

GHG Assessment

Gujarat Ambuja Exports Limited



12 December 2022

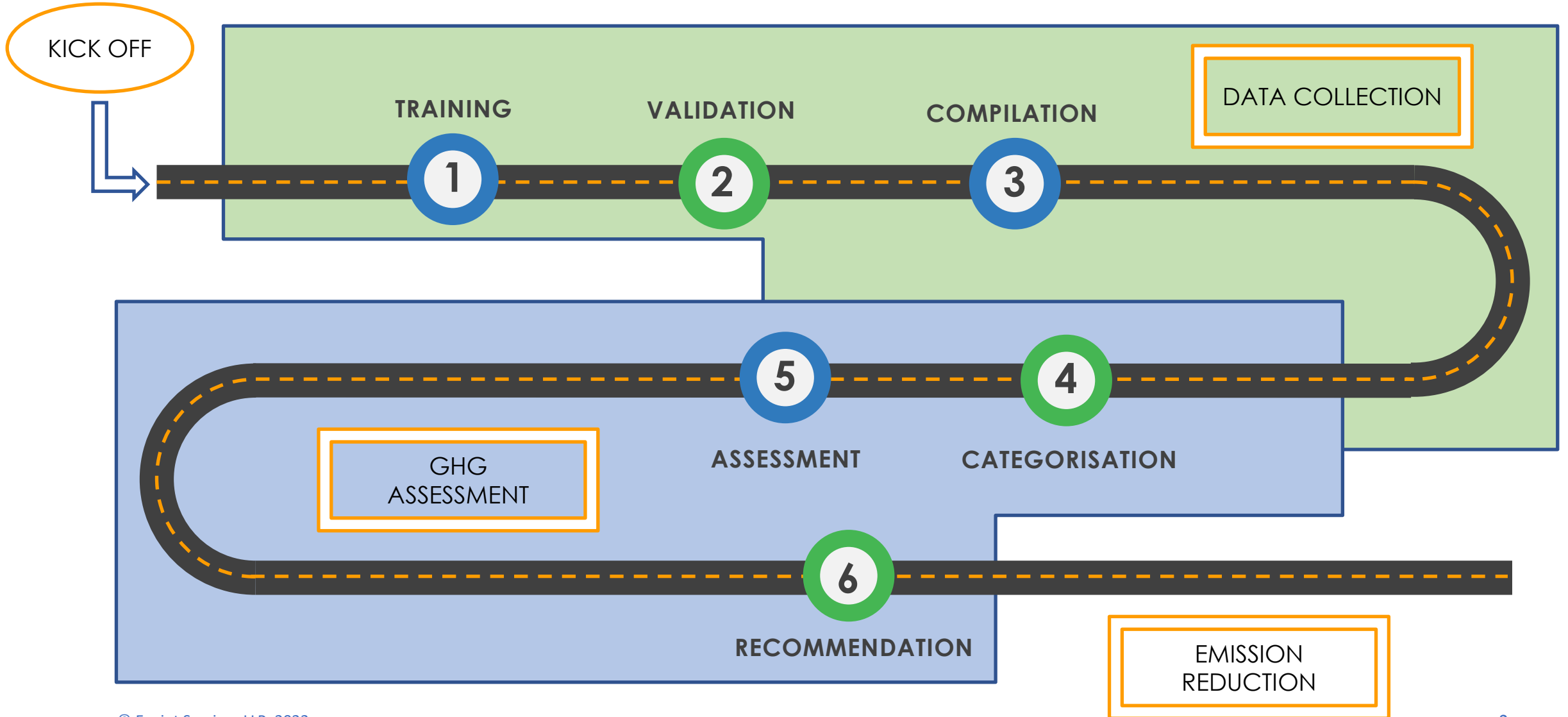
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GHG Assessment

