



# YePrayas's **CARBON FOOTPRINT REPORT** 2022-23

Report By



# Introduction

[Carbon Footprint](#) | [Briefing](#)

# What is Carbon Footprint?

A carbon footprint represents the greenhouse gas (GHG) emissions associated with the activities of an entity or individual. The carbon footprint attributable to an investment portfolio measures the proportionate emissions associated with companies held by that portfolio.

The greenhouse gases in our analysis are those covered by the internationally recognized GHG Protocol and include, where available carbon dioxide (CO<sub>2</sub>), nitrogen trifluoride (NF<sub>3</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydro fluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>). All gases are converted to CO<sub>2</sub> equivalents (CO<sub>2</sub>e) to calculate footprint.

There are 3 divisions of GHG emissions on the basis of scope - Scope 1, 2 & 3. Essentially, scope 1 & 2 are those emissions that are owned or controlled by a company, whereas scope 3 emissions are a consequence of the activities of the company but occur from sources not owned or controlled by it.

# Why we need to Disclose our Carbon Footprint?

Disclosure is the essential first step to drive environmental action. 680+ investors with over US\$130 trillion in assets and 200+ large purchasers with over US\$5.5 trillion in procurement spend are requesting thousands of companies to disclose their environmental data through CDP.

There are tangible business benefits to be gained from responding to your stakeholder's requests for disclosure:

- Protect & improve your company's reputation - build trust through transparency, respond to rising environmental concern among the public
- Gain a competitive edge when it comes to performance on the stock market, access to capital and winning tenders
- Track and benchmark progress - benchmark your environmental performance against your industry peers
- Uncover risks and opportunities - identify emerging environmental risks and opportunities
- Get ahead of regulation - in a world in which mandatory disclosure is gaining momentum, disclosing enables companies to meet reporting rules



# Briefing

The first step towards contributing to climate action is by accounting for one's own emissions



## Holdings & Subsidiaries Included

Ye Prayas Private Limited entire operations and value chain is included. There are no other subsidiaries.



## Scope Included

Entire Scope 1 & 2 have been covered. Scope 3 is covered with its own limitations.



## Objective Included

The objective of this report is to setup the baseline for Ye Prayas' entire operations and value chain. Also, to calculate the Carbon Footprint of the entire company for the financial year 2022-23 along with its consistent monitoring and tracking.



## Baseline Month

The financial year 2022-23 will be set as the baseline year meanwhile April is the baseline month and then subsequent emission will be calculated for the upcoming year

# Methodologies

[Methodology Used](#)[Limitations](#)[List of Locations](#)[Data Compilation](#)

# Methodology Used to Calculate YePrayas's Carbon Footprint

Currently there are several internationally recognized methodologies and standards for the calculation of carbon footprint according to their approach, scope and orientation. The most widespread and internationally recognized standards for the calculation of an organization's carbon footprint are briefly explained below:

- **Corporate Accounting and Reporting Standard. GHG Protocol**

It is an internationally recognized standard developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). The GHG Protocol offers standards and guidelines for companies and other organizations interested in calculating a basic carbon footprint (Scopes 1 and 2), with the possibility of broadening the carbon footprint approach (including Scope 3).

- **ISO 14064**

This standard details the principles and requirements for the design, development and management of GHG inventories for companies and organizations, and for the reporting of these inventories. It also includes the requirements to determine the GHG emission limits, quantify the emissions and removals of the organization's gases and identify the activities or specific actions of the company in order to improve the management of these gases.

ISO 14064, like the GHG Protocol, focuses mainly on the facilities and activities subject to the entire organization, conducting a study of GHG emissions associated with the processes carried out by the company, leaving open the possibility of including scope 3 sources.



