



ESG

Performance Report

FY 23-24

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GHG Emissions Report

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About ESG Performance report

At Granules, our purpose is “*Healing lives responsibly through pioneering green science*”

This ESG Performance Report outlines our commitment to sustainable development through clearly defined goals and measurable progress. It highlights our key achievements and strategic initiatives across environmental, social, and governance areas.

This report outlines our short-medium and long-term sustainability objectives, accompanied by performance data over the past two years, providing a transparent view of our journey.

All metrics disclosed in this report is disclosed through our BRSR and sustainability report and assured by third party

This boundary of the disclosed metrics covers the all Manufacturing units of Granules India Limited (GIL) including the Corporate office and R&D units .

ESG Goals

(Mid-Long Term)

Climate & Environment

Emissions

Achieve Net Zero Emissions by 2050

Energy

Achieve 100 % Sourcing renewable electricity by FY2030

Water

Achieve Water Positivity by FY 2032

Waste

Achieve Zero waste to landfill by FY 30

Social

Community

Touch 1 million lives through CSR programs by FY2030

Safety

Foster a safety-first culture and Target zero workplace fatality

Diversity, Equity, And Inclusion (DEI)

Achieve a 100% increase in women’s employment by 2030 compared to FY24
Achieve gender pay parity by FY2030

Performance Highlights



22%

Absolute reduction in GHG emissions (Scope 1 and 2)



47%

Of electricity consumption from renewable sources (PPA, rooftop solar, and I-RECs)



~40%

Of our waste water is recycled



88%

Hazardous waste sent for reused (co-processing)



80%

Of vendors engaged to determine product carbon footprint and climate commitment



6,525+

Employees



11.7%

Female employees



31%

Increase in female employees



100%

Return-to-work rate



1200+

Students trained through Pharma Pathshala



Zero

Confirmed cases of discrimination



25%

Women on the Board

For More details refer our BRSR Section of Annual Report FY 23-24 Page No 62-107

ESG PERFORMANCE





Business Performance

Production & Revenues

Production & Revenues	Unit	FY 22-23	FY 23-24
Total Production	MT	56,906	60,626
Revenues - Consolidated	Million INR	45,119	45,064
Revenues - Standalone	Million INR	39,312	37,550

Financial

Revenue (₹ mn)

₹45,064



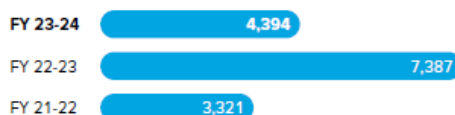
EBITDA (₹ mn)

₹8,560



Operating Cash Flow (₹ mn)

₹4,394



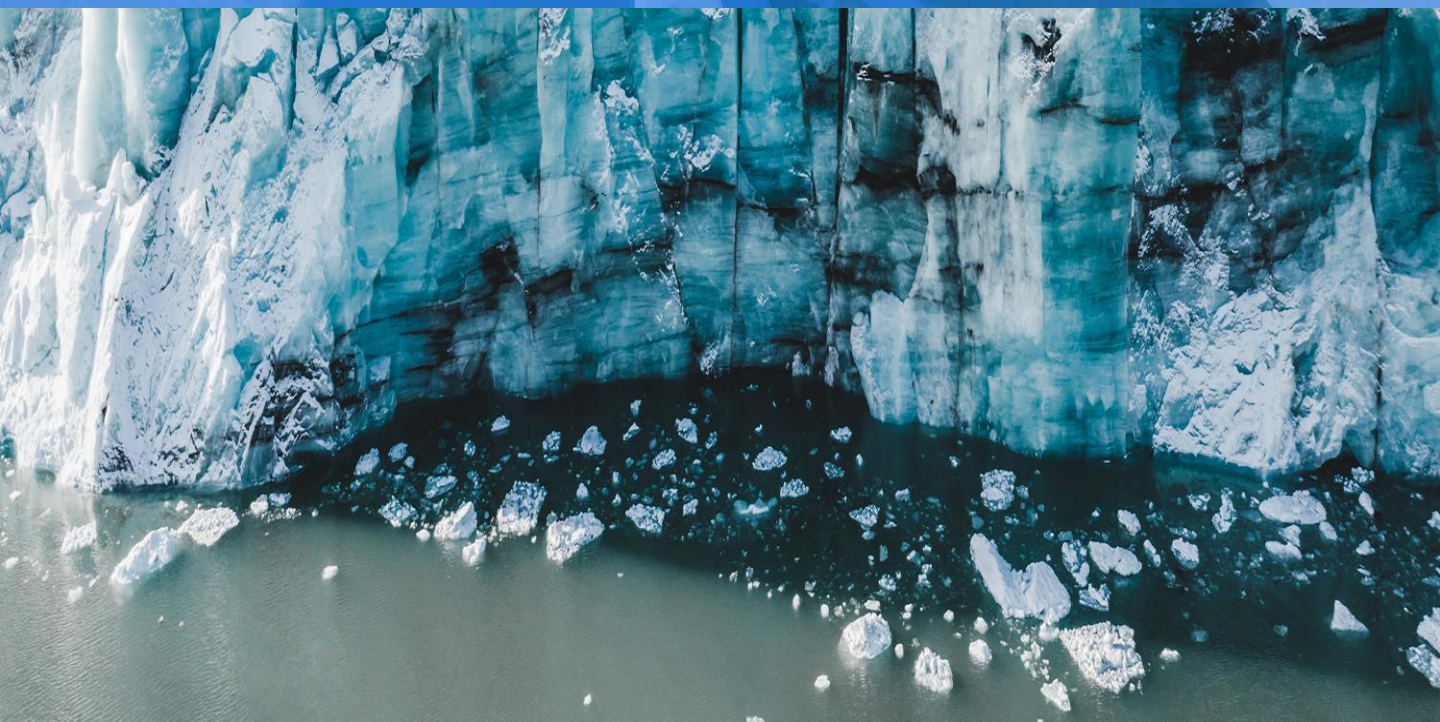
ROCE (%)

16.50%





Climate & Environment Performance



Energy

Energy	Unit	FY 22-23	FY 23-24
Total Electricity consumption	MWh	77,078	84,066
Electricity from Renewable Sources (PPA +On-site + I-RECs)	MWh	7,565	39,885
% of Renewable Energy share of consumed Electricity	%	9.8%	47.4%
Fuels Consumption			
Coal Consumption	MT	22,149	21,732
HSD consumption	KL	742	508
Furnace Oil Consumption	MT	64.50	63.62
Petrol Consumption	KL	0.76	3.26
Energy by Source			
Energy From Electricity Consumption	TJ	277.5	302.6
Energy From Fuels Consumption	TJ	592.2	573.3
Total Energy in TJ	TJ	869.7	875.95
Energy Intensity -TJ/Production	TJ/MT	0.01528	0.01445