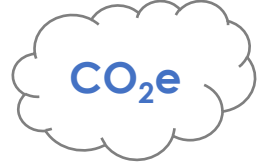
Recommendations

Assessment methodology

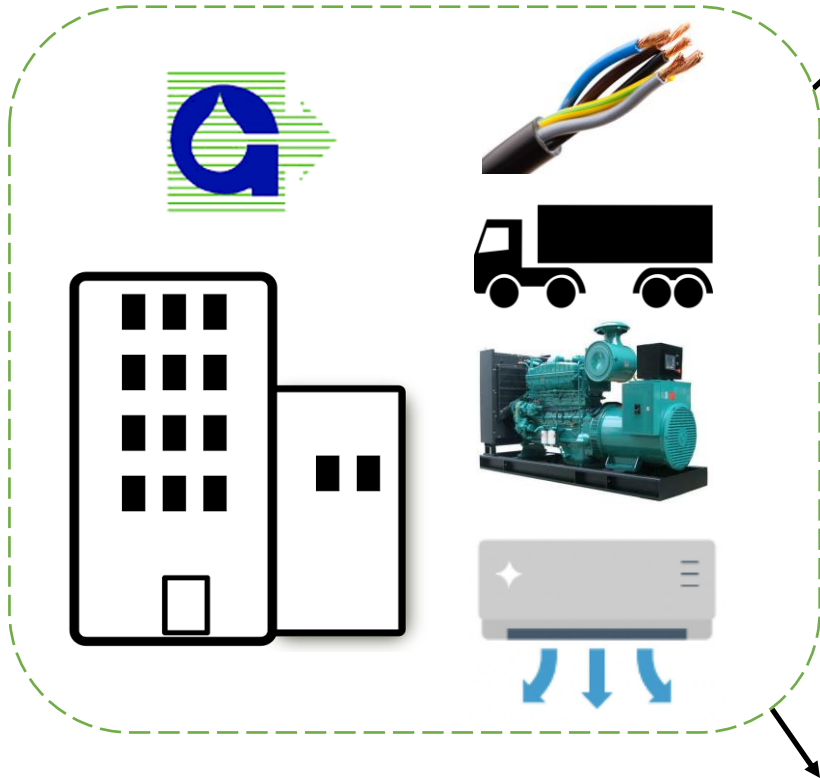


GHG Emissions | Scope of assessment

Scope 1 Emissions : Directly released into air (eg., GHG emissions from manufacturing, DG sets, vehicles, AC's owned/controlled by GAEL)

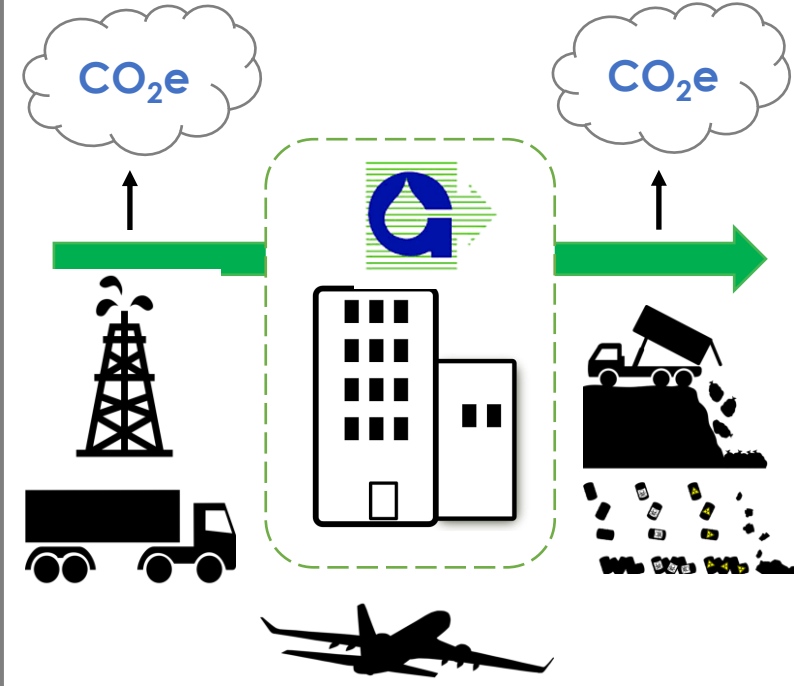


Scope 2 Emissions : Indirect emissions released at power plant for power consumed by GAEL



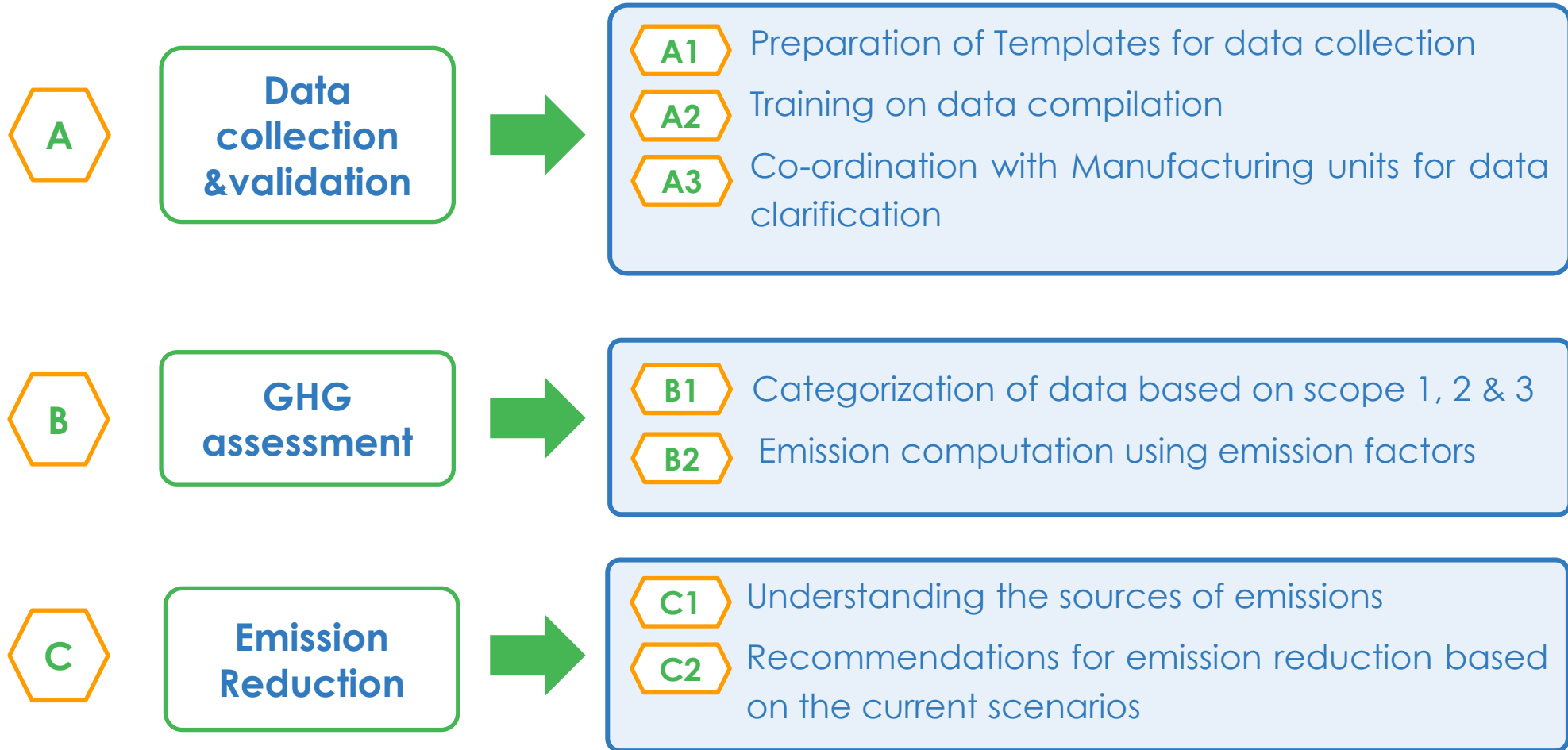
Business boundary (organization, operational)
Includes activities which GAEL owns or controls