# Limitations



## Organizational Limit

The first step in the development of the carbon footprint is the definition of organizational limits. By setting organizational limits, a company selects an approach to consolidate its GHG emissions. In other words, it determines the business units and operations that make up the company. These organizational limits are defined by the type of control exercised by the subject from whom the footprint is calculated on a business operation and organization that can be done with several different approaches:

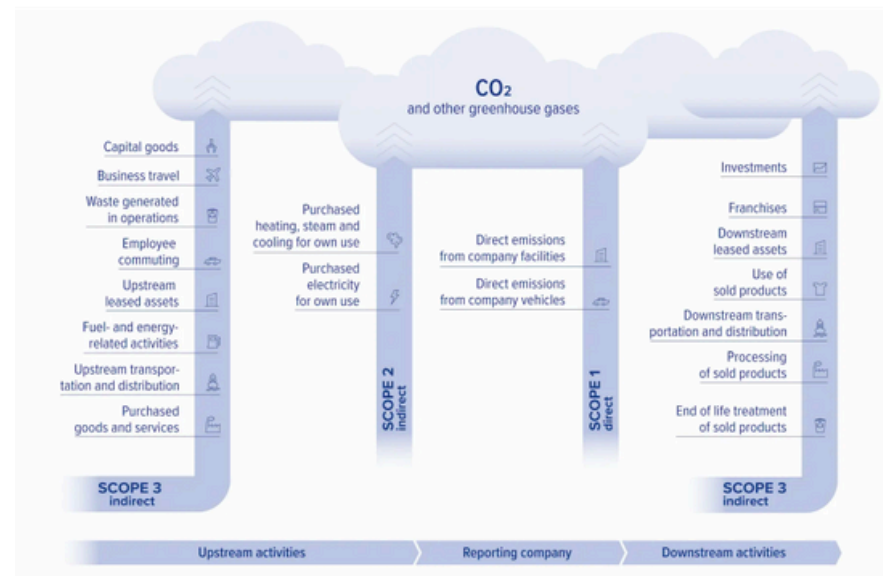
A) Equity B) Control



## Approach - Operational control

A company exercises operational control over an operation if said company or any of its subsidiaries has full authority to introduce and implement its operating policies in the year. Under this approach, the company that owns the control of an operation, either directly or through one of its subsidiaries, must quantify as its own 100% of the emissions of the operation.

As YePrayas is a single entity here, all the emissions fall under its scope.



## Scope 1 emissions (Direct emissions):

Emissions that result from the activities that the organization controls.

Examples of the processes that can generate them:

- Combustion in fixed sources • Physical or chemical processes • Combustion in mobile sources
- Fugitive emissions that result from intentional or unintentional releases such as refrigerants used in air conditioning and refrigeration equipment.

## Scope 2 emissions (Indirect emissions)

Emissions of the organization due to the use of electricity.

## Scope 3 emissions (other indirect emissions):

Emissions of the products and services of the organization. They are induced by the activities of the company, but they occur in sources that are not owned or controlled by the company.

For one organization these emissions will be part of its direct emissions and for the other organization they will be part of its indirect emissions.

