



SCOPE-3 CARBON FOOTPRINT REPORT

Jyotindra International

FY 2025-26

ABOUT THIS REPORT

This report outlines the carbon footprint generated by the operations of Jyotindra International in FY 2025-26 through the assessment of greenhouse gas (GHG) emissions. It covers most material categories from Scope 3 emissions. Activity data were collected from the company's internal records and relevant supporting sources. All the data collected and analyzed within this report follow The Greenhouse Gas Protocol outlined by the World Resources Institute (WRI) and ISO 14064-1: 2018 – Greenhouse gases – Part 1, maintaining a high standard of accuracy and transparency in emissions measurement, management, and reporting processes.

CARBON FOOTPRINT REPORT FY 2025-26

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**Jyotindra International**

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Report Approved by

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ABBREVIATIONS & ACRONYMS

BY	Base Year
CEA	Central Electricity Authority
CO₂	Carbon Dioxide
CO₂e⁻	Carbon Dioxide Equivalent
DEFRA	Department for Environment, Food and Rural Affairs
D.G.	Diesel Generator
EPA	Environment Protection Agency
GHG	Greenhouse Gases
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standard Organization
kWh	Kilowatt Hour
L	Liter
LPG	Liquefied Petroleum Gas
mt	Metric Tons
mtCO₂e⁻	Metric Tons Carbon Dioxide Equivalent
tCO₂e⁻	Ton of Carbon Dioxide Equivalent
WRI	World Resources Institute

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CEO/CSO/MD/CHAIRMAN MESSAGE

At Jyotindra International, our commitment to quality and customer satisfaction has been the foundation of our journey since our establishment in 1973. As a leading manufacturer, supplier, and exporter of Psyllium and Senna-based products, we play an important role in delivering high-quality herbal and agricultural solutions to global markets.

Our mission is to consistently provide products that meet and exceed customer expectations, supported by strong values of integrity, professionalism, and service excellence. Over the years, we have built robust manufacturing and processing capabilities, ensuring that our products maintain the highest standards of purity, quality, and reliability across diverse applications, including food and pharmaceutical industries.

This report provides a transparent overview of our emissions, covering all scopes, from raw material sourcing to manufacturing and distribution. It highlights our progress and identifies areas where we can further improve. We are proud of the steps we have taken, yet we understand that this journey is ongoing. As we continue to innovate and expand, sustainability remains a core pillar of our growth strategy.

We view this report as more than just a document; it is a call to action. It is a call to action for continuous improvement and collaboration across the industry. We welcome your feedback and look forward to working together to create a more sustainable future, where industrial progress aligns with environmental responsibility.

Partner

Jyotindra International

1. EXECUTIVE SUMMARY

Jyotindra International recognizes its role in working to conserve the environment while satisfying the needs of its clients and aims to take proactive steps to be part of the solution by assessing its carbon footprint and disclosing emissions from its operations. The carbon footprint report for FY 2025 – 2026 evaluates various operational activities based on the GHG Protocol and ISO 14064-1 standard, highlighting the company's dedication to sustainability.

1.1 CARBON FOOTPRINT RESULTS SUMMARY

Despite a steady increase in production volumes at Jyotindra International during the reporting periods, the company has maintained its focus on monitoring and managing emissions while supporting business growth.

SCOPE-WISE GHG EMISSIONS:

The summary of greenhouse gas (GHG) emissions by different scopes within the reporting boundary for FY 2025-26 is presented below:

Table 1: Scope-wise GHG emissions

Source/Scope	Emissions in tCO ₂ e ⁻ FY 2025-26
Scope-3	24,791.12
Total GHG Emissions (Scope-3)	24,791.12

Table 2: Carbon Removals & Avoided Emissions (FY 2025-26)

Environmental Initiative	tCO ₂ e ⁻
Renewable Energy — Rooftop Solar	352.38
Renewable Energy – Ground-Mounted Solar	597.33
On-site Tree Carbon Sequestration	37.27
Total Avoided / Sequestered	986.95

1.2 CATEGORY-WISE GHG EMISSION

The below table provides a breakdown of GHG emissions for the reporting period:

Table 2: Category-wise GHG emissions (FY 2025-26)

Scope	Category	Emissions (tCO ₂ e) (FY 2025-26)
Scope-3	Purchased Goods & Services	7703.17
	Capital Goods	0.19
	Fuel- and Energy-Related Activities	121.53
	Upstream Transportation & Distribution	531.42
	Operational Waste	0.03
	Business Travel	2.62
	Employee Commuting	55.77
	Downstream Transportation & Distribution	11743.53
	Processing of Sold Products	4632.86
	Total	24791.12