GHG Emissions

GHG Emissions	Unit	FY 22-23	FY 23-24
Scope-1	tCO2e	56,265	56,254
Scope-2 (Market-Based)	tCO2e	56,306	31,632
Scope-2 (Location -Based)	tCO2e	62,433	60,191
Scope-1 +2 (Market Based)	tCO2e	1,12,571	87,886
Scope-1 +2 (Location Based)	tCO2e	1,18,698	1,16,445
Scope-3 GHG Emissions			
Category 1 - Purchased Goods & Services	tCO2e	4,95,807	5,14,516
Category 2 - Capital Goods	tCO2e	4,705	10,265
Category 3 - Fuel and Energy Related Activities	tCO2e	26,788	22,579
Category 4 - Upstream Transportation & Distribution	tCO2e	8,392	8,557
Category 5 - Waste Generated from Operations	tCO2e	2,992	3,571
Category 6 - Business Travel	tCO2e	295	850
Category 7 - Employee Commuting	tCO2e	1,476	1,571
Category 8 - Upstream Leased Assets	tCO2e	587	1,628
Category 9 - Downstream Transportation & Distribution	tCO2e	22,381	24,827
Category 10 - Processing of Sold Products	tCO2e	46,658	41,187
Category 11 - Use of Sold Products	tCO2e	-	-
Category 12 - End of Life Treatment of sold products	tCO2e	4,031	4,287
Category 13 - Downstream Leased Assets	tCO2e	-	-
Category 14 - Franchises	tCO2e	-	-
Category 15 - Investments	tCO2e	-	-
Total SCOPE-3 Emissions	tCO2e	6,14,113	6,33,837
Total Scope 1 and Scope 2 emission intensity in terms of physical output	tCO2e/Tons of Production	1.98	1.45
Scope 3 emission Intensity in terms of physical output	tCO2e/Tons of Production	10.79	10.45

Air Emissions

Air emissions	Unit	FY 22-23	FY 23-24
Oxides of Nitrogen (Nox)	MT	124.1	65.3
Sulfur oxide (SOx) emissions	MT	230.9	198.56
Particulate matter (PM)	MT	89.3	82.08
Persistent organic pollutants (POP)	MT	BDL	BDL
Volatile organic compounds (VOC)	MT	BDL	BDL
Hazardous air pollutants (HAP)	MT	BDL	BDL

BDL-Below Detection Limit

Water & Wastewater

Water & Wastewater	Unit	FY 22-23	FY 23-24
Water withdrawal by source			
Surface water	KL	0	0
Ground Water	KL	0	0
Third Party Water	KL	341008	368002
Seawater/ Desalinated Water	KL	0	0
Rainwater Harvesting	KL	11,143	0
Total volume of water withdrawal	KL	3,52,151	3,68,002
Total volume of water consumption	KL	1,93,125	2,26,083
Water intensity in terms of physical output	KL/Tons of Production	6.19	6.070
Water Water Generated (LTDS+HTDS)	KL	1,59,026	141919
Recycle of Waste Waste Generated	KL	81804	55083
Percentage generated Wastewater Recycled	%	51%	39%
Water discharge by destination and level of treatment (in kilolitres)			
To Surface water	KL	0	0
To Groundwater	KL	0	0
To Seawater	KL	0	0
Sent to third-parties	KL	68821	79,216

Waste

Waste	Unit	FY 22-23	FY 23-24
Haz.Waste disposed to Landfill	MT	406.32	398.373
Haz.Waste disposed to Incineration	MT	63.235	71.52
Haz.Waste disposed to Co-processing	MT	2664.07	3482.355
Total Hazardous Waste	MT	3133.6	3952.2
Plastic waste	MT	1081.7	1106.6
Non-Hazadous Waste (Other than Plastic Waste)	MT	1946.9	2170.3
Bio Medical Waste	MT	1.228	3.009
E-Waste	MT	1.55	1.26
Waste Oil	MT	3.5	2.57
Total Waste	MT	6169	7236
Waste Intensity	MT/Tons of Production	0.108	0.119

A close-up photograph of two individuals in business attire shaking hands. The person on the left is wearing a dark blue suit jacket over a white shirt. The person on the right is wearing a light blue suit jacket over a white shirt. Their hands are clasped in a firm handshake. A solid blue horizontal band is superimposed over the middle of the image, containing the word "Social" in white text.

Social

Employment

Employees and workers	Unit	FY 22-23	FY 23-24
No.of Employees	No's	3650	4057
No. of Male	No's	3410	3741
No.of Female	No's	240	316
New Hires	No's	1588	1406
Attrition	No's	1387	1020
Work Men (Up to Sr.Executive)	No's	3058	3377
Executives (Above Sr.Executive)	No's	592	680
<30 Yrs	No's	1938	2178
30-50 Yrs	No's	1630	1792
>50 Yrs	No's	82	87
No.of Contract Work Employees	No's	2223	2467
No. of Male	No's	1806	2022
No.of Female	No's	417	445
Total Work Force	No's	5873	6524
% of Female Employees	%	6.6%	7.8%
% of Female Work Force (Overall)	%	11.2%	11.7%
% of Attrition	%	38.0%	25.1%
Return to work and retention rates	%	97%	100%
Women representation on Board of Directors	%	20%	25%

Employee Benefits

% Of employees covered by	Unit	FY 22-23	FY 23-24
Health insurance	%	100	100
Accident insurance	%	100	100
Maternity benefits	%	100	100
Paternity benefits	%	100	100
Daycare facilities	%	100	92.3

% Of employees covered by retirement benefits	Unit	FY 22-23	FY 23-24
PF	%	100%	100%
Gratuity	%	100%	100%
ESI - No. of employees covered (as a % of total employees)	%	23%	20%
ESI - No. of workers covered (as a % of total workers)	%	99%	99%

Wages

Median remuneration / wages:	Unit	FY 22-23	FY 23-24
Median remuneration/ salary/wages - Male	INR Lakh/Annum	4.5	4.77
Median remuneration/ salary/wages - Female	INR Lakh/Annum	3.74	3.74
Gross wages paid to females as % of total wages paid by the entity, in the following format:	%	7.17	6.69

minimum wages paid to employees and workers

Equal to minimum wage	%	0%	0%
More than minimum wage	%	100%	100
Equal to minimum wage	%	95%	99%
More than minimum wage	%	5%	1%

Trainings & Career Development Review

Trainings & Performance and Career Development Review	Unit	FY 22-23	FY 23-24
Performance and career development reviews	%	79.7%	83.7%
provided training on human rights issues and policy	%	100%	100%
Training Hours - GMP	Man-Hours	2,89,391	2,86,783
Training Hours - EHS Trainings	Man-Hours	13,695	13,463
Other Trainings (External Technical & Behavioral)	Man-Hours	3,425	9,761

Complaints and Grievances

No.of complaints made by employees and workers	Unit	FY 22-23	FY 23-24
Working Conditions	No's	0	0
Health & Safety	No's	0	0
Sexual Harassment	No's	1	0
Discrimination at workplace	No's	0	0
Child Labor	No's	0	0
Forced Labor /Involuntary Labor	No's	0	0
Wages	No's	0	0
Complaints on POSH as a % of female employees/workers	%	0.15%	0%
Number of consumer complaints:	Unit	FY 22-23	FY 23-24
Data privacy	No's	0	0
Advertising	No's	0	0
Cyber-security	No's	0	0
Delivery of essential services	No's	0	0
Restrictive Trade Practices	No's	0	0
Unfair Trade Practices	No's	0	0
Instances of corruption and bribery	No's	0	0
No .of Complaints/grievances	Unit	FY 22-23	FY 23-24
Communities	No's	0	0
Investors (other than shareholders)	No's	0	0
Shareholders	No's	0	0
Employees and workers	No's	0	0
Customers	No's	414	486
Value Chain Partners	No's	0	0
Product Quality & Safety	Unit	FY 22-23	FY 23-24
instances of product recalls on accounts of safety issues	No's	0	0
Fines/ Penalties/ Punishment/ Compounding fees/ Settlement	Unit	FY 22-23	FY 23-24
Penalty/ Fine (Monetary)	INR	0	0
Settlement (Monetary)	INR	0	0
Compounding fee (Monetary)	INR	0	0
Imprisonment (Non-Monetary)	No's	Nil	Nil
Punishment (Non-Monetary)	No's	Nil	Nil
Complaints with regard to conflict of interest	Unit	FY 22-23	FY 23-24
Number of complaints received in relation to issues of Conflict of Interest of the Directors	No's	0	0
Number of complaints received in relation to issues of Conflict of Interest of the KMPs	No's	0	0