# List of Locations

## YePrayas Office

Houses the employees of management, business development, and business planning

## YePrayas Warehouse

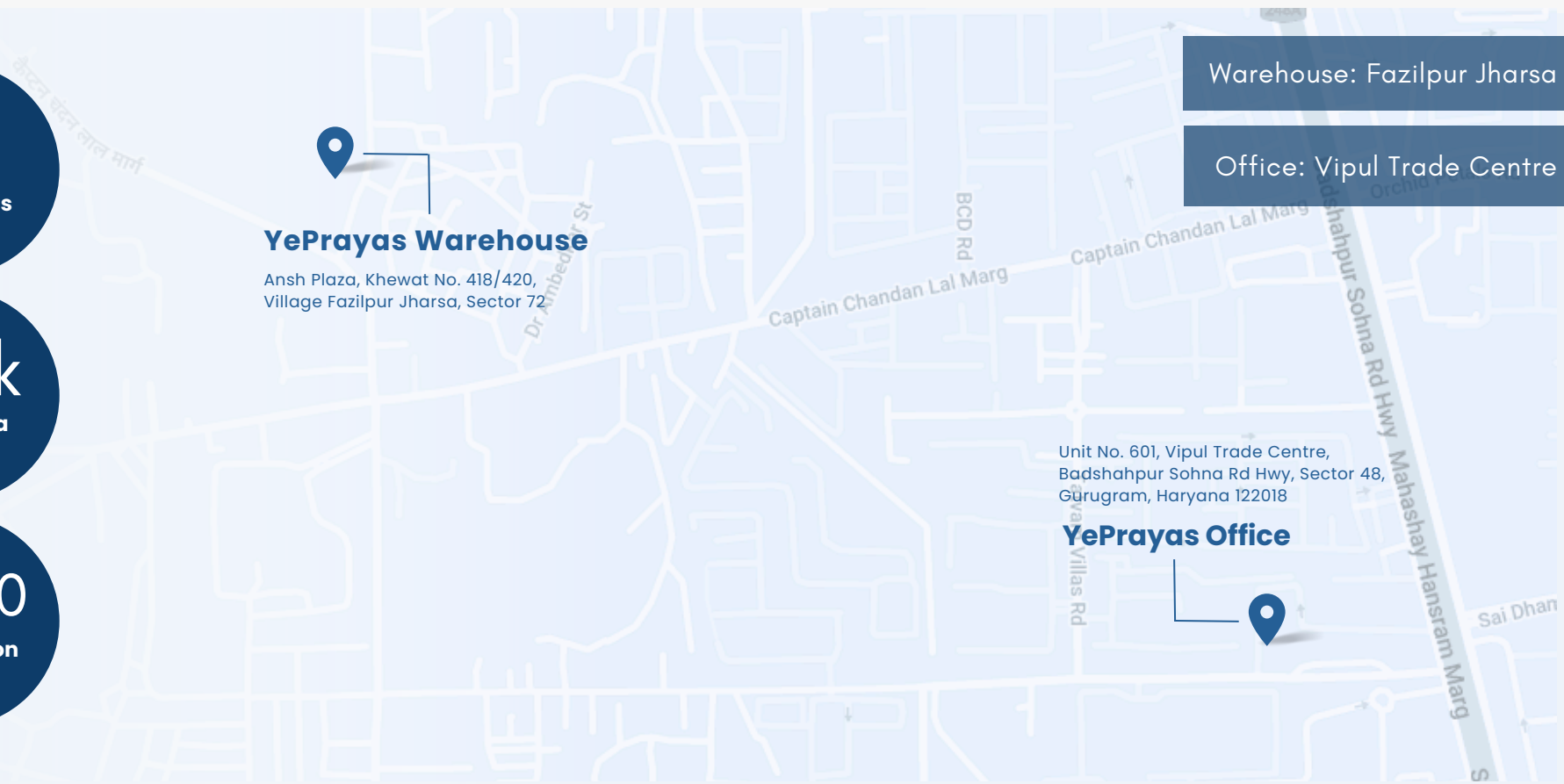
House the wheels of the company who make all the business happen with their hands along with management to keep things running smoothly

Location	Type of Location	Name
Gurgaon	Headquarters	YePrayas Office
Gurgaon	Warehouse	YePrayas Warehouse

25  
Employees

8.4k  
Total Area  
(Sq. Ft.)