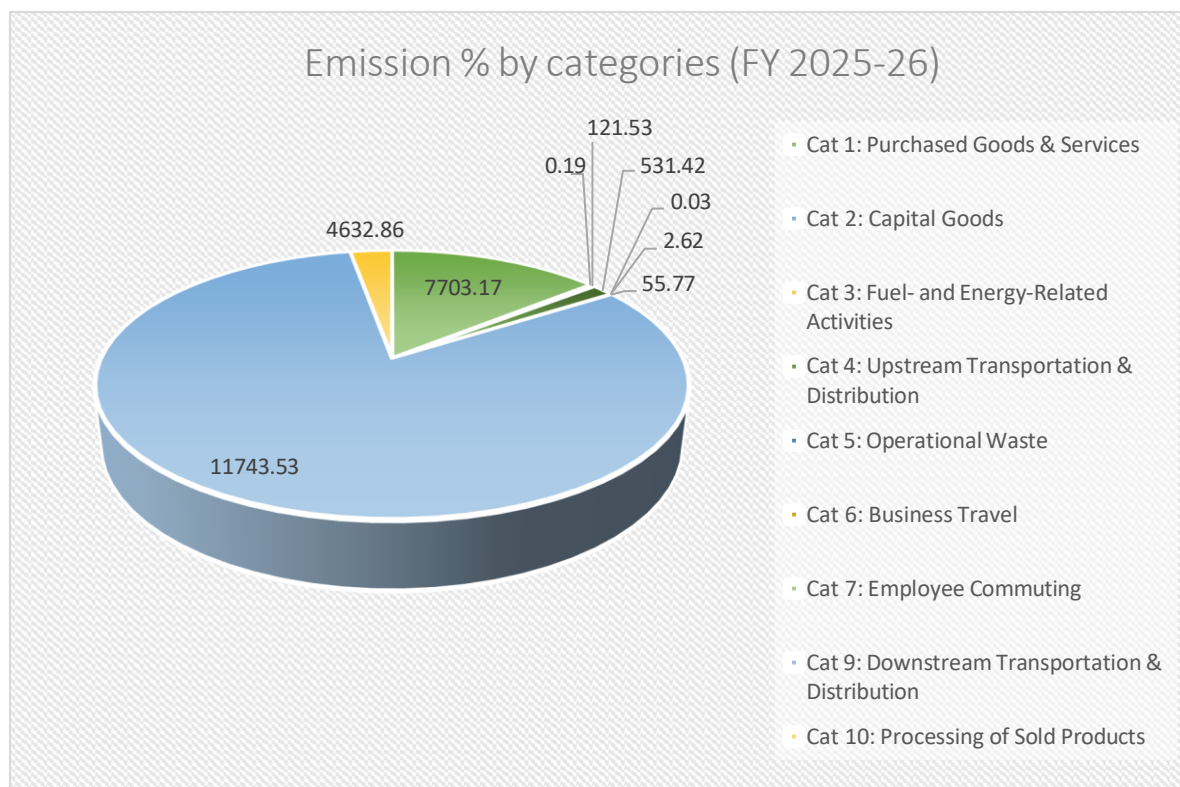


Figure 1: GHG emission % by categories (FY 2025-26)

1.3 GHG EMISSION INTENSITY

GHG EMISSION INTENSITY PER EMPLOYEE:

The details for GHG emissions intensity for FY 2025-26 are assessed as follows:

Table 3: GHG Emission Intensity per employee (FY 2025-26)

Site	Number of Employees	Total Absolute GHG Emissions (Scope-3)	Total GHG Emission Intensity per employee (mtCO ₂)- Scope-3
Jyotindra International	50	24,791.12	495.82

2. INTRODUCTION

At the current global rate of consumption, humans are depleting natural resources at a faster pace than they are replenished, leading to a projected need to satisfy our needs by 2030. To address this challenge, it is imperative to reduce carbon emissions.

Jyotindra International is hereby presenting its carbon footprint assessment for FY 2025-26, aimed at quantifying and evaluating the company's greenhouse gas (GHG) emissions. This assessment serves as a means to establish benchmarks for GHG emissions performance indicators and to track progress over time.

2.1 About Jyotindra International

Jyotindra International proud to be leading manufacturer and supplier of Psyllium/Senna and its related Products like Psyllium Seeds, Psyllium Husk, Psyllium Husk Powder, Senna Leaves, Senna Pods and Senna Powder etc.

The dream was shared by a couple of people with professionalism and vision. They joined their hands together to make this a reality by forming and founding a venture called “Jyotindra Group” in 1973.

Jyotindra Group stands for quality and excellence from the first day of its establishment. The group as it is seen today was established by the group Chairman, Mr. Jyotindra. He is a man with a great vision and has motivated this organization to reach this height of achievements.

Company Overview

Jyotindra International stands on a strong foundation of integrity, innovation, and excellence. Our strength lies in our well-established infrastructure, experienced team, and a clear vision for sustainable growth. With years of expertise in the herbal export industry, we understand global quality expectations and regulatory standards.

We operate with a forward-looking approach, constantly upgrading our systems, technology, and processes. Our focus is not only on production but also on building trust through transparent communication, ethical business practices, and reliable service. The company's wide market presence reflects our commitment to delivering value consistently.

Quality Assurance:

Implementation of stringent quality control measures at every stage of production, ensuring compliance with national and international standards.

Supply Chain & Distribution:

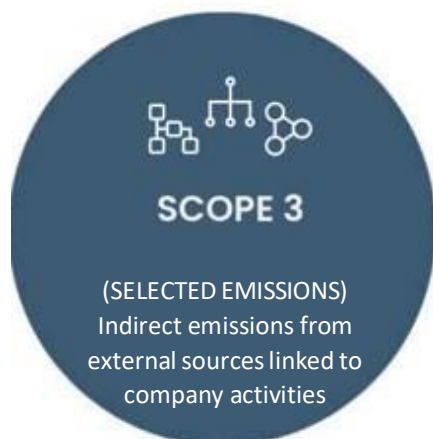
Strong logistics and supply chain network enabling timely delivery and reliable service to customers across various regions.

Sustainability & Efficiency:

Commitment to optimizing resource utilization, improving energy efficiency, and adopting responsible manufacturing practices aligned with environmental and sustainability goals.

2.2 Boundaries & Methodology

The operational boundaries are the activities that lead to emissions whether they are direct or indirect. They include selected categories from indirect GHG emissions from external sources (Scope 3) for this year.



The analysis and calculations of this assessment followed protocols & standards specially developed for accounting and reporting carbon footprint including The Greenhouse Gas Protocol Guidelines, the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories (with 2019 Refinements) and the ISO 14064-1:2018 Standards.

2.3 Base Year for GHG Inventory and Reporting Period

The first year of Scope 3 emissions reporting for the company was Fiscal Year 2024–25; therefore, FY 2024–25 is established and considered as the official Base Year for Scope 3 emissions. The current reporting period covers the operational Fiscal Year 2025–26 (from 1st April 2025 to 31st March 2026). The base year serves as a benchmark reference point against which current and future emissions performance is evaluated to track reduction targets and decarbonization progress over time. To ensure consistency and comparability over time, base year emissions may be recalculated in case of significant structural changes, such as acquisitions, divestments, or major methodological improvements that impact the inventory boundary. In the absence of such significant changes, the base year remains unchanged.

3.INVENTORY DESIGN & DEVELOPMENT

Sustainability reporting acts as a powerful tool for controllers, public interest groups, and other stakeholders to determine the environmental performance of an organization. Quantification of GHG emissions requires the GHG activity data to be collected and recorded at a sufficiently disaggregated level, and capable of being consolidated in various forms. The Company has developed and implemented GHG monitoring and quantification system in line with the requirements of GHG Protocol and ISO 14064-1:2018.