Scope 3 Emissions : Indirect emissions released through value chain operations outside the business boundaries of GAEL



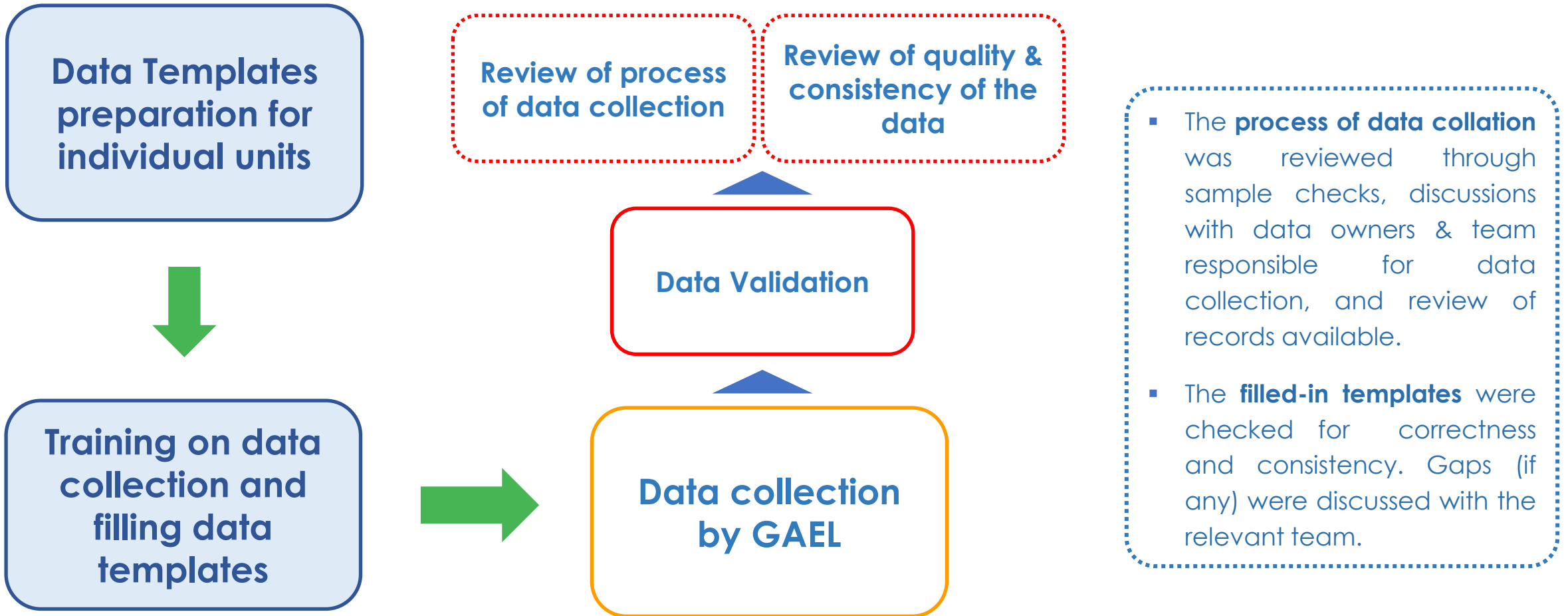
Not owned/controlled by GAEL, but indirectly responsible

Scope of work





Data collection & validation



- The **process of data collation** was reviewed through sample checks, discussions with data owners & team responsible for data collection, and review of records available.
- The **filled-in templates** were checked for correctness and consistency. Gaps (if any) were discussed with the relevant team.