2020  
Foundation  
Year

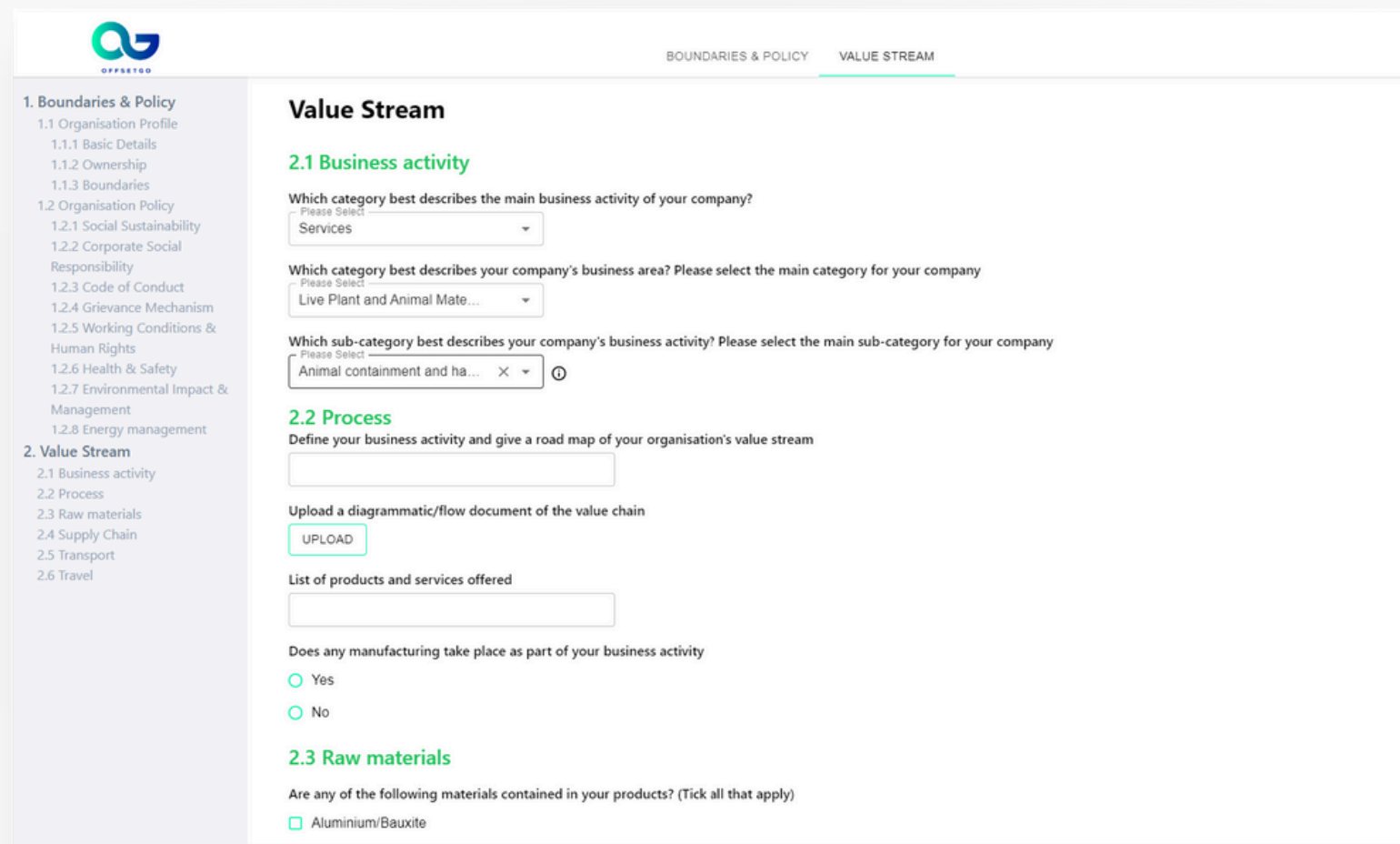




# Data Compilation

OffsetGo has designed a tool for the calculation of carbon footprint (CO<sub>2</sub>edata) that allows each organization to report the activity data necessary for the calculation and obtain greenhouse gas emissions associated with its activity.

The CO<sub>2</sub> data virtual platform (<http://ssri.earth>) has allowed OffsetGo to report the necessary activity data in a more comfortable and efficient way. With separate sections for each organization, it is prepared so that each one of them can enter the activity data of the previously defined emission sources. In addition, it has subsections to enter the different types of data and the location of their source and allows more than one agent to enter data associated with the same source. On the other hand, it allows entering evidence associated with the activity data, allowing for a single file or several files associated with a single data.



**OffsetGo** BOUNDARIES & POLICY VALUE STREAM

**1. Boundaries & Policy**

- 1.1 Organisation Profile
  - 1.1.1 Basic Details
  - 1.1.2 Ownership
  - 1.1.3 Boundaries
- 1.2 Organisation Policy
  - 1.2.1 Social Sustainability
  - 1.2.2 Corporate Social Responsibility
  - 1.2.3 Code of Conduct
  - 1.2.4 Grievance Mechanism
  - 1.2.5 Working Conditions & Human Rights
  - 1.2.6 Health & Safety
  - 1.2.7 Environmental Impact & Management
  - 1.2.8 Energy management

**2. Value Stream**

- 2.1 Business activity
- 2.2 Process
- 2.3 Raw materials
- 2.4 Supply Chain
- 2.5 Transport
- 2.6 Travel

**Value Stream**

**2.1 Business activity**

Which category best describes the main business activity of your company?  
Please Select:

Which category best describes your company's business area? Please select the main category for your company  
Please Select:

Which sub-category best describes your company's business activity? Please select the main sub-category for your company  
Please Select:

**2.2 Process**

Define your business activity and give a road map of your organisation's value stream

Upload a diagrammatic/flow document of the value chain

List of products and services offered

Does any manufacturing take place as part of your business activity

Yes

No

**2.3 Raw materials**

Are any of the following materials contained in your products? (Tick all that apply)