GHG MANAGEMENT PROCESS

The major steps taken in designing and development of GHG Inventory are as follows:

1. Defining operational boundary
2. Identification of GHG sources
3. Selection and collection of GHG activity data
4. Selection of GHG emission factors
5. Calculation of GHG emissions

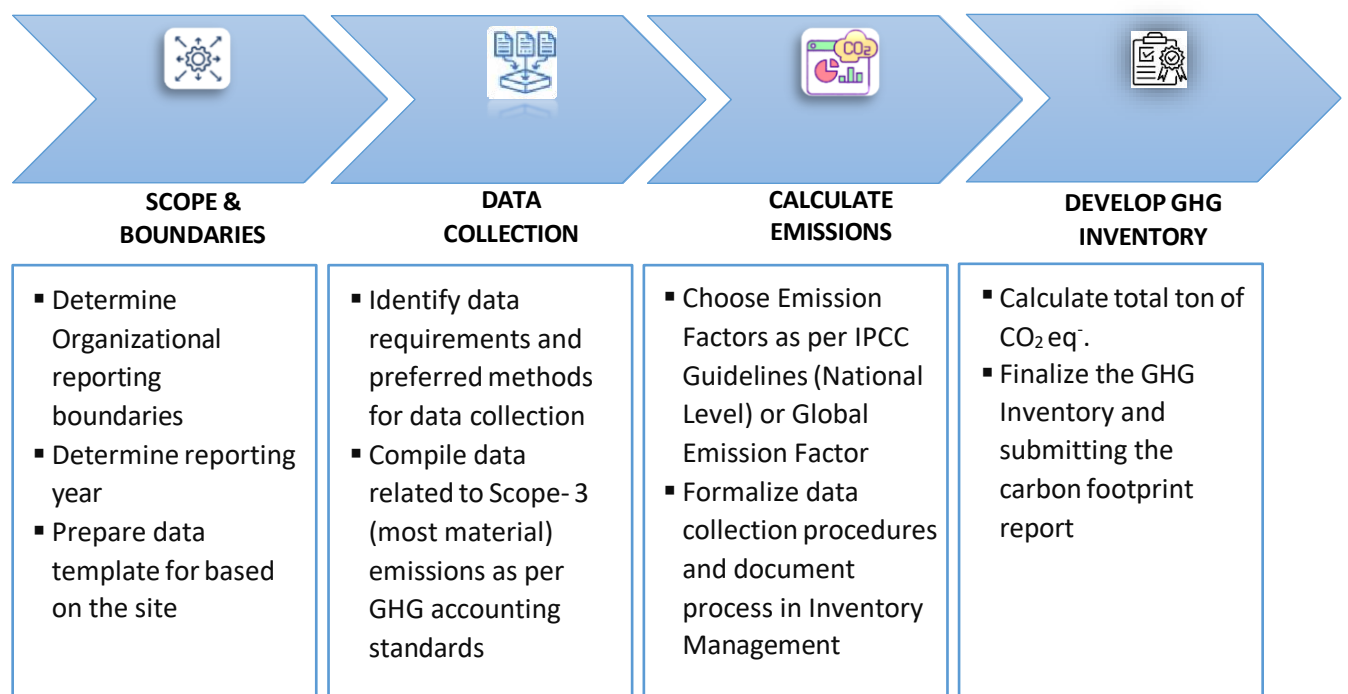


Figure 2: GHG Inventory Development Process

The major steps taken in designing & development of GHG Inventory are as follows:

- Defining organizational boundary
- Defining operational boundary
- Identification of GHG sources
- Selection and collection of GHG activity data

- Selection of GHG emission factors
- Calculation of GHG emissions

The organization has adopted a control-based approach to consolidate its organizational boundary. The emissions factors selected, and methodologies used for GHG accounting are referenced from the sources as given in the standard (ISO 14064 - 1: 2018) e.g., GHG protocol, DEFRA, IPCC etc.

Completeness

The company has accounted for emission sources which contribute significantly to its GHG emissions for selected sources from scope 3 based on the relevance of the emission type.

Materiality

Information is material if, by its inclusion or exclusion, it can be seen to influence any decisions or actions taken by users of it. Therefore, within the predefined scope the source of emissions that by its inclusion or exclusion makes a significant difference in reported GHG emissions or GHG removals will be considered material for GHG Inventory. The company has established and implemented procedures to identify and record GHG emission sources resulting within the boundary.

GHG Activity Data Monitoring, Transparency and Accuracy

The company has established and implemented the procedures for identification of GHG sources and sinks and the procedures to monitor and record the GHG activity data during the given period. The calculations of GHG emissions for the period are based on actual data monitored and recorded.

3.1 Organizational Boundaries

The organizational boundary for the current GHG report encompasses the operations of Jyotindra International, Palanpur, Gujarat, 385001. Jyotindra International is considered a single entity for this report, with no subsidiaries or separate entities included in the GHG emission boundary. The following site has been included within the set boundary:

Table 4: Organizational Boundaries Details

 Office Site	 Number of Employees	 Type of Premise
Jyotindra International Palanpur, Gujarat, 385001	50	Manufacturer Organization (Owned)

3.2 Operational Boundaries

Jyotindra International has established its operational boundary for GHG accounting by focusing exclusively on Scope 3 emissions, as this report covers only indirect emissions across the value chain. The boundary includes all relevant upstream and downstream activities associated with the company's operations.

The Scope 3 categories considered in this assessment include Purchased Goods and Services, Capital Goods, Fuel and Energy-Related Activities, Upstream Transportation and Distribution, Operational Waste, Business Travel, Employee Commuting, Downstream Transportation and Distribution, and Processing of Sold Products. Although these emissions are not directly controlled by the company, they are integral to its overall value chain and have been included in this assessment.

3.3 Scope Emissions

Scope 3: Other Indirect GHG Emissions

Scope 3 allows for the treatment of all other indirect GHG emissions which are a consequence of the activities of the company but occur from sources not owned by the company and not included under scope 1 and scope 2 emissions. The scope 3 emissions are distinguished in 15 categories depending upon the upstream and downstream emission sources across the corporate value chain of the organization.