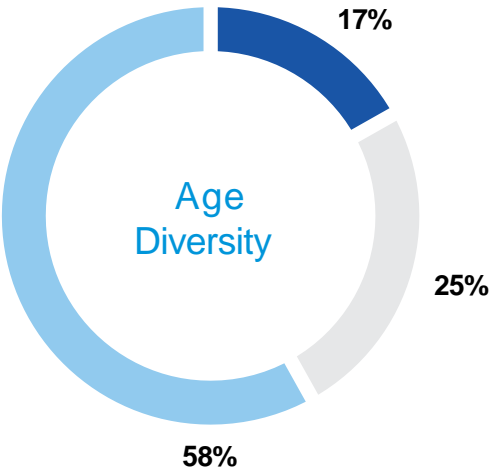
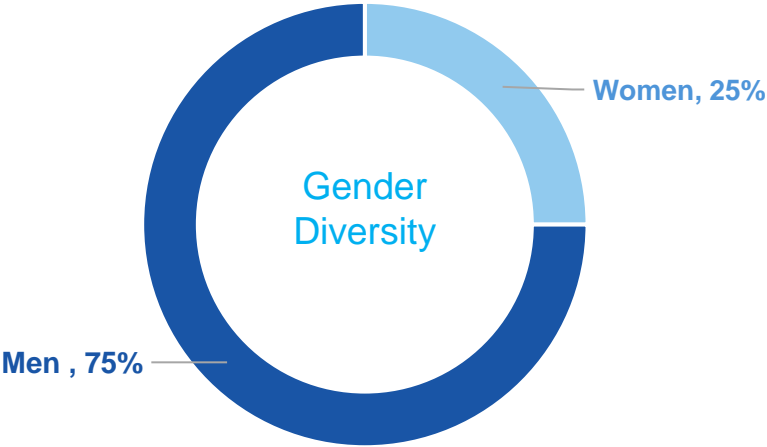
Safety Performance

Safety Performance	Unit	FY 22-23	FY 23-24
Reportable Incidents -Employees	No's	1	0
Reportable Incidents -Workers	No's	0	2
Lost Time Injury Frequency Rate for Employees (LTIFR) (per one million-person hours worked)	LTI-FR	0.12	0
Lost Time Injury Frequency Rate for Workers (LTIFR) (per one million-person hours worked)	LTI-FR	0	0.30
Total recordable work-related injuries -Employees	No's	7	23
Total recordable work-related injuries -Workers	No's	11	15
High consequence work-related injury or ill-health - Employees (excluding fatalities)	No's	1	0
High consequence work-related injury or ill-health - Workers (excluding fatalities)	No's	0	0
No. of fatalities -Employees	No's	0	0
No. of fatalities -Workers	No's	0	2
Man Hours Worked - Employees	Man-Hours	80,81,100	89,82,198
Man Hours Worked - Workers	Man-Hours	73,02,555	66,42,270
Lost time injury (LT I) severity rate for Employees - (number of days lost due to injuries) x 1,000 / total hours worked	LTI-SR	0.67	0
Lost time injury (LT I) severity rate for Workers - (number of days lost due to injuries) x 1,000 / total hours worked	LTI-SR	0	1.81

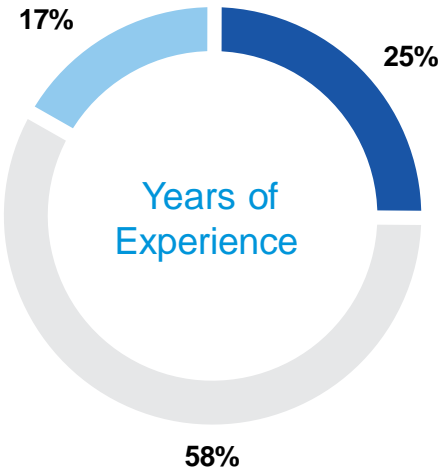
Governance



Board Composition



● <45 years ● >60 years
● 45-60 years



● <20 years ● >40 years
● 20-40 years

Green House Gas (GHG) Emission Report 2024



About the Report

Granules GHG Emissions Report provides a comprehensive overview of the **Granules India Limited (GIL) and subsidiaries (GPI ,GUSA ,GLS ,GCZRO)** greenhouse gas emissions, covering Scope 1, Scope 2, and Scope 3 categories.

As part of our commitment to reducing environmental impact, we have analyzed emissions directly under our control (Scope 1), such as fuel combustion in company-owned facilities and vehicles, as well as indirect emissions from purchased electricity, steam, and heating (Scope 2).

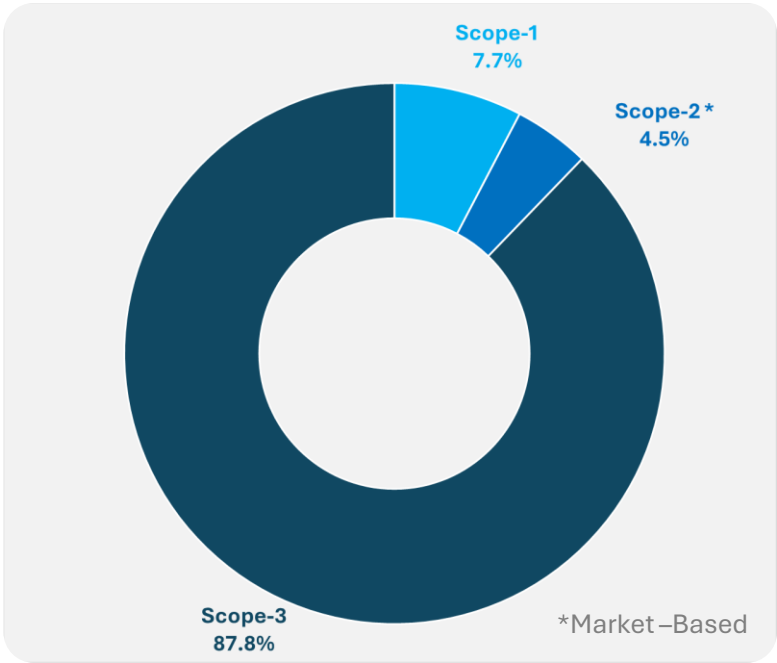
And Scope 3 emissions are accounted for, encompassing emissions across our entire value chain, from supplier activities to product use and disposal. Recognizing that Scope 3 emissions often represent the largest portion of our carbon footprint, we are working to collaborate with suppliers, optimize operations, and engage stakeholders throughout our supply chain.

This report reflects our dedication to transparency and our ongoing efforts to meet industry standards, particularly aligning with the GHG Protocol, while advancing our sustainability initiatives to mitigate climate impact.