Aluminium/Bauxite

# Emission Spread

[Overall Inventory](#)[Scope 1,2 & 3 Spread](#)[Electricity Spread](#)[Employee Footprint](#)[Water Footprint](#)

# Overall Inventory

## The inventory comprises of:

- Preparing the Scope 1, 2 and 3 emissions calculation methodology in its entirety
- Determining applicable categories
- Mapping out the differences between the scopes

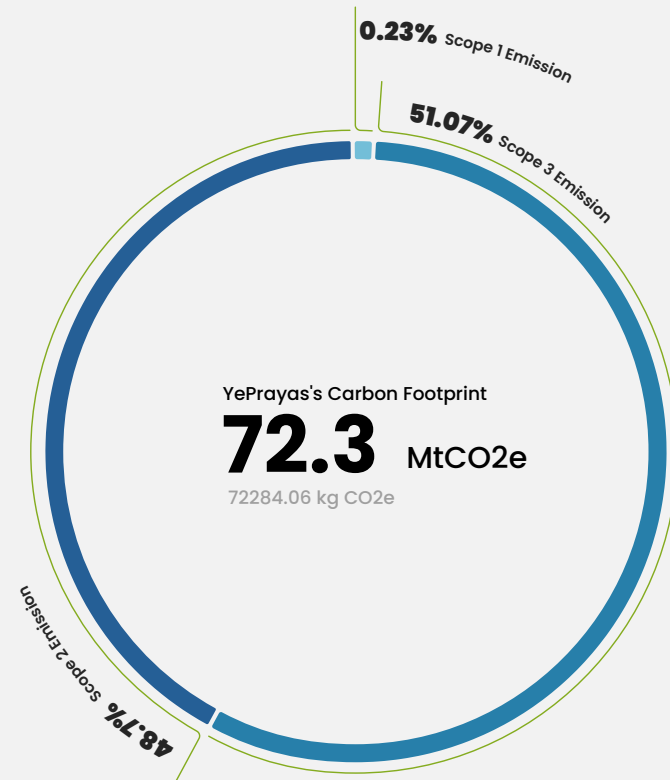
Scope Category	Emissions
Scope 1	170.8 kg CO <sub>2</sub> e
Scope 2	35,240 kg CO <sub>2</sub> e
Scope 3	36873.26 kg CO <sub>2</sub> e
<b>Total</b>	<b>72284.06 kg CO<sub>2</sub>e</b>

**Table 1:** Greenhouse gas (GHG) emissions, GHG emissions by Scope

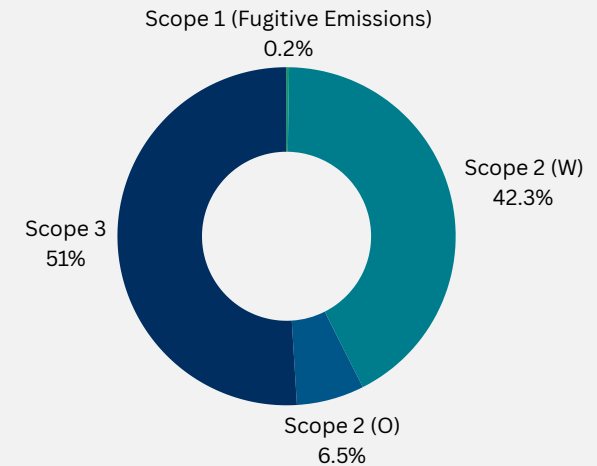
## Revenue Emission Intensity

### Mt CO<sub>2</sub>e/ Revenue (e-5)

Scope wise Emission Intensity	FY(22-23)
Revenue (₹)	10,00,00,000
Scope 1 (Fuel Consumption)	0.025
Scope 1 (Fugitive Emissions)	0.149
Scope 2 (Warehouse)	30.6
Scope 2 (Office)	4.68
Scope 3	36.87



All the scope values range from 0.1% to even 99.9% varying from companies to companies. An oil and gas firm will have a Scope 1 of 80% meanwhile a logistics organization can label its 98% emissions under Scope 3