The company has accounted for the selected emissions from Scope-3 such as

- Purchased Goods and Services
- Capital Goods
- Fuel and Energy-Related Activities
- Upstream transportation and distribution
- Operational waste
- Business travel
- Employee commute
- Downstream transportation and distribution
- Processing of Sold Products

Other categories have not been included in the scope of calculation for the reporting year either due to unavailability of data or due to inapplicability of the category for the company scope and relevant business activities.

SCOPE 3



Purchased Goods and Services



Capital Goods



Upstream Transportation



Downstream Transportation



Operational Waste



Fuel & Energy-Related activities



Employee Commute



Business Travel



Processing of Sold Products

4. OVERALL METHODOLOGY

4.1 Followed Protocols & Standards

Currently there are several internationally recognized methodologies and standards for the calculation of carbon footprint according to their approach, scope and orientation. Jyotindra International Carbon Footprint analysis and calculations were based on:

 GREENHOUSE GAS PROTOCOL	THE GREENHOUSE GAS PROTOCOL GUIDELINES ❖ A Corporate Accounting and Reporting Standard ❖ Corporate Value Chain (Scope 3) Accounting and Reporting Standard
	ISO 14064-1: 2018 ❖ Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
	2006 INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC) ❖ Guidelines for Greenhouse Gas Inventories (with 2019 Refinements)

4.2 Data Collection

The identification of emission sources and the type of data available, assessment has been done. Accordingly, customized data collection spreadsheets were designed for each emission source considered in the GHG inventory. Data collection sheets were communicated and reviewed simultaneously with the focal points at the departments to ensure transparency and completeness in data collection procedure. Data collected was categorized under Scope-3 other indirect emissions.

4.3 Calculation Approach



Global warming potentials (GWPs) are factors describing the radiative forcing impact of one unit of a specific greenhouse gas (e.g. methane) relative to one unit of carbon dioxide. They are used in GHG accounting to convert individual greenhouse gas emissions to a standardized unit for comparison; carbon dioxide equivalent (CO₂e).

100-year GWPs to all emissions data in this inventory in order to calculate total emissions, in metric tons carbon dioxide equivalent (tCO₂e). Global warming potential values were sourced from the Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report (AR6, Version No. 2, 2024), the most recent IPCC report available at the time of assessment. The Kyoto Protocol GHGs (or categories of GHGs) and their respective GWPs are listed in the table below:

Table 5: GHG Gases Covered

Greenhouse Gas	Chemical Formula	100-Year GWP
Carbon Dioxide	CO ₂	1
Methane – non-fossil	CH ₄	27
Nitrous Oxide	N ₂ O	273
Hydrofluorocarbons (HFCs)	Various	Various
Perfluorocarbons (PFCs)	Various	Various
Nitrogen Trifluoride	NF ₃	17,400
Sulphur Hexafluoride	SF ₆	24,300

To calculate the GHG emissions, the main formula used is:

$$\text{GHG Emissions (tCO}_2\text{e)} = \text{Activity Data (unit of activity)} \times \text{Emission Factor} \times \text{GWP}$$

Where,



ACTIVITY DATA

Activity data are those associated with the consumption of energy, electricity or consumables of the organization and were obtained via customized data collection sheets.



EMISSION FACTOR

Emission factors (EF) are representing the quantity of pollutants released to the atmosphere caused by a certain activity. The emission factor is usually expressed as the carbon dioxide equivalent (CO₂e) emissions generated by a unit such as weight, volume and distance, e.g., CO₂e/litre fuel consumed or CO₂e-/kWh of purchased electricity etc. Emission factors are retrieved from Department for Environment, Food & Rural Affairs (DEFRA), 2006 Intergovernmental Panel on Climate Change (IPCC) with 2019 Refinements, Country Specific Emission Factors, India, Country specific grid electricity emission factor and Environmental Protection Agency.



GLOBAL WARMING POTENTIAL (GWP)

GWP, is the heat absorbed by any greenhouse gas in the atmosphere, as a multiple of the heat that would be absorbed by the same mass of carbon dioxide. GWP is 1 for CO₂. The global warming potentials of the sixth IPCC report have been used.

Table 6: Emission Factors and Conversion Values Used in GHG Calculations

Particulars	Value	Unit	Source
Raw material: Ispaghula (Psyllium) Seeds	0.86	kg CO ₂ e/kg	CarbonCloud ClimateHub, "Psyllium" product
Emission Factor for Purchased Goods and Services, Capital Goods, Processing of Sold Products	Item-Specific	kgCO ₂ /USD	US Environmentally-Extended Input-Output (USEEIO)- Supply Chain GHG Emission Factors
Weighted Average Grid Emission Factor (India)	0.71	tCO ₂ /MWh	CDM – CO ₂ Baseline Database Version 21.0
WTT of Diesel	0.62409	kgCO ₂ e/litres	DEFRA- UK Government GHG Conversion Factors for Company Reporting
WTT of PNG	0.3366	kgCO ₂ e/m ³	DEFRA- UK Government GHG Conversion Factors for Company Reporting
WTT of electricity	0.0459	kgCO ₂ e/kWh	DEFRA- UK Government GHG Conversion Factors for Company Reporting
T&D Loss Rate (%) - India	Country-Specific	14.16%	World Bank Group - Electric power transmission and distribution losses
Emission Factor for Medium- and Heavy-Duty Truck	0.186 0.0016 0.0054	kgCO ₂ /short ton-mile gCH ₄ /short ton-mile gN ₂ O/short ton-mile	US EPA- GHG Emission Factors Hub 2025
Emission Factor for Operational Waste (Mixed Organics-Combusted)	0.05	MTCO ₂ e-/Short Ton Material	US EPA- GHG Emission Factors Hub 2025
Emission Factor for Business Travel - Flight (>= 2300 miles)	0.163 0.0006 0.0052	kgCO ₂ /passenger-mile gCH ₄ /passenger-mile kgN ₂ O/passenger-mile	US EPA- GHG Emission Factors Hub 2025
Emission Factor for Sea (Waterborne Craft)	0.077 0.0310 0.0020	kgCO ₂ /short ton-mile gCH ₄ /short ton-mile gN ₂ O/short ton-mile	US EPA- GHG Emission Factors Hub 2025
Emission Factor for Employee Commute	0.297 0.005 0.0053	kgCO ₂ /Vehicle-mile gCH ₄ /Vehicle-mile gN ₂ O/Vehicle-mile	US EPA- GHG Emission Factors Hub 2025