- Templates circulated to the teams

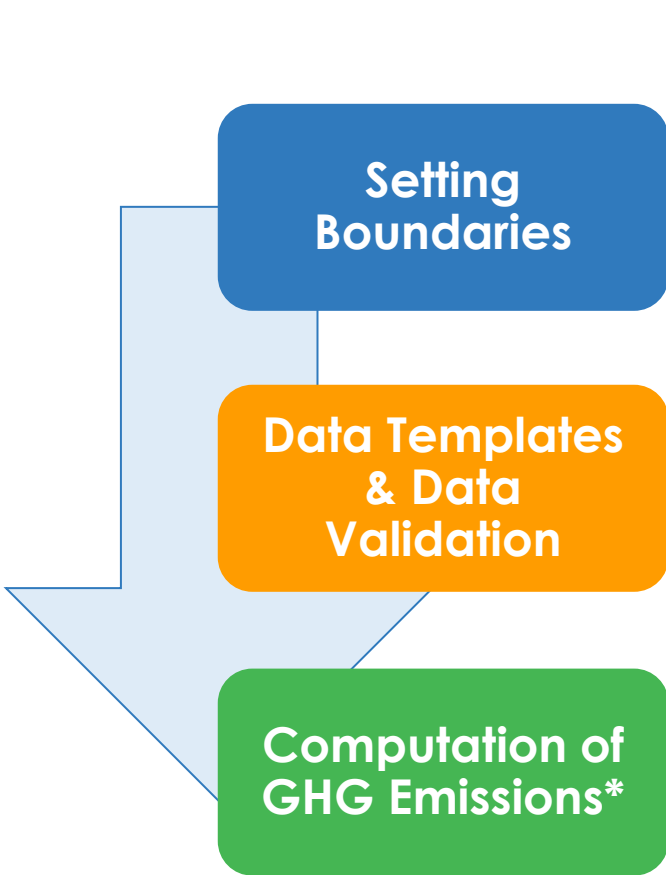
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Journey from data collection to
computation

GHG Assessment

Recommendations

B GHG Assessment (1/7)



Data Collection by GAEL



Data Validation



Computation of GHG

Scope of FY 2021-22

- Consumption at Manufacturing units
- Granular data collected and analyzed across 9 facilities

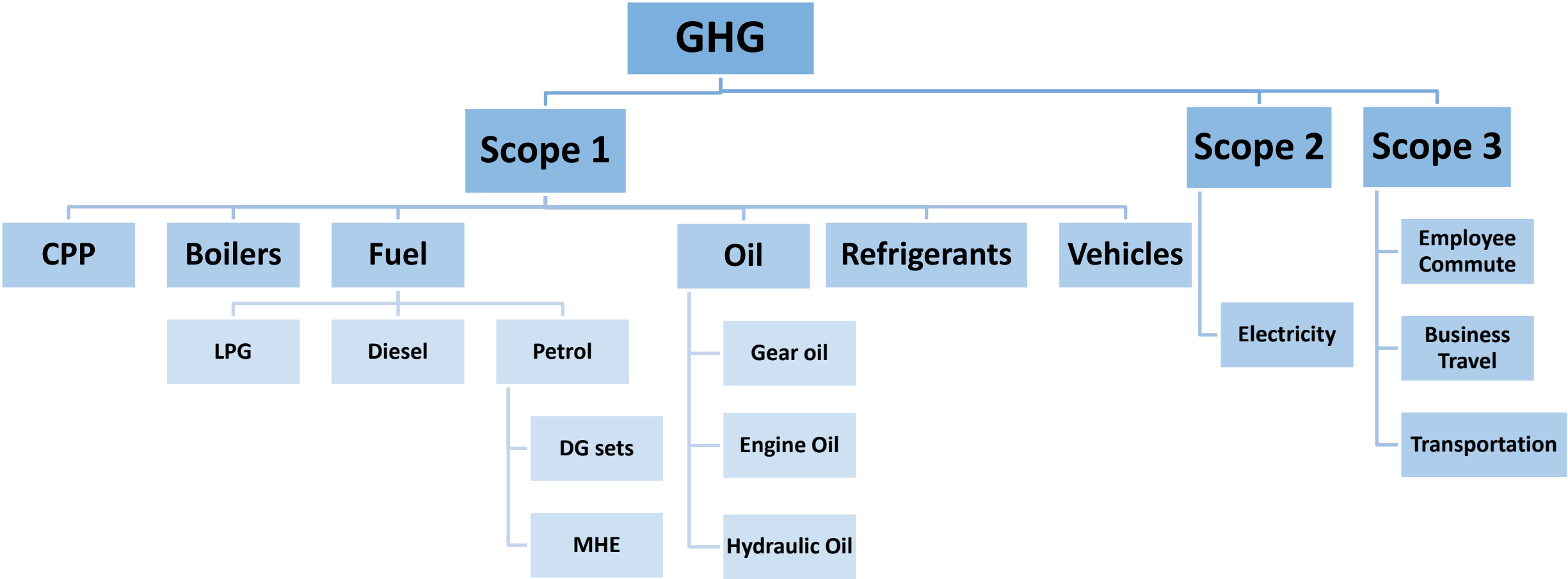
Assessment Methodology

- GHG Protocol, India GHG Program (2013, 2015)
- Emission factors (EF) and Global Warming Potential (GWP) as per IPCC country-specific recommendations
- Supplementary checks with CPCB, IISc., ARAI, CEA reports.