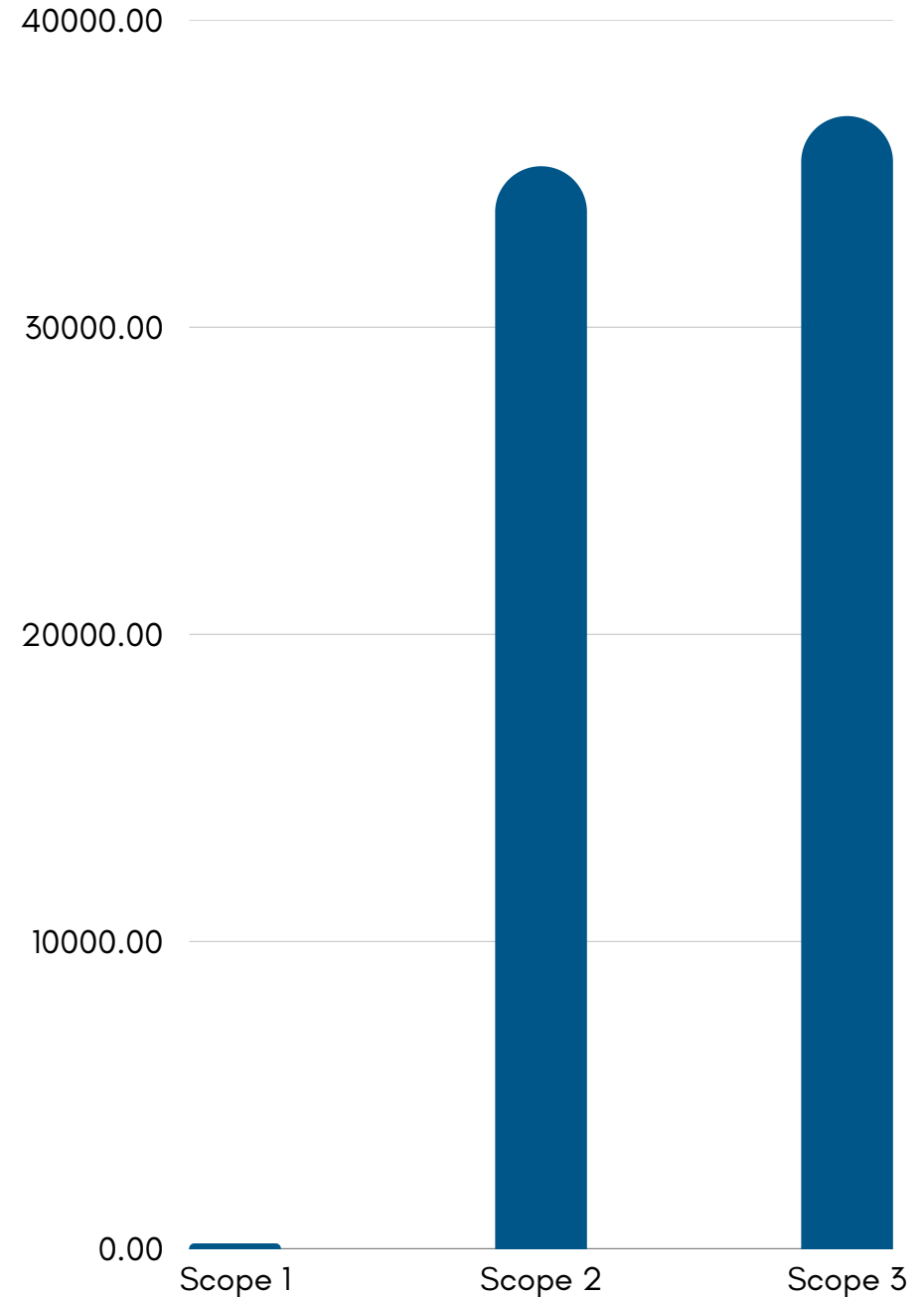


# Scope 1,2 & 3 spread

**Table 1**

Greenhouse gas (GHG) emissions  
GHG emissions by Scope (kgCO<sub>2</sub>e)