Particulars	Value	Unit	Source
(Passenger Car (Petrol))			
Emission Factor for Employee Commute (Light-Duty Truck (Diesel))- [Diesel Car & Auto Rickshaw-Diesel]	0.394 0.0109 0.0088	kgCO ₂ /Vehicle-mile gCH ₄ /Vehicle-mile gN ₂ O/Vehicle-mile	US EPA- GHG Emission Factors Hub 2025
Emission Factor for Employee Commute (Motorcycle / Two Wheeler (Petrol))	0.388 0.0888 0.0188	kgCO ₂ /Vehicle-mile gCH ₄ /Vehicle-mile gN ₂ O/Vehicle-mile	US EPA- GHG Emission Factors Hub 2025
Emission Factor for Two Wheeler (Electric)	0	kgCO ₂ /Vehicle-mile gCH ₄ /Vehicle-mile gN ₂ O/Vehicle-mile	US EPA- GHG Emission Factors Hub 2025
Average Wood Density	Species-Specific	t/m ³	Global Wood Density Database- USDA Forest
Carbon content in woody living biomass	0.47		IPCC Default value
Carbon: CO ₂ conversion	3.67		By Default
Biomass Expansion Factor	3.4		Table 3A.1.10 of IPCC GPG-LULUCF
$V \text{ (m}^3\text{/tree)} = \pi \times (\text{DBH}/2)^2 \times H \times F$ Where: V = Volume (m³) DBH = Diameter at Breast Height (m) H = Total Height (m) F = Form Factor (Avg. 0.5)			FAO Forestry Paper 134 "Forest volume and biomass estimation"

5. CARBON FOOTPRINT

5.1 Overview

Table 7: Emissions By Category (Scope-3) in FY 2025-26

Scope	Category Name	Emissions tCO ₂ e- in FY 2025-26
3.1	Purchased Goods & Services	7703.17
3.2	Capital Goods	0.19
3.3	Fuel- and Energy-Related Activities	121.53
3.4	Upstream Transportation & Distribution	531.42
3.5	Operational Waste	0.03
3.6	Business Travel	2.62
3.7	Employee Commuting	55.77
3.8	Downstream Transportation & Distribution	11743.53
3.9	Processing of Sold Products	4632.86

Emissions By Scope tCO₂e- in FY 2025-26

Scope 3



5.2 Emissions Breakdown

The breakdown sections below show FY 2025-26 emissions for each category.

5.2.1 SCOPE-3 EMISSIONS

The organization has decided to report on scope 3 emissions as well. Under this scope the sources of emissions are divided into 15 categories of GHG emissions which happen due to operations of organization but are not controlled by the organization (upstream and downstream indirect emissions).

Quantification of this scope necessitates assessing GHG emissions across the entire value chain. However, quantification of scope 3 GHG emissions is limited to the most material categories. For remaining categories either the data is insufficient or negligible emission. Also, there are some categories which don't apply to the scope of operating activities of the company.

5.2.3.1 Purchased Goods and Services

EMISSION FROM PURCHASED GOODS AND SERVICES



7703.17

tCO₂e

In FY 2025-26

Purchased goods and services represent a significant portion of Jyotindra International Scope 3 emissions profile. This category encompasses all upstream emissions from the production of products and services acquired by the company, primarily raw materials used in manufacturing operations.

Jyotindra International' primary purchases include raw materials such as Ispaghula seeds, wood pallets etc. along with various services required for business operations.

The emissions are calculated using the formula: Emissions (tCO₂e) = Activity Data × Emission Factor. Where:

- Activity Data is the monetary value of purchased goods and services in USD
- Emission Factor varies by product category (kgCO₂e/\$)

FY 2025-26

For the reporting period from 1st April 2025 to 31st March 2026, emissions from purchased goods and services in Category 1 of Scope-3, based on procurement data, were calculated using emission factors from recognized sources such as "US Environmentally-Extended Input-Output (USEEIO)-Supply Chain GHG Emission Factors". The emissions associated with purchased goods and services amounted to **7703.17 tonnes of CO₂e**.

Table 8: Emissions from Purchased Goods and Services

Reported Year	Emission from Purchased Goods and Services (tCO ₂ e)
FY 2025-26	7703.17

5.2.3.2 Capital Goods

EMISSION FROM CAPITAL GOODS



0.19

tCO₂e

In FY 2025-26

Capital goods represent emissions associated with the production of equipment, Air Conditioner assets purchased by Jyotindra International during the reporting period. These are items that are not completely consumed within the reporting year and provide long-term value to the organization.

The emissions are calculated using the formula:

$$\text{Emissions (tCO}_2\text{e)} = \text{Activity Data} \times \text{Emission Factor}$$

Where:

- Activity Data is the monetary value of capital goods purchased in USD
- Emission Factor varies by capital good category (kgCO₂e/\$)

FY 2025-26

For the reporting period from 1st April 2025 to 31st March 2026, the emissions associated with capital goods acquisition amounted to **0.19 tonnes of CO₂e**, representing a relatively small portion of the company's total Scope 3 emissions.

Table 9: Emissions from Capital Goods

Reported Year	Emission from Capital Goods (tCO ₂ e)
FY 2025-26	0.19

5.2.3.3 Fuel- and Energy-Related Activities

EMISSION FROM PROCESSING OF FUEL AND ENERGY RELATED ACTIVITIES



121.53

tCO₂e

In FY 2025-26

Emissions from fuel- and energy-related activities under Scope 3 encompass indirect greenhouse gas (GHG) emissions associated with the production, transportation, and distribution of fuels and energy purchased and consumed by the Company. These activities extend beyond direct consumption and capture upstream emissions embedded in the energy supply chain.