GHG Assessment (2/7)

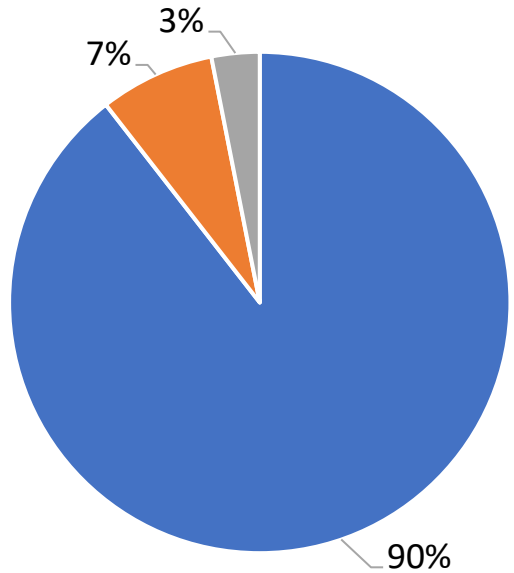
Categories covered for calculation of the GHG emissions





GHG Assessment (3/7)

Total GHG Emissions (MT CO₂e)



■ Scope 1 ■ Scope 2 ■ Scope 3

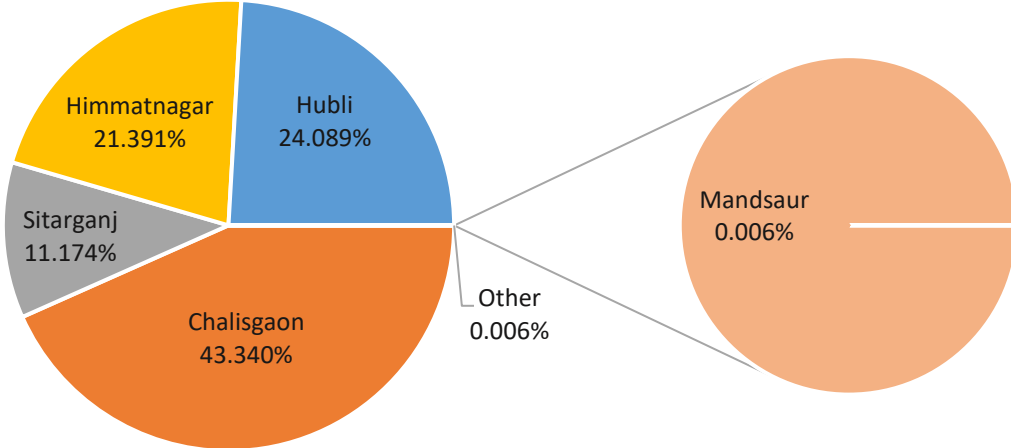
Scope 1
4,54,768 TCO₂e

Scope 2
37,217 TCO₂e

Scope 3
15,552 TCO₂e

Total emissions:
5,01,389 TCO₂e

Captive Power Plant Emissions



■ Chalisgaon ■ Sitarganj ■ Himmatnagar ■ Hubli ■ Mandsaur

B GHG Assessment (4/7)

501,389 TCO₂e is equivalent to about:



3,717 Flight trips from Delhi to NY



43.22 million ft³ of concrete construction



14,297 Train Journeys from Kashmir to Kanyakumari



44,138 Tons of rice production in India



13,22,926 Truck rides from Sitarganj to Shiggaon

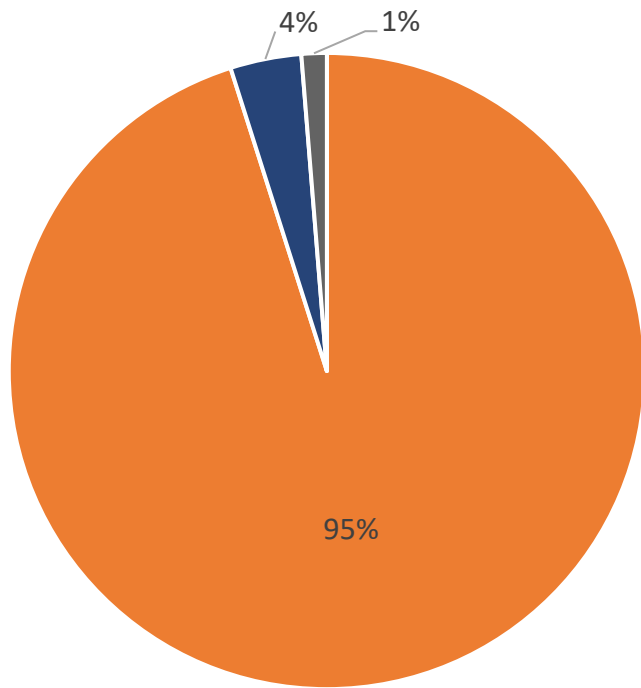


9,31,950 Tons of carboard production in India

B

GHG Assessment (5/7)