Our Carbon Footprint Overview

Scope	FY 23	FY 24
Scope-1	57,816	58,254
Scope-2 (Market Based)	57,974	34,519
Scope-3	6,25,236	6,66,694
Total Emissions	7,41,026	7,59,467

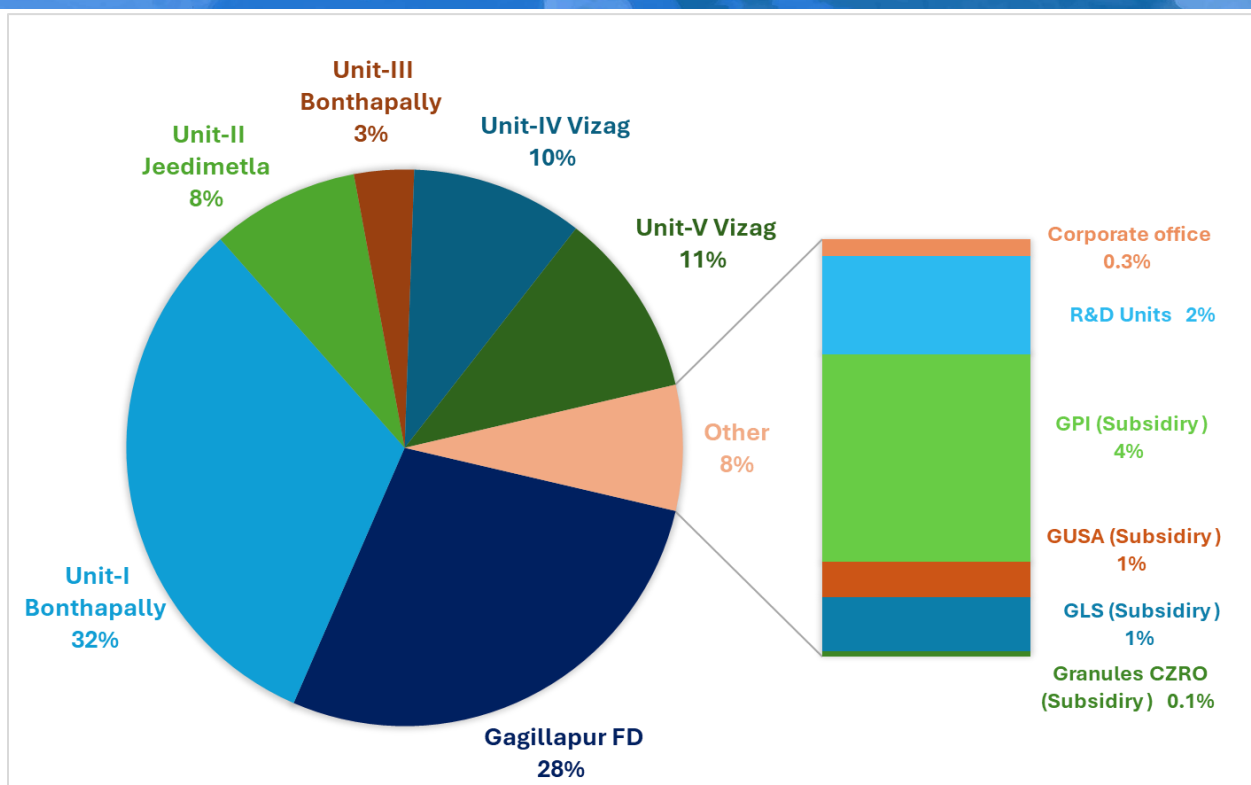
All Values in Tons of CO₂ equivalent



Our Carbon Footprint –Detailed View

Granules GHG Emission Profile , tCo2 eq		Emission Profile For FY 2022-23			Emission Profile For FY 2023-24		
Scope	Emission Category	GIL Standalone	GIL-All Subsidiaries	GIL Consolidated	GIL Standalone	GIL-All Subsidiaries	GIL Consolidated
Scope-1	Direct emissions from sources owned or controlled by a company (Coal, Fuels)	56,265	1,551	57,816	56,254	2,001	58,254
Scope-2 (Market-Based)	Indirect emissions from the generation of purchased energy (Electricity)	56,306	1,668	57,974	31,632	2,886	34,519
Scope-2 (Location -Based)	Indirect emissions from the generation of purchased energy (Electricity)	62,433	1,668	64,101	60,191	2,886	63,078
	Scope-1+2 Total	1,12,571	3,219	1,15,790	87,886	4,887	92,773
Scope-3	Category 1 - Purchased Goods & Services	4,95,807	882	4,96,689	5,14,516	5,292	5,19,808
Scope-3	Category 2 - Capital Goods	4,705	465	5,170	10,265	18,565	28,830
Scope-3	Category 3 - Fuel and Energy Related Activities	26,788	403	27,191	22,579	875	23,453
Scope-3	Category 4 - Upstream Transportation & Distribution	8,392	33	8,425	8,557	83	8,640
Scope-3	Category 5 - Waste Generated from Operations	2,992	1,625	4,618	3,571	150	3,721
Scope-3	Category 6 - Business Travel	295	37	332	850	81	931
Scope-3	Category 7 - Employee Commuting	1,476	314	1,790	1,571	518	2,089
Scope-3	Category 8 - Upstream Leased Assets	587	4,205	4,792	1,628	6,153	7,781
Scope-3	Category 9 - Downstream Transportation & Distribution	22,381	3,131	25,512	24,827	1,097	25,924
Scope-3	Category 10 - Processing of Sold Products	46,658	-	46,658	41,187	1	41,188
Scope-3	Category 11 - Use of Sold Products	-	-	-	-	-	-
Scope-3	Category 12 - End of Life Treatment of sold products	4,031	28	4,059	4,287	43	4,330
Scope-3	Category 13 - Downstream Leased Assets	-	-	-	-	-	-
Scope-3	Category 14 - Franchises	-	-	-	-	-	-
Scope-3	Category 15 - Investments	-	-	-	-	-	-
	Scope-3 Total	6,14,113	11,123	6,25,236	6,33,837	32,857	6,66,694
Total Emissions - Scope 1, Scope 2 (marked Based) and Scope 3		7,26,684	14,342	7,41,026	7,21,723	37,744	7,59,467

Scope 1 and Scope 2: Analysis by site (FY 23-24)