The emissions in this category were quantified using activity data on purchased fuels and electricity, applying appropriate emission factors as per recognized methodologies.

FY 2025-26

For the reporting period from 1st April 2025 to 31st March 2026, the total Scope 3 emissions from fuel- and energy-related activities during the reporting year amounted to **121.53 tonnes of CO₂e**.

Table 10: Emissions from Fuel and Energy-Related Activities

Reported Year	Emission from Fuel and Energy-Related Activities (tCO ₂ e)
FY 2025-26	121.53

5.2.3.4 Upstream Transportation and Distribution

EMISSION FROM UPSTREAM TRANSPORTATION AND DISTRIBUTION



531.42

tCO₂e⁻
In FY 2025-26

Upstream transportation and distribution emissions encompass the carbon footprint associated with transporting raw materials and components from suppliers to Jyotindra International' manufacturing facility. These emissions form a significant portion of the company's Scope 3 inventory.

Jyotindra International relies on medium-duty vehicles for transporting raw materials from suppliers to its facility, with Ispaghula seeds being the primary material transported.

The emissions are calculated using the formula:

$$\text{Emissions (tCO}_2\text{e)} = \text{Activity Data} \times \text{Distance} \times \text{Emission Factor}$$

Where:

- Activity Data is the quantity of raw material transported in tons
- Distance is measured in kilometers
- Emission Factor kgCO₂/short ton-mile for medium- heavy duty vehicles

FY 2025-26

For the reporting period from 1st April 2025 to 31st March 2026, a total of **8,850.64 tons of raw materials** were transported over a cumulative distance of 4,234.00 km, resulting in emissions equivalent to **531.42 metric tons of CO₂e**.

Table 11: Emissions from Upstream Transportation

Reported Year	Emission from Upstream Transportation (tCO ₂ e ⁻)
FY 2025-26	531.42

5.2.3.5 Operational Waste

EMISSION FROM OPERATIONAL WASTE



0.03

tCO₂e

In FY 2025-26

Operational waste emissions are associated with the disposal and treatment of waste generated during Jyotindra International' manufacturing processes and facility operations.

Jyotindra International generates various types of waste, primarily consisting of lab waste like microorganisms. Waste is combusted and other pollutants are properly managed.

The emissions are calculated using the formula:

$$\text{Emissions (tCO}_2\text{e)} = \text{Activity Data} \times \text{Emission Factor}$$

Where:

- Activity Data is the quantity of waste generated in tons
- Emission Factor varies by waste type and disposal method (tCO₂e/ton)

FY 2025-26

For the reporting period from 1st April 2025 to 31st March 2026, a total of 0.3355 tons of waste was generated, resulting in emissions equivalent to **0.03 tonnes of CO₂e**.

Table 12: Emissions from Operational Waste

Reported Year	Emission from Operational Waste (tCO ₂ e)
FY 2025-26	0.03

5.2.3.6 Business Travel

EMISSION FROM BUSINESS TRAVEL



2.62

tCO₂e⁻
In FY 2025-26

Business travel emissions result from the transportation of Jyotindra International' employees for business-related activities, including client meetings, supplier visits, conferences, and training. This includes travel by air, rail, and road.

Jyotindra International employees undertake business travel for site visits and other business purposes, utilizing various modes of transportation including flights.

The emissions are calculated using the formula: Emissions (tCO₂e) = Activity Data × Emission Factor

Where:

- Activity Data is the distance traveled in kilometers
- Emission Factor varies by mode of transport (kgCO₂/passenger-km)

FY 2025-26

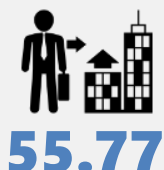
For the reporting period from 1st April 2025 to 31st March 2026, employees traveled a total of 18800 kilometers by flight for business purposes, resulting in emissions amounting to **2.62 tonnes of CO₂e**.

Table 13: Emissions from Business Travel

Reported Year	Emission from Business Travel (tCO ₂ e ⁻)
FY 2025-26	2.62

5.2.3.7 Employee Commute

EMISSION FROM EMPLOYEE COMMUTE



tCO₂e⁻
In FY 2025-26

Employee commuting emissions result from the transportation of Jyotindra International 50 employees between their homes and the workplace. This category includes various modes of transport such as bikes, cars, public transportation, and walking.

Jyotindra International' employees use various modes of transportation for their daily commute to and from the workplace, including bikes, cars, and three wheelers.

The emissions are calculated using the formula:

$$\text{Emissions (tCO}_2\text{e)} = \sum (\text{Distance} \times \text{Emission Factor})$$

Where:

- Distance is the total distance traveled by employees in kilometers
- Emission Factor varies by mode of transport (kgCO₂/passenger-km)

FY 2025-26

For the reporting period from 1st April 2025 to 31st March 2026, employees collectively traveled 228750 kilometers for commuting purposes, with bikes, cars, etc. This resulted in emissions equivalent to **55.77 tonnes of CO₂e**.

Table 14: Emissions from Employee Commute

Reported Year	Emission from Employee Commute (tCO ₂ e ⁻)
FY 2025-26	55.77

5.2.3.8 Downstream Transportation and Distribution

EMISSION FROM DOWNSTREAM TRANSPORTATION AND DISTRIBUTION



Downstream transportation and distribution represent the largest category of Scope 3 emissions for Jyotindra International. These emissions arise from the transportation of finished products from the company's manufacturing facility to customers and end-users across the country as well as internationally.

11743.53

tCO₂e⁻
In FY 2025-26

Jyotindra International distributes its finished products, such as Psyllium Husk, primarily using container vehicles for transportation by road and sea.

The emissions are calculated using the formula:

Emissions (tCO₂e) = Activity Data × Distance × Emission Factor

Where:

- Activity Data is the quantity of finished products transported in tons
- Distance is measured in kilometers
- Emission Factor is 0.186 kgCO₂/short ton-mile for medium-duty vehicles

FY 2025-26

For the reporting period from 1st April 2025 to 31st March 2026, a total of 2372.20 tons of finished products were transported across India, resulting in emissions of 1422.37 tCO₂e. Additionally, 1662.676 tons of finished products were transported internationally, resulting in emissions of 10,321.16 tCO₂e. Overall, this resulted in total emissions of **11743.53 tonnes of CO₂e**.