Process Boilers Emissions

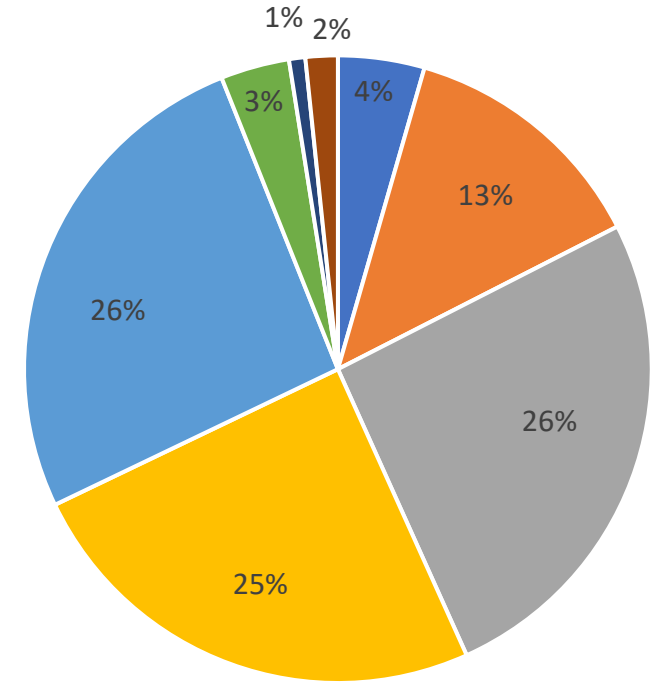


■ Akola ■ Kadi ■ Pithampur

Process Boilers contribute to 1.7% of total Scope 1 generated

Grid Electricity contributes to 7% of the total emissions

Scope 2 - Grid Electricity

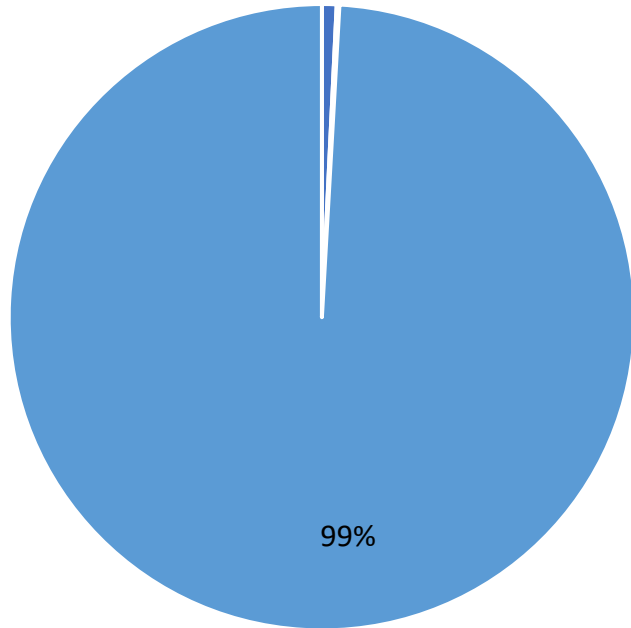


■ Akola ■ Chaliswaon ■ Sitarganj ■ Himmatnagar
 ■ Hubli ■ Kadi ■ Mandsaur ■ Pithampur



GHG Assessment (6/7)

Scope 3 emissions



- Employee Commute
- Business Travel
- Downstream Transportation

Emission calculation for scope 3 categories:

1. **Employees Commute**
2. **Business Travel**
3. **Downstream Transportation**

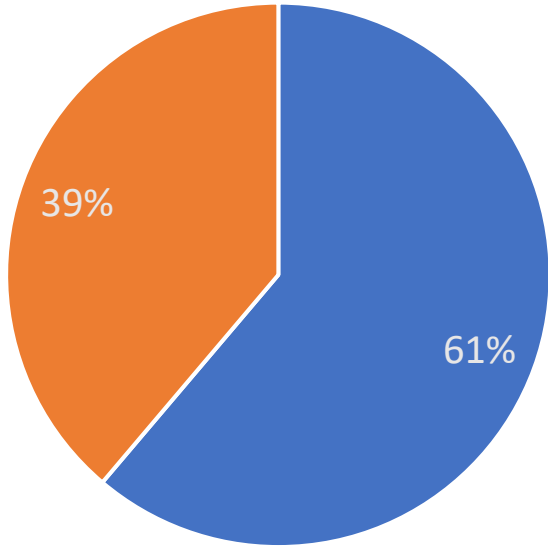
Based on current data, the downstream transportation contributed to 99% of all scope 3 calculations

B

GHG Assessment (7/7)

Avoided Emissions

Akola Electricity Consumption

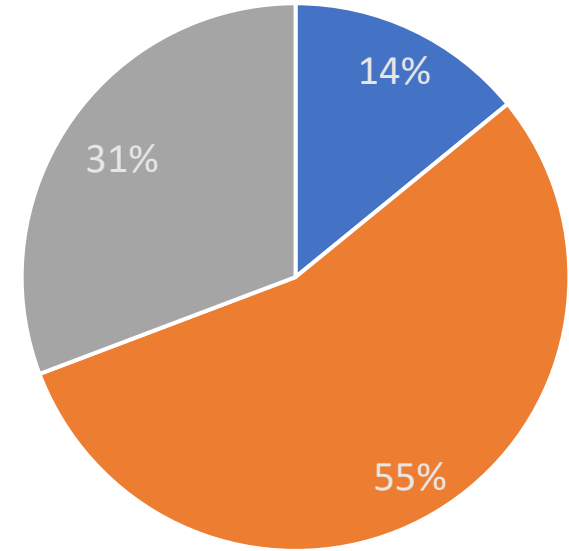


■ Grid ■ Solar

**Akola avoided emissions :
1052 TCO₂e of 2710 TCO₂e**

**Total Emissions
avoided through
renewable
sources:
4023 TCO₂e of
7001 TCO₂e**

Kadi Electricity Consumption



■ Solar ■ Wind ■ Grid

**Kadi avoided emissions :
2971 TCO₂e of 4291 TCO₂e**

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Journey from data collection to computation