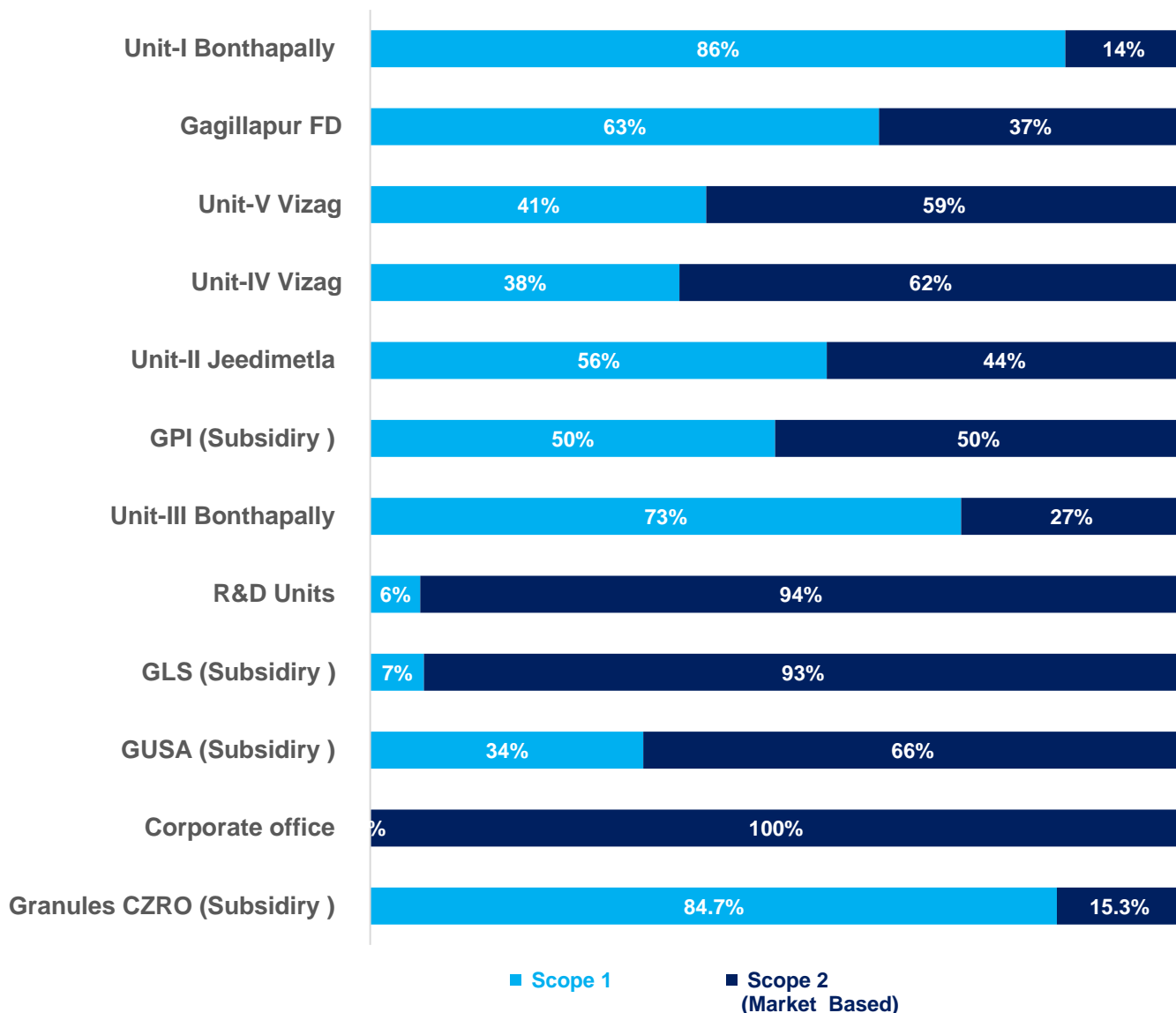


Unit & Location	Scope 1 tCo2e	Scope 2 , tco2e (Market Based)	Total (Scope 1 +Scope 2 Market based)
Gagillapur FD	16,227	9,644	25,871
Unit-I Bonthapally	25,402	4,240	29,641
Unit-II Jeedimetla	4,484	3,482	7,966
Unit-III Bonthapally	2,351	876	3,227
Unit-IV Vizag	3,540	5,746	9,286
Unit-V Vizag	4,152	5,867	10,019
Corporate office	-	272	272
R&D Units	99	1,504	1,603
GPI (Subsidiary)	1,673	1,679	3,352
GUSA (Subsidiary)	196	386	582
GLS (Subsidiary)	57	808	866
Granules CZRO (Subsidiary)	74	13	87
Total - Scope 1 +Scope 2 (Market Based) , tCo2 e	58,254	34,519	92,773

Scope2 as per market-based method

The market-based method reflects the renewable adoption through power purchase agreement (PPA), solar roof top at site and purchase of Energy Attribute Certificates (EAC) through International Renewable Energy Certificates (IREC).

Scope 1 and Scope 2: Analysis by site (FY 23-24)



Unit wise Profile -Scope1 and Scope 2 Emissions (Marked Based Method)

Scope2 as per market-based method

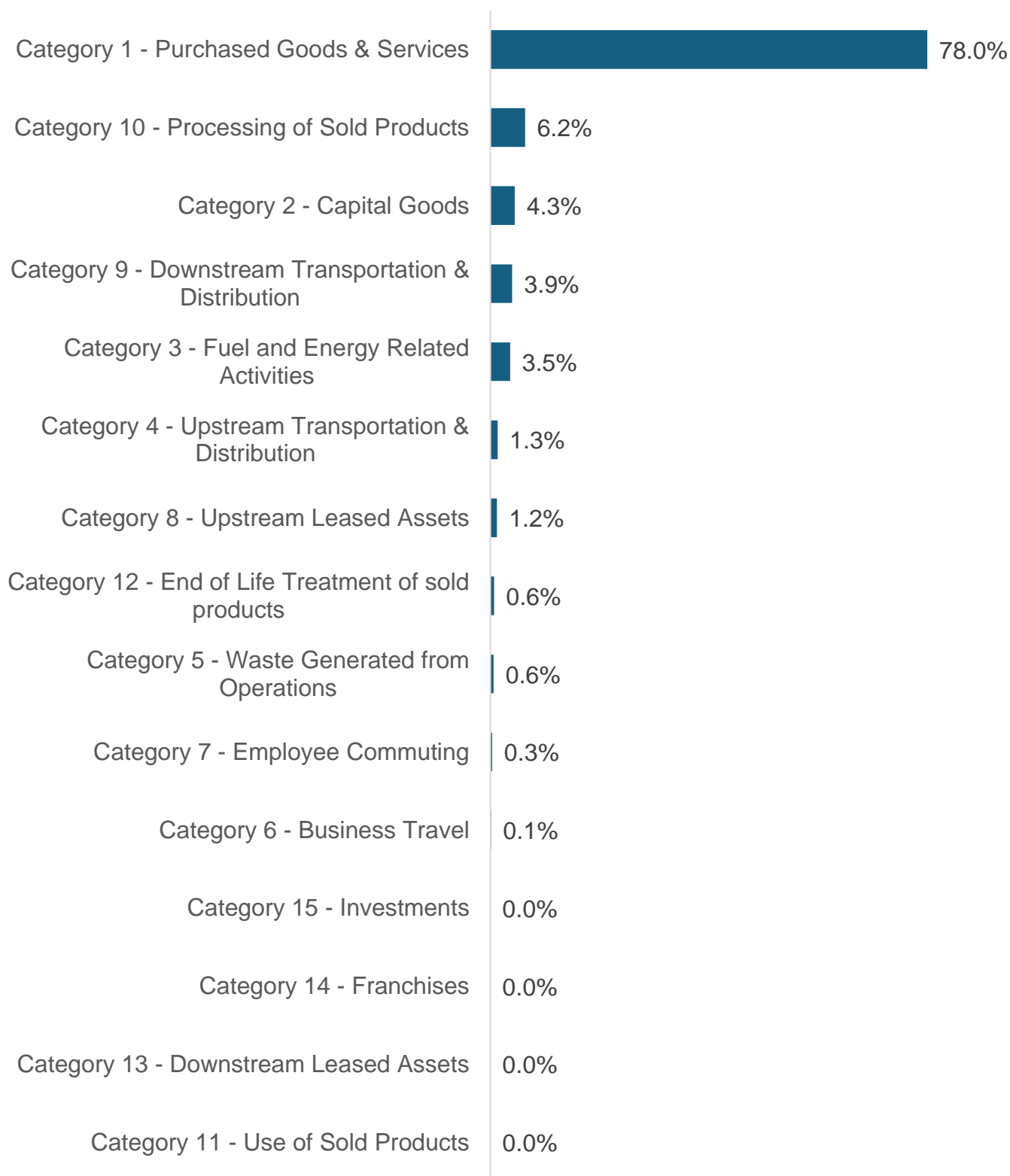
The market-based method reflects the renewable adoption through power purchase agreement (PPA), solar roof top at site and purchase of Energy Attribute Certificates (EAC) through International Renewable Energy Certificates (IREC).

Scope 3:

Analysis by category (FY 23-24)

Scope -3 Category	GHG Emission, tCo2 eq
Category 1 - Purchased Goods & Services	5,19,808
Category 10 - Processing of Sold Products	41,188
Category 2 - Capital Goods	28,830
Category 9 - Downstream Transportation & Distribution	25,924
Category 3 - Fuel and Energy Related Activities	23,453
Category 4 - Upstream Transportation & Distribution	8,640
Category 8 - Upstream Leased Assets	7,781
Category 12 - End of Life Treatment of sold products	4,330
Category 5 - Waste Generated from Operations	3,721
Category 7 - Employee Commuting	2,089
Category 6 - Business Travel	931
Category 11 - Use of Sold Products	-
Category 13 - Downstream Leased Assets	-
Category 14 - Franchises	-
Category 15 - Investments	-
Total Scope - 3	6,66,694

Scope 3: Analysis by category (FY 23-24)



ESG Goals (Short to Mid-Term)



Climate and Environment Targets

Short to Mid-term

Granules' climate goal aligned with the science-based target for limiting global warming to a 1.5°C temperature goal.