Table 15: Emissions from Downstream Transportation

Reported Year	Emission from Downstream Transportation (tCO ₂ e ⁻)
FY 2025-26	11743.53

5.2.3.9 Processing of Sold Products

EMISSION FROM PROCESSING OF SOLD PRODUCTS



4632.86

tCO₂e⁻
In FY 2025-26

This category accounts for emissions from the processing of intermediate products sold by Jyotindra International by third parties (e.g., manufacturers) subsequent to sale. These emissions occur when the company's products require further processing before they reach their final state.

The emissions are calculated using the formula: Emissions (tCO₂e) = Activity Data × Emission Factor

Where:

- Activity Data is the quantity of sold products in tons
- Emission Factor varies by product type and processing method (tCO₂e/ton)

FY 2025-26

For the reporting period from 1st April 2025 to 31st March 2026, the emissions associated with the processing of sold products by downstream companies amounted to 4632.86 metric tons of CO₂e.

Table 16: Emissions from Processing of Sold Products

Reported Year	Emission from Processing of Sold Products (tCO ₂ e ⁻)
FY 2025-26	4632.86

5.2.3.10 Summary of Scope-3 Emission

Table 17: Summary of Scope-3 Emissions (FY 2025-2026)

Category	Emissions tCO ₂ e- in Scope 3 in FY 2025-26
Purchased Goods & Services	7703.17
Capital Goods	0.19
Fuel- and Energy-Related Activities	121.53
Upstream Transportation & Distribution	531.42
Operational Waste	0.03
Business Travel	2.62
Employee Commuting	55.77
Downstream Transportation & Distribution	11743.53
Processing of Sold Products	4632.86
Total	24,791.12

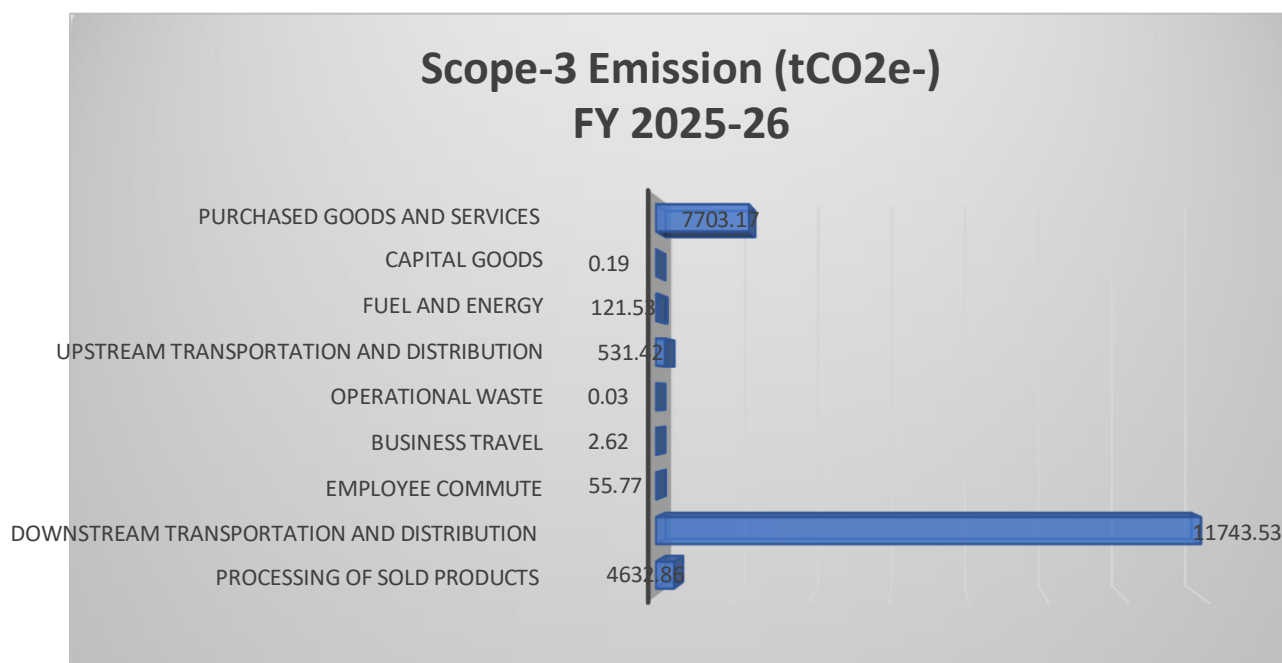


Figure 3: Scope-3 Emission by Sub-categories (FY 2025-26)

5.3 RENEWABLE AND ENVIRONMENTAL BENEFITS

5.3.1 Quantification of Carbon Sequestration by Trees

Jyotindra International has undertaken an on-site tree plantation initiative as part of its environmental stewardship commitment. The carbon sequestration potential of the planted trees was assessed based on species, number of trees, average height, and Diameter at Breast Height (DBH). The methodology follows internationally recognised forestry and IPCC guidelines. Methodology and Parameters: Tree volume was estimated using the standard cylindrical volume equation from FAO Forestry Paper 134 "Forest Volume and Biomass Estimation":

$$V \text{ (m}^3\text{/tree)} = \pi \times (\text{DBH}/2)^2 \times H \times F$$

Where:

- V = Volume (m³)
- DBH = Diameter at Breast Height (m)
- H = Total Height (m)
- F = Form Factor (average = 0.5)

The assessment revealed that the **200 trees across 7 species** on Jyotindra's premises have a cumulative stored biomass of **21.6 tonnes** and sequester an estimated **37.3 tCO₂e in total**, with an annual rate of **0.53 tCO₂e per tree per year** during the reporting period April 2025 – March 2026.