GHG Computation

Recommendations

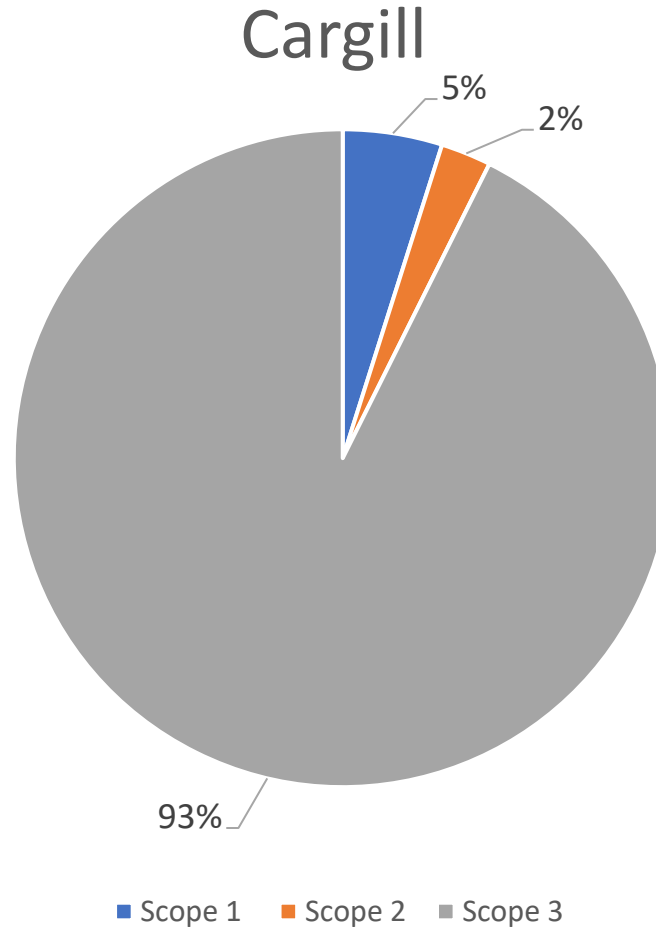
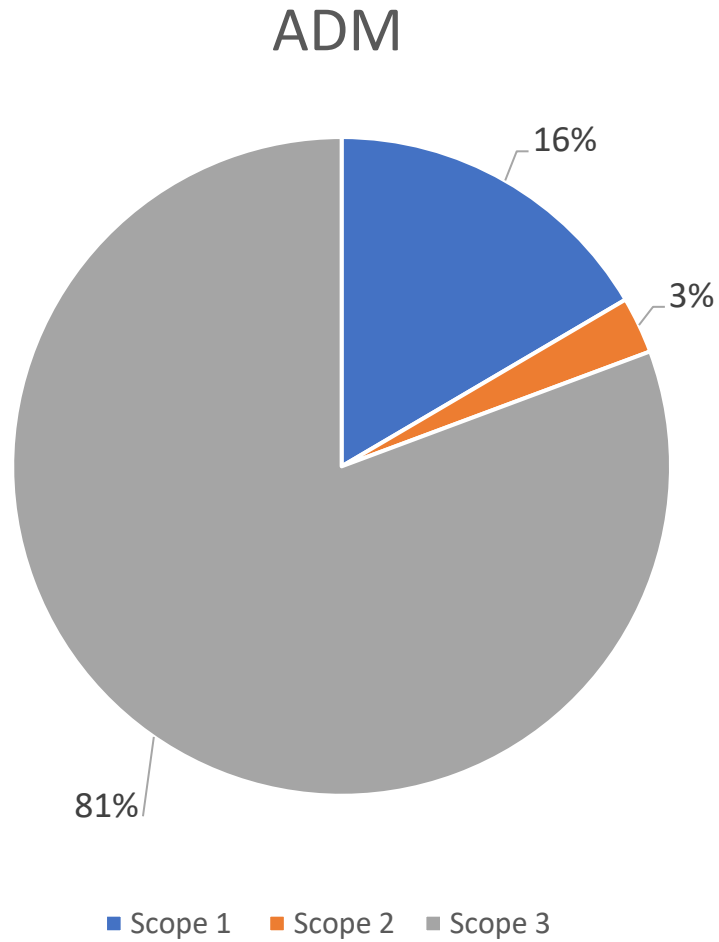