- Reduce Scope 1 and Scope 2 absolute emissions by 42% by FY 30 from FY 23 baseline
- Reduce Scope 3 absolute emission by 42% by FY 30 from FY 23 baseline
- Adopt supplier's sustainability framework and encourage strategic suppliers to set science-based emission reduction targets by FY 27
- Energy intensity reduction by 20% by FY 27
- Water intensity reduction by 27% by FY 27
- 27% reduction in waste to landfill by FY 27
- Increase renewable energy mix in electricity consumption.
 - Commission 1MW rooftop solar plant at Gagillapur unit by FY 25.
 - Increase renewable energy purchases through PPA across our plants.
 - Complete techno-commercial feasibility of alternate fuels for boilers for Bonthapally and Gagillapur
 - Develop an Internal Carbon Pricing (ICP) by FY 25.
- Increase coprocessing of waste to 95% by FY 26.
- Conduct water risk assessment and develop a water stewardship plan by FY 25.
- Conduct climate risk analysis for all facilities and strategic suppliers by FY 25.
- Conduct climate risk analysis using the Task Force on Climate-related Financial Disclosures (TCFD) recommendations and integrate major physical and transitional risks with Granules' Enterprise Risk Management (ERM) framework.
- Roll out supplier sustainability framework, identify strategic suppliers, and engage them to adopt and share climate targets by FY 25.
- Develop a green packaging strategy by FY 25.


Social Targets

Short to Mid-term

- Occupational health and safety:
 - Foster a safety-first culture and Target zero workplace fatality
 - Identify and execute projects to improve workplace safety parameters to the best in class- such as incident rate, Lost Time Injury Frequency Rate (LTIFR) etc.
- Employee Engagement:
 - Drive employee engagement for measurable outcomes
- Human Capital development:
 - Identify mandatory training and ensure 100% compliance
 - Target to be in the top quartile in the pharmaceutical industry on L&D parameters
- Community impact, relations and development:
 - Drive health, skilling, environmental sustainability, and Volunteering as part of CSR activity
 - Touch 1 million lives through CSR programs by FY2030
- Access, Diversity and Inclusion:
 - Achieve gender pay parity by FY2030
 - All plants to be made accessible for physically challenged people
 - Ensure equal opportunity in selection and promotion
- Occupational health and safety:
 - Target zero workplace fatality by identifying set of safety related lead indicators and improving over previous year
 - 10% Y-o-Y reduction in the Lost Time Injury Frequency Rate (LTIFR)
- Employee well-being:
 - Expand employee health and wellness program. Initiate mental health program including access to psychological counselling.
- Human Capital development:
 - Identify mandatory training and ensure 100% compliance
 - Target 24 hours (3 days) of training and development per employee per year
- Community impact, relations and development:
 - Drive health, skilling, environmental sustainability, and Volunteering as part of CSR activity
 - Conduct CSR impact assessment and improve the number of lives impacted by 50%
- Access, Diversity and Inclusion:
 - All plants to be made accessible for physically challenged people
 - Ensure equal opportunity in selection and promotion
 - Develop a process for increasing the pool of women in the CV sourcing and screening stage of recruitment

Governance Targets Short to Mid-term

- Business ethics and integrity:
 - Conduct awareness programs and mandatory code of conduct training
 - Ethical business conduct and Zero tolerance to violations through robust culture building and training.
- Sustainability governance:
 - Adopt sustainability governance across the organization and integrate with the ERM framework
 - Transparency through disclosures on various ESG reporting platforms
- Data privacy and cyber security:
 - Conduct an annual third-party vulnerability threat assessment, IT & OT security Gap & Convergence Assessment
 - Ensure Zero data privacy and cyber security breaches
 - Target ISO 27001 certification by year FY2027
 - Conduct annual cyber safety awareness & refresher program for the targeted audience within the organization and ensure 100% coverage
- Business ethics and integrity:
 - Conduct awareness programs and mandatory code of conduct training
 - Ethical business conduct and Zero tolerance to violations through robust culture building and training.
- Sustainability governance:
 - Adopt sustainability governance across the organization and integrate with ERM framework
- Data privacy and cyber security:
 - Conduct annual vulnerability threat assessment, and IT & OT security Gap & Convergence Assessment
 - Conduct cyber safety awareness program for targeted audience within the organization and ensure 100% coverage



GHG Quantification Methodology

GHG Quantification Methodology

SCOPE 1 - QUANTIFICATION METHODOLOGY

For calculating scope 1 emissions, we have included data pertaining to three categories:

Fugitive emissions from refrigerants

A 'purchase-based approach' has been used to arrive at the activity data for the consumption of refrigerants. To calculate fugitive GHG emissions, the Intergovernmental Panel on Climate Change (IPCC) and DEFRA emission factors have been referenced.

Stationary combustion

The key fuel sources considered for arriving at the activity data are furnace oil, coal, HSD, Natural gas, gasoline. To quantify emissions, the relevant guidelines from IPCC and Department for Environment, Food and Rural Affairs (DEFRA) have been referenced for emission factors.

Wastewater

Most of our Manufacturing units sending the Wastewater to Third party CETPs (common effluent treatment plants for treatment) for treatment and Disposal. Hence Emissions from Transportation and Treatment of Effluent is captured at Relevant category of SCOPE-3 i.e Category 5:Waste Generated in Operations

SCOPE 2 - QUANTIFICATION METHODOLOGY

Scope 2 emissions data encompasses activity data from grid electricity consumption. We have adopted a location-based approach for selecting the emission factors, due to unavailability of source-specific emission factors. For the Estimation of Scope-2 Emissions, we have adopted emission factors published by Central Electricity Authority of India.

SCOPE 3 QUANTIFICATION METHODOLOGY

We have aligned our methodology to GHG accounting standard & ISO 14064 (Guidance on quantification and reporting of greenhouse gas emissions) . Due to variation in data availability & nature of category, we have used different methodologies for different categories.

GHG Quantification Methodology

Scope 3 Category No	Scope 3 Category Description	Methodology
1	Purchased Goods and Services	Supplier-specific method Hybrid method
2	Capital Goods	Hybrid method Average-product method
3	Fuel- and Energy-Related Activities	Average-data method
4	Upstream Transportation and Distribution	Distance-based method
5	Waste Generated in Operations	Waste-type-specific method
6	Business Travel	Distance-based method
7	Employee Commuting	Fuel-based method
8	Upstream Leased Assets	Lessor-specific method
9	Downstream Transportation and Distribution	Distance-based method
10	Processing of Sold Products	Average-data method
11	Use of Sold Products	Not Applicable, as this category is not relevant
12	End-of-Life Treatment of Sold Products	Average-data method
13	Downstream Leased Assets	Not Applicable, as this category is not relevant
14	Franchises	Not Applicable, as this category is not relevant
15	Investments	Not Applicable, as this category is not relevant

Category 1 -Purchased Goods and Services

At Granules, the majority of our purchased goods and services emissions originate from Active Pharmaceutical Ingredients (APIs) , Key Startup Materials (KSMs) .Solvents and Packaging materials .Key raw materials include PAP, Acetic Anhydride, DCDA, Ibuprofen and Metformin HCL Etc..

Methodology Used: Supplier-specific method & Hybrid method using the Primary and Secondary data.

GHG Quantification Methodology

Category 2 -Capital Goods

At Granules, the majority of our capital goods emissions originate from purchase of pharma manufacturing equipment's . Granules procures many capital goods that aid its operations of producing API, PFI and finished dosages. Key capital goods include compression machines, tablet printing machines, coating granulators, air receiver tanks etc.,

Methodology Used: Hybrid method &Average-product method using the Primary and Secondary data.