The table below presents the breakdown of CO₂ sequestered by each tree species:

Table 18: CO₂ Sequestration by Tree Species (FY 2025-26)

S.No	Species Name	Botanical Name of Species	Average Age (years)	No of Trees	Estimated DBH (cm)	Average Height (m)	Total vol (cubic meter)	Total Biomass (tonnes)	CO ₂ sequestered per annum
1	Nilgiri	Eucalyptus globulus	20+	15	21.80	12	0.2240	9.1829	15.8
2	Asopalav	Polyalthia longifolia	10+	50	13.30	8	0.0556	6.3485	11.0
3	Royal Palm	Roystonea regia	20+	5	18.20	10	0.1301	1.0614	1.8
4	Coconut Tree	Cocos nucifera	20+	6	18.20	10	0.1301	1.6558	2.9
5	Umbrells Tree	Schefflera actinophylla	5+	3	22.20	10	0.1935	0.9713	1.7
6	Christmas Tree	Araucaria heterophylla	20+	1	18.20	10	0.1301	0.2547	0.4
7	Other Medium size Tree	Mixed broadleaf (assumed)	5+	120	8.60	3	0.0087	2.1330	3.7
Total									37.3

5.3.2 Renewable Energy (Solar)

Methodology:

Avoided Emissions (tCO₂e) = Solar Generation (MWh) × Grid Emission Factor (tCO₂e/MWh)

For the reporting period from **1st April 2025 to 31st March 2026**, Jyotindra International generated a total of **1,326,406 kWh (1,326.41 MWh)** of renewable electricity through **rooftop and ground-mounted solar power systems**. Of the total generation, **492.15 MWh** was generated from rooftop solar and **834.26 MWh** from ground-mounted solar. Based on the applicable grid emission factor of **0.716 tCO₂e/MWh**, the total avoided GHG emissions were **949.71 tCO₂e**, comprising **352.38 tCO₂e from rooftop solar** and **597.33 tCO₂e from ground-mounted solar**.

Table 19: Solar Energy Generation by Installation Type (FY 2025-26)

Reported Year	Solar Consumption (MWh)	Energy Avoided (tCO ₂ e-)
Rooftop Solar	492.15	352.38
Ground-Mounted Solar	834.26	597.33
Total FY 2025-26	1,326.41	949.71

6.DATA SOURCES AND QUALITY

All the information used to compute the various footprints comes from Jyotindra International database. The data quality has been evaluated and presented below, with data from each business sector evaluated independently to enable for better analysis and display of resolution and further explanations. The most used types of data are:

- ❖ **Primary Data:** Data taken from documents that are directly linked to the assessment, such as electricity invoices, to calculate emissions caused due to electricity.
- ❖ **Secondary Data:** Such as databases, studies, and reports.
- ❖ **Assumptions:** Assumptions made based on internationally recognized standards and studies.

Table 20: Quality of Sourced GHG Data

#	SCOPE-3	ACTIVITY	DATA	NOTES
	Cat-1	Purchased Goods and Services	Multiple items	Detailed procurement data for raw materials including Ispaghula Seeds Wood Pallets, Plastic Bags along with various services
	Cat-2	Capital Goods	Equipment purchases (Air Conditioner, Photostability Test Chamber Autoclave, Installation parts)	Data on acquisition of manufacturing equipment and machinery
	Cat-3	Fuel and Energy-Related Activities	Diesel, PNG and Electricity Consumption	All fuel and energy-related data is collected on a monthly basis.
	Cat-4	Upstream Transportation and Distribution	6848523 kg (from Apr 25 to Mar 26)	Data received on total quantity of raw material transported and distance transported
	Cat-5	Operational Waste	Lab waste (Microorganism)	Data received on type, weight, and quantity of waste generated, primarily consisting of lab waste
	Cat-6	Business Travel	Flight	Data received on distance traveled by: Air mode
	Cat-7	Employee Commute	Multiple modes	Data received on total distance traveled by employees using different modes: Bike, Car, Auto, some assumptions are made on basis of survey

#	SCOPE-3	ACTIVITY	DATA	NOTES
	Cat-9	Downstream Transportation and Distribution	Distance travelled by different modes	Data received on total quantity of finished products transported and the distances
	Cat-10	Processing of Sold Products	Product sales data	Data on pharmaceutical and food-grade ingredients/products sold by Jyotindra International, which undergo further processing, or incorporation into final products by customers.

FOUNDATIONAL:
Area for refinement

SATISFACTORY:
Potential for enhancement

GOOD:
No changes recommended

6.1 Relevancy & Exclusions

A few emissions sources due to being negligible or non-availability of appropriate activity data are not included in this GHG inventory. The details of the same are given below.

Table 21: Exclusion of GHG Emissions

#	SCOPE-3	ACTIVITY	DESCRIPTION	STATUS
	Cat-8	Upstream Leased Assets	Assets leased by Jyotindra International	Not applicable as the company operates in owned facilities rather than leased properties
	Cat-11	Use of Sold Products	Emissions associated with customer use of automotive components	Not applicable as components do not directly generate emissions during use; emissions are accounted for at vehicle level
	Cat-12	End-of-Life Treatment of Sold Products	Disposal of automotive components after use	Negligible impact as components are typically recycled with vehicles at end-of-life; data collection not feasible
	Cat-13	Downstream Leased Assets	Assets owned by Jyotindra International and leased to others	Not applicable as Jyotindra International does not lease assets to other entities
	Cat-14	Franchises	Operation of franchises	Not applicable as Jyotindra International does not operate any franchises
	Cat-15	Investments	Financial investments	Not material to Jyotindra International' carbon footprint as the company's primary investments are in its own operations

FOUNDATIONAL:
Area for refinement

SATISFACTORY:
Potential for enhancement

GOOD:
No changes recommended

6.2 Uncertainty Assessment

The GHG emissions reported in this GHG inventory are based on input (consumption) data from the records of GHG activity data maintained by the company. The emission factors are referenced from IPCC 2006 guidelines and World Resource Institute (GHG Protocol's corporate accounting standard, 2nd edition, Nov 2011). Therefore, the uncertainties considered by IPCC apply to the current GHG inventory.

The IPCC Reports default uncertainty range for fossil fuel combustion data to be plus or minus 5 percent. The description of plus or minus 5% is given below:

- The value in the energy statistics or energy balance is interpreted as the point estimate for the activity data
- The lower limit value of the 95 percent confidence interval is 0.95 times the point estimate.
- The upper limit value of the 95 percent confidence interval is 1.05 times this value.

7 REFERENCES

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