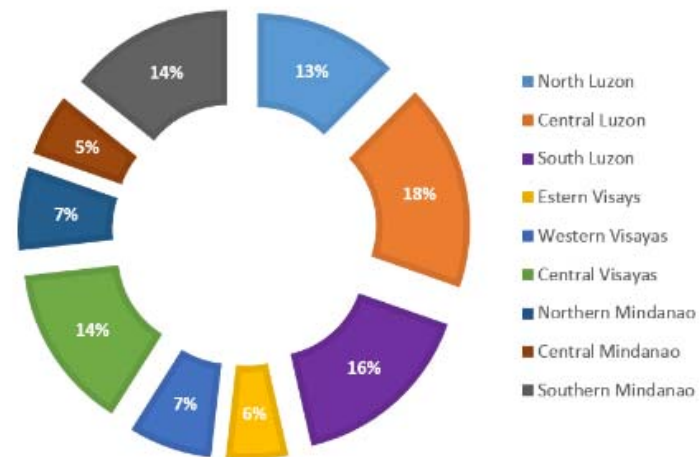
Sectoral Breakdown (Sample)

- ● Cement
- ● Transport Fleet
- ● Glass
- ● Buildings
- ● Iron and steel
- ● Construction

Benchmarks

FMCG SECTOR: EMISSIONS PER 100G PRODUCT A
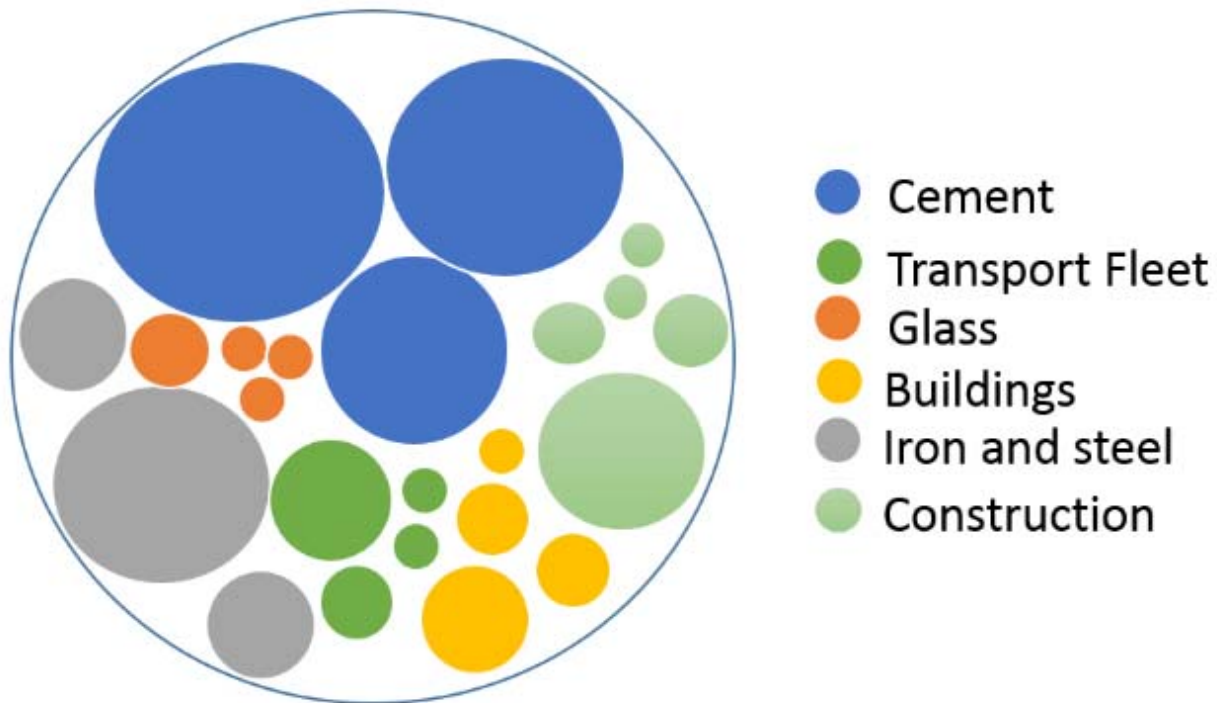
Query Reports (Sample)

Table 6. Sample Query report of specific emission types from specific group of companies

Manufacturing Sector	Co A	Co B	Co C	Co D	Co E	Co F	Total (t CO2 e)
Process emissions	0	126	0	120	510	293	**1499**
Mobile Combustion	33	42	117	40	170	98	**500**
Stationary Combustion	150	189	525	180	765	440	**2249**

Mechanisms: Rating/Certification System

- **Seal Approach**
  - GHG Reporter Seal
  - Verified GHG Inventory Seal
  - Low Carbon Intensity or low carbon product seal

- **Quantitative Marks**
  - (e.g. "this product is produced with 20% lower carbon emissions compared to industry benchmark")

Mechanisms: Awards System

Effort Based:

- Best GHG Report
- Verified at Highest Verification Level

Performance based:

- Best in carbon reduction
- Best in Carbon Intensity
- Best in Carbon Productivity