Category 3 - Fuel- and Energy-Related Activities

At Granules, we consume the electricity and fuels like Coal, HSD, Furnace oil etc in the manufacturing operations of pharmaceutical products. Hence the majority of our Fuel and Energy related activities emissions originate from generation and transmission of electricity from grid and extraction, exploration, production and transportation of the fuels like Coal, Diesel, Furnace oil.

Methodology Used: Average-data method using the Primary data.

Calculation formula Upstream CO2e emissions of purchased fuels (extraction, production, and transportation of fuels : $\Sigma (\text{fuel consumed (e.g., kWh)} \times \text{upstream fuel emission factor (kg CO2e)/kWh})$

Source of Emission Factors Used: India Specific Road Transport Emission Factors, India GHG Program, 2015 & Ecolnvent

Category 4 - Upstream Transportation and Distribution

At Granules, the majority of our upstream transportation and distribution emissions generated during the transportation of all materials like APIs ,RM ,KSMs ,Packaging materials etc used in your pharmaceutical product manufacturing. Majority of the suppliers of raw materials, packing materials and MRO (Maintenance, Repair & Operations) items used in the manufacturing of our products are situated in India and China. RM and PM are usually transported from the suppliers / traders' site by sea and road with air shipments constituting a small share of the inbound shipments.

Methodology Used: Distance-based method using the Primary data.

Calculation formula Distance-based method (transportation):

sum across transport modes and/or vehicle types:

$= \Sigma (\text{mass of goods purchased (tonnes or volume)} \times \text{distance travelled in transport leg (km)} \times \text{emission factor of transport mode or vehicle type (kg CO2e/tonne or volume/km)})$

Source of Emission Factors Used: India Specific Transport Emission Factors, India GHG Program, 2015 & DEFRA

GHG Quantification Methodology

Category 5 - Waste Generated in Operations:

At Granules, the majority of our "Waste generated in operations" emissions generated during the transportation, treatment, disposal of Waste and Wastewater generated in the pharmaceutical manufacturing process.

As a company that produces pharmaceutical APIs, PFIs and finished dosages, we generate and dispose waste under two categories namely liquid waste (effluent) and solid waste. Solid waste is further divided into sub-categories basis the chosen disposal methods.

Effluent waste undergoes primary treatment within Granules' premises and is then disposed to Central Effluent Treatment Plants (CETPs). The methods of treatment of various solid wastes are described below.

All the figures for absolute emissions include both emissions due to transportation of the waste to respective 3rd party treatment facilities and emissions due to treatment of the waste in such facilities

Methodology Used: Waste-type-specific method using the Primary Data

Calculation formula Waste-type-specific method:

$\Sigma (\text{waste produced (tonnes or m}^3) \times \text{waste type and waste treatment specific emission factor (kg CO}_2\text{e/tonne or m}^3))$

Source of Emission Factors Used: EcolInvent, USEPA and other Emission factors from Secondary Research Reports

Category 6 - Business Travel

At Granules, the majority of our "business travel" emissions generated during the travelling (by road, by train, by air, including local travel by bus, car, auto etc) and staying during the business visits like meetings, conferences, site visits, and training sessions.

Primary modes of transportation used by employees during business travel are flights and cars for which company authorized travel service partners are available. Employees also use trains, buses and hotels during business travel for which they are reimbursed at actuals basis rules outlined in the company travel policy guidelines

Methodology Used: Distance-based method using the Primary data

Calculation formula Distance-based method:

$\Sigma (\text{distance travelled by vehicle type (vehicle-km or passenger-km)} \times \text{vehicle specific emission factor (kg CO}_2\text{e/vehicle-km or kg CO}_2\text{e/passenger-km)})$

Source of Emission Factors Used: India Specific Transport Emission Factors, India GHG Program, 2015 & DEFRA

GHG Quantification Methodology

Category 7 - Employee Commuting

At Granules, the majority of our "employee commuting" emissions generated through employees travel between home and workplaces by various modes of transportation used by employees such as company provided bus, employee-owned vehicles like two-wheeler, car and public transport like bus, Metro train, Auto etc.

Methodology Used: Fuel-based method & Distance-based method using the Primary data

Calculation formula Distance-based method:

total distance travelled by vehicle type (vehicle-km or passenger-km)
$$= \sum (\text{daily one-way distance between home and work (km)} \times 2 \times \text{number of commuting days per year})$$

Source of Emission Factors Used: India Specific Transport Emission Factors, India GHG Program, 2015 & DEFRA

Category 8 - Upstream Leased Assets:

At Granules, the majority of our "upstream leased assets" emissions generated from Leased Warehouses, Guest house/Hostels, Laptops etc. Granules has taken warehouses, hostels and IT assets on lease basis. The emissions from the utilisation of these assets for operations of Granules been estimated in this category.

Methodology Used: Lessor-specific method using the Primary data

Calculation formula Lessor-specific method:

$$\sum (\text{scope 1 and scope 2 emissions of lessor (kg CO}_2\text{e) area, volume, quantity, etc., of the leased asset} / \text{total area, volume, quantity, etc., of lessor assets})$$

Source of Emission Factors Used: India Specific Transport Emission Factors, India GHG Program, 2015, DEFRA & EcolInvent

Category 9 - Downstream Transportation and Distribution

At Granules, The majority of our downstream transportation and distribution emissions generated during the transportation of Finished dosage formulations, Pharmaceutical formulation Ingredients (PFIs) and Active Pharmaceutical Ingredients (APIs). Majority of the customers of Granules India Limited are concentrated in Europe, Americas and Australia. Typical products include API (Active Pharmaceutical Ingredient), PFI (Pharmaceutical Formulation Intermediate) and Finished Dosage (FD) that are primarily shipped to customers via sea and air. For domestic customers, sales

GHG Quantification Methodology

Methodology Used: Distance-based method using the Primary data.

Calculation formula *Distance-based method (transportation):*

sum across transport modes and/or vehicle types:

$$= \sum (\text{mass of goods purchased (tonnes or volume)} \times \text{distance travelled in transport leg (km)} \times \text{emission factor of transport mode or vehicle type (kg CO}_2\text{e/tonne or volume/km)})$$

Source of Emission Factors Used: India Specific Transport Emission Factors, India GHG Program, 2015 & DEFRA

Category 10 - Processing of Sold Products:

Granules India Limited Manufactures Active Pharmaceutical Ingredients (API) and Pharmaceutical Formulation Intermediates (PFIs) which are sold to other pharma. companies that transform them further into Finished Dosage (FD) for use by end consumers.

Methodology Used: Average-data method using the Secondary data.

Calculation formula *Average-data method:*

$$\sum (\text{mass of sold intermediate product (kg)} \times \text{emission factor of processing of sold products (kg CO}_2\text{e/kg of final product)})$$

Category 12 - End-of-Life Treatment of Sold Products

Granules India Limited sells a mix of Active Pharmaceutical Ingredients (API), Pharmaceutical Formulation Intermediates (PFI) and Finished Dosages (FD) to its customers. We have accounted for treatment of waste from processing of sold APIs / PFIs to FD by our customers. We have further accounted for the packaging waste disposed once finished dosages, produced by Granules India Ltd., are consumed by our customers

Methodology Used: Average-data method using the Secondary data.

Source of Emission Factors Used: US EPA Emissions factors hub, 2023,

GHG Quantification Methodology

Exclusions:

Category 12 - Use of Sold Products: This category is not relevant to Granules operations, all the final products are consumed by the end users

Category 13 - Downstream Leased Assets: This category is not relevant to Granules as there are no downstream leased assets.