Peer Benchmarking





Emission Reduction

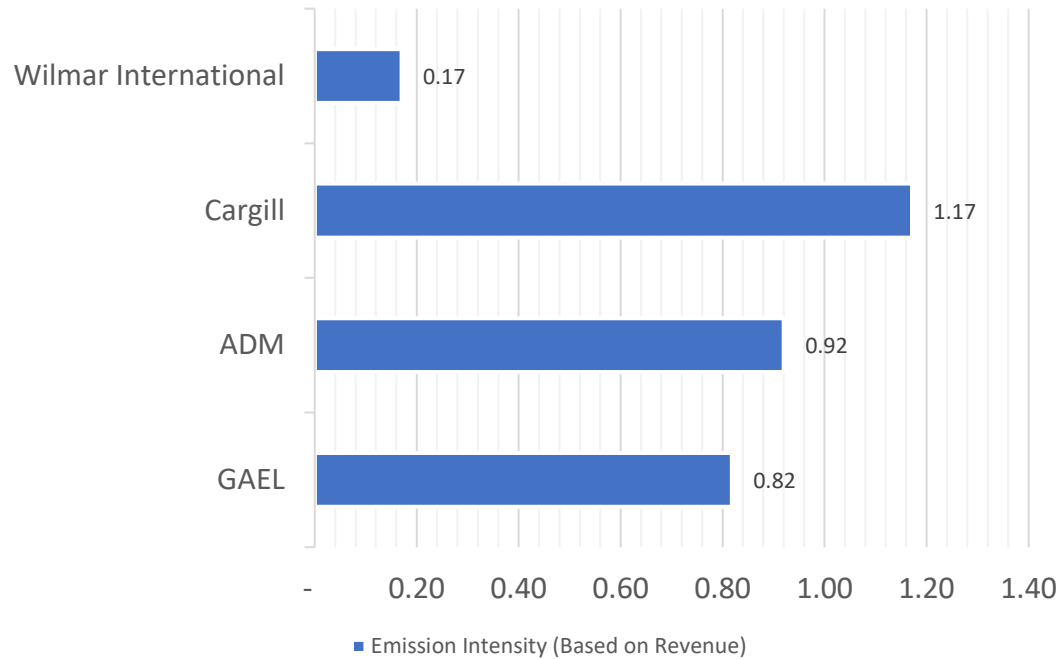


- Majority of the emissions for ADM & Cargill are Scope 3, involving transportation
- Scope 1 & 2 contribute to 10-20% of the total emissions for the peers, in contrast to GAEL

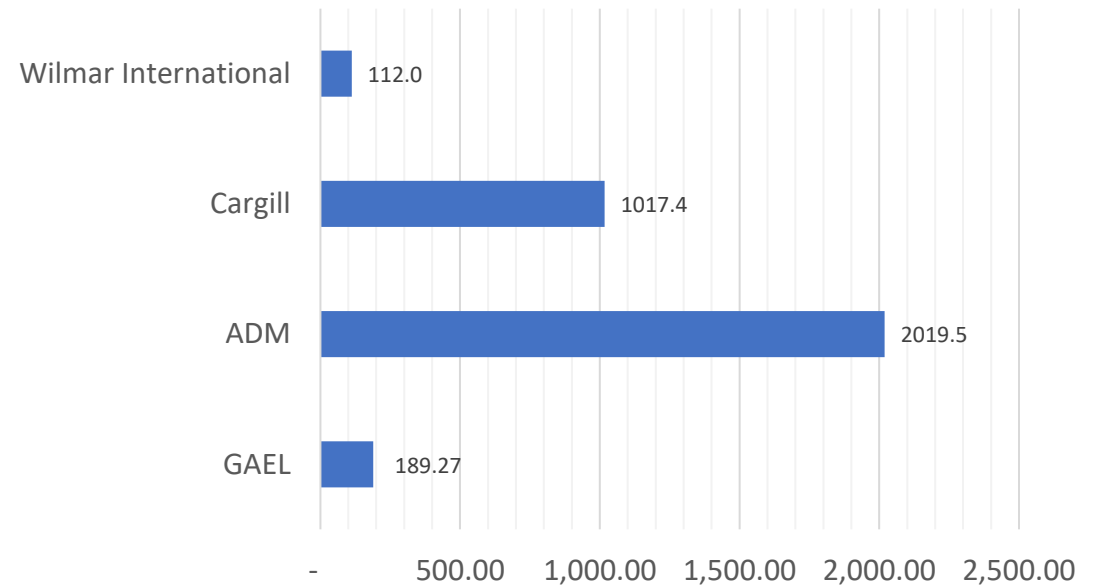


Emission Intensity

Emission Intensity = Total GHG emissions (MTCO2e)/ Revenue (\$ billion)



Emission Intensity = Total GHG emissions (MTCO2e)/ No. of employees





Emission Reduction



Emission reduction /
Net Zero plans

10 % reduction in
emission by 2025

Scope 1 & 2
reduction by 6%
till 2021

Achieve net-zero
GHG emission by
2040

Recommendations

Deliverable	Recommended Action(s)	Timeline
<p>Enhanced disclosure</p>	<ul style="list-style-type: none"> • Voluntary BRSR filing • CDP filing (TBD) 	<p>Immediate</p>
<p>Improving assessment quality</p>	<ul style="list-style-type: none"> • Awareness trainings • Data collection system • Scope 3 comprehensions 	<p>Through FY 2023</p>
<p>Decarbonization</p>	<ul style="list-style-type: none"> • Planning for emission reductions and targets 	<p>Next 3-6 months</p>

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