	FY 22-23
<b>Scope 1</b>	<b>170.8</b>
Fuel Combustion	24.9
Fugitive Emissions	145.9
<b>Scope 2</b>	<b>35240</b>
Warehouse	30560
Office	4680
<b>Scope 3</b>	<b>36873.26</b>
Category 1 - Purchased goods and services	10
Category 2 - Capital goods	9.67
Category 3 - Fuel- and energy-related activities	N.A.
Category 4 - Upstream transportation and distribution	20600
Category 5 - Waste generated in operations	2110.33
Category 6 - Business travel	2760.84
Category 7 - Employee commuting	11382.42
Category 8 - Upstream leased assets	N.A.
Category 9 - Downstream transportation and distribution	N.A.
Category 10 - Processing of sold products	N.A.
Category 11 - Use of sold products	N.A.
Category 12 - End-of-life treatment of sold products	N.A.
Category 13 - Downstream leased assets	N.A.
Category 14 - Franchises	N.A.
Category 15 - Investments	N.A.
Total emissions (Scope 1 + 2 + 3)	<b>72284.06</b>



## Electricity wise spread

**Table 7**

Energy intensity (MWh/Revenue)

Electricity Wise Spread	FY 22-23
Electricity consumed within the organization (MWh)	42.2
Revenue (₹)	10,00,00,000
Electricity Consumption Normalized by Revenue (MWh/₹) 1e-7	4.2

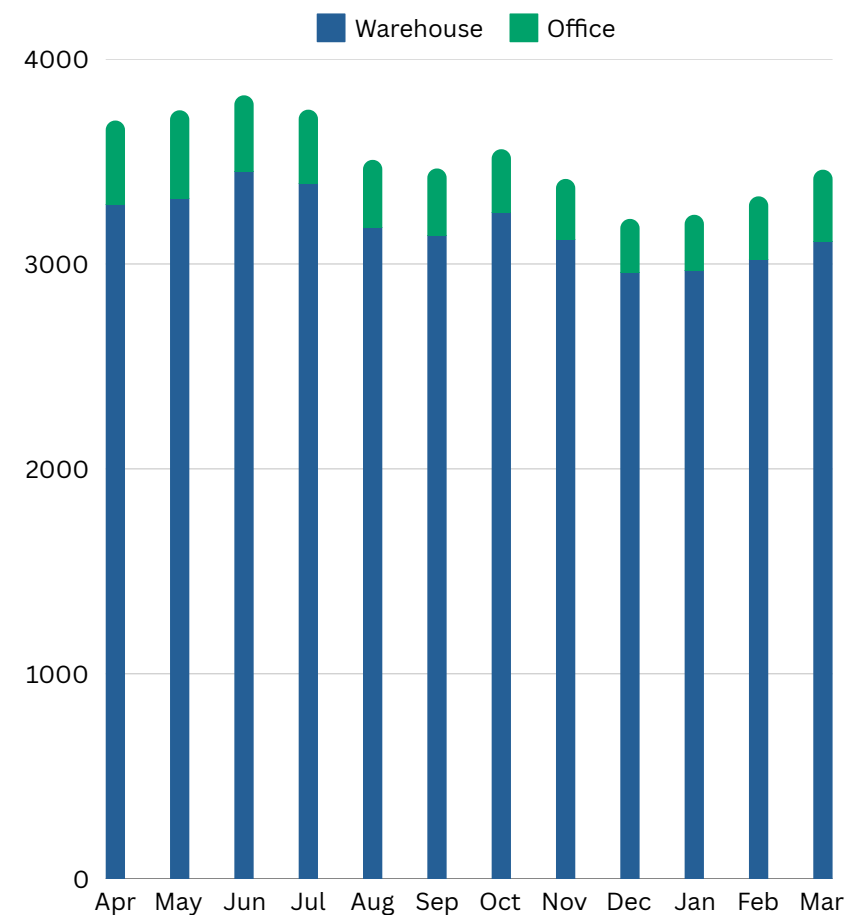
### Overview

- All electricity generation technologies emit greenhouse gases at some point in their life cycle and hence have a carbon footprint.
- Fossil-fuelled generation has a high carbon footprint, with most emissions produced during plant operation. "Carbon capture and storage" could reduce these significantly, though this is unproven at full scale.
- Nuclear and renewable generation generally have a low carbon footprint. Most emissions are caused indirectly, such as during the construction of the technology itself.
- Carbon footprints are sensitive to factors including the technology's operating conditions and country of its manufacture.
- Further studies for the UK would improve the evidence base.