Category 14 - Franchises: This category is not relevant to Granules as there are no Franchises.

Category 14 – Investments: This category is not relevant to Granules as there are no Investments

UNCERTAINTY:

The GHG emissions reported for Scope 1, Scope 2, and Scope 3 include inherent uncertainties due to estimation methodologies and data limitations. For Scope 1 and Scope 2 emissions, which cover direct and energy-related emissions under our operational control, uncertainties are minimized through direct measurement and utility data; however, minor variability may occur due to the accuracy of fuel and electricity data collection methods

Scope 3 emissions reporting for Granules involves inherent uncertainties due to the complexity and variability of the data sources across the value chain. Since these emissions largely depend on activities outside Granules' direct control—such as supplier operations, product transport, and end-of-life treatment—estimating them accurately presents significant challenges. Data reliability issues, varying supplier reporting practices, limited primary data availability, and the use of industry averages or estimation models contribute to this uncertainty.

Granules recognizes these limitations and is committed to continuously refining its data collection and estimation processes. Through engagement with suppliers, adoption of advanced calculation methodologies, and leveraging of more accurate data sources, Granules aims to improve the accuracy of its Scope 3 inventory over time, thereby enhancing its alignment with the GHG Protocol requirements and supporting its broader sustainability goals.



Assurance Report



INDEPENDENT ASSURANCE OPINION STATEMENT

To: Board Committee – Sustainability and CSR of Granules India Limited.

Holds Statement No.: **769272-2**

The British Standards Institution (**BSI**) has conducted a limited assurance engagement on the sustainability information (described in the "Scope") in the **Granules Sustainability Report 23-24 of Granules India Limited**.

Scope

The scope of engagement agreed upon with Granules India Limited includes the following:

The assurance covers the information of ESG matters in the Granules Sustainability Report 23-24, for the reporting period 1st April 2023 to 31st March 2024.

The reported information is reported in accordance "with reference reporting" to GRI Standards 2021.

[The details of subject matters and their boundaries within the scope is described in Appendix A and Appendix B in this independent assurance opinion statement].

Opinion Statement

We have conducted a limited assurance engagement on the sustainability information described in **Granules Sustainability Report 23-24 for the reporting period 1st April 2023 to 31st March 2024**.

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the accompanying Sustainability Information is not prepared, in all material respects, with reference reporting to GRI Standards 2021.

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Methodology

Our assurance engagements were carried out in accordance with ISAE3000 (Revised). Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a top-level review of issues raised by external parties that could be relevant to Granule's policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers and staffs on Granule's approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- document review of relevant systems, policies, and procedures where available
- review of supporting evidence for claims made in the reports.
- review of key organizational developments

Responsibility

Granules India Limited is responsible for the preparation and fair presentation of the sustainability information and report in accordance with the agreed criteria. BSI is responsible for providing an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Independence, Quality Control and Competence

BSI is independent to Granules India Limited and has no financial interest in the operation of Granules India Limited other than for the assurance of the sustainability statement contained in the report.

This independent assurance opinion statement has been prepared for the stakeholders of Granules India Limited only for the purposes of verifying its statements relating to its environmental, social and governance (ESG) more particularly described in the Scope above.

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This independent assurance opinion statement is prepared on the basis of review by BSI of information presented to it by Granules India Limited. In making this independent assurance opinion statement, BSI has assumed that all information provided to it by Granules India Limited is true, accurate and complete. BSI accepts no liability to any third party who places reliance on this statement.

BSI applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021-1:2015 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

BSI is a leading global standards and assessment body founded in 1901. The BSI assurance team has extensive experience in conducting verification over environmental, social and governance (ESG), and GRI Universal Standard 2021, ISO 14001, ISO 45001, ISO 14064, ISO 50001, and ISO 9001, etc.

Issue Date: 24-09-2024

For and on behalf of BSI:

Srinivasa Babu Nagaraj

Lead Assurer

Theuns Kotze, Managing Director – IMETA Assurance

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Appendix A: [Data of subject matters within the scope].

List of material topics:

GRI 2: General Disclosures 2021 – 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 2-10, 2-11, 2-12, 2-13, 2-14, 2-15, 2-16, 2-17, 2-18, 2-22, 2-23, 2-24, 2-25, 2-26, 2-27, 2-28, 2-29
GRI 3: Material Topics 2021 3-1 Process to determine material topics, 3-2 List of material topics, 3-3 Management of material topics.
GRI 205: Anti-corruption 2016 - 205-1, 205-2, 205-3
GRI 302: Energy 2016 - 302-1, 302-3, 302-4, 302-5
GRI 303: Water and Effluents 2018- 303-1, 303-2, 303-3, 303-4, 303-5
GRI 305: Emissions 2016- 305-1, 305-2, 305-3, 305-4, 305-5, 305-7
GRI 306: Waste 2020 - 306-1, 306-2, 306-3, 306-4, 306-5
GRI 401: Employment 2016- 401-1, 401-2, 401-3
GRI 403: Occupational Health and Safety 2018 - 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10,
GRI 404: Training and Education 2016 - 404-1, 404-2, 404-3
GRI 405: Diversity and Equal Opportunity 2016 - 405-1
GRI 406: Non-discrimination 2016 - 406-1
GRI 413: Local Communities 2016 - 413-1
GRI 416: Customer Health and Safety 2016 - 416-1, 416-2
GRI 418: Customer Privacy 2016- 418-1

Appendix B: List of locations from the boundaries of Granules sustainability report 23-24

Plants in India	Location
Corporate office	2nd Floor, 3rd Block, My Home Hub, Madhapur, Hyderabad- 500 081 - Telangana State, India.
Finished Dosage Unit	160/A, 161/E, 162 & 174/A, Gagillapur Village, Dundigal Gandimaisamma Mandal, Medchal-Malkajgiri District – 500 043, Telangana State, India.
API Unit – I	Sy. No. 533, 535, 536, 537 Temple Road, Bonthapally Village, Gummadidala Mandal, Sangareddy District – 502 313, Telangana State, India
API Unit – II	Plot No. 15A/1, Phase III, IDA Jeedimetla, Qutubullapur Mandal, Medchal-Malkajgiri District, Hyderabad – 500 055, Telangana State, India.
API Unit – III	Sy.No.216, Bonthapally Village, Gummadidala Mandal, Sangareddy District – 502 313, Telangana State, India.
API Unit – IV	Plot No 8, J.N. Pharma City, Tadi Village, Parawada Mandal, Anakapalli District – 531 019, Andhra Pradesh, India.
API Unit – V	Plot No. 30, J. N. Pharma City, Parawada Mandal, Anakapalli District – 531 019, Andhra Pradesh, India

R&D Centers	Location
1	Plot No. 56, Road No. 5, ALEAP Industrial Area, Pragathi Nagar, Gajularamaram Village, Qutbullapur Mandal, Medchal-Malkajgiri District, Hyderabad – 500 072, Telangana State, India.
2	Survey Nos. 234/1 to 4 and 6 to 7, 235 /6 to 9 and 245/1 to 3, India Land Global Industrial Park, Hinjewadi Phase -1, Mulshi Taluka, Pune District – 411 057, Maharashtra State, India
3	H.No.5-33, Sy No.352, Plot No. 8, Road No. 2, ALEAP Industrial Area, Pragathi Nagar, Gajularamaram village, Qutbullapur Mandal, Medchal- Malkajgiri District, Hyderabad – 500 072, Telangana State, India.
4	Lab No: 11 & 13, Building No:1800, Sy No. 101,101/2 & 340, M. N. Park, Genome Valley, Lalgadi Malakpet Village, Shameerpet Mandal, Medchal- Malkajgiri District, 500 078, Telangana State, India.



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