## Electricity used

**Fig. 1**

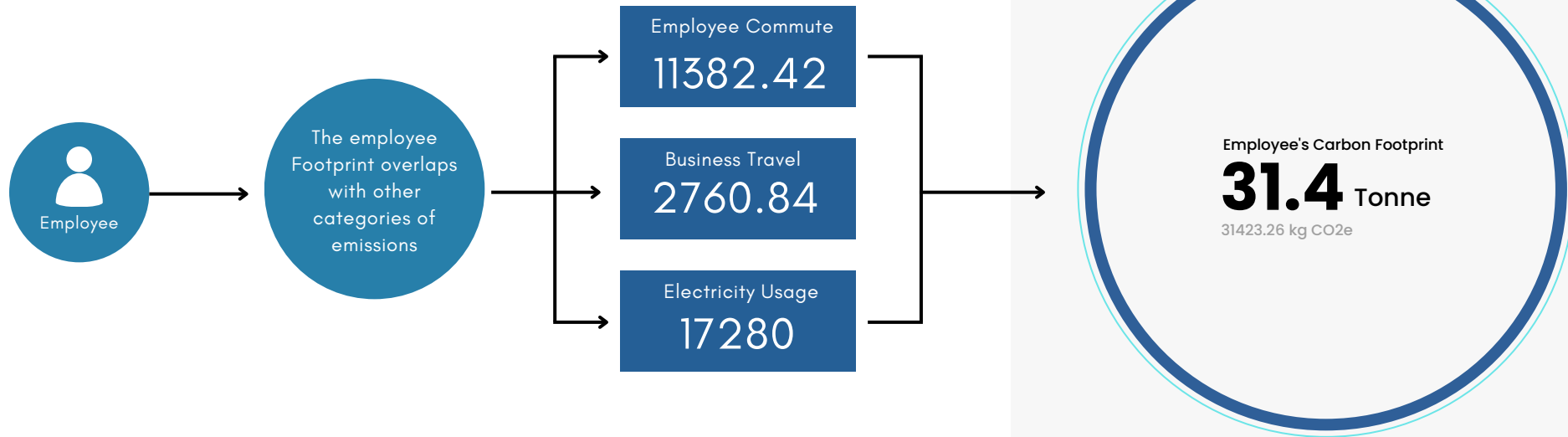
Energy consumption within the organization (Units)



1. Only reported categories and values are applicable. Renewable fuels, electricity sold, heating sold, cooling sold, and steam sold categories are currently not applicable.

# Employee Footprint

An employment footprint includes a country's domestic employment and that occurring along the supply chains of, and hence embodied in, its imported goods and services.



# Top Emitters of the Organization

- The top 5 employee occupy straight up 41% of the total employee footprint

Employee name	Carbon Footprint (in Kg CO2e)
Jaydev sharma	3339.6
Viresh	2803.938
Harsh Khatana	2546.4
Sanyog Mehra	2182.3
Sankalp Suman	2010.738

## Intensity Metrics

Per Employee

**1.26**  
Mt CO2e



Per sq. ft. Office Space

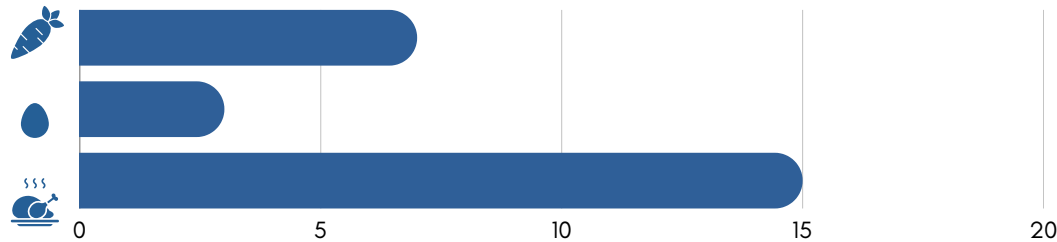
**0.008**  
Mt CO2e



# Employee Footprint

Even though most of the employees reside within a 10km vicinity and 1/3rd use non-conventional means, the carbon footprint of this category occupies more than 34%.

With a 6 day work week and no hybrid work policy, the no. of days conventional transport means are used increases drastically



Carbon emission occurs during various stages of life cycle of food products. Greenhouse gases (GHG) emission from 24 Indian food items showed that animal food products (meat and milk) and rice cultivation mostly contributed to methane (CH<sub>4</sub>) emission, while food products from crops contributed to emission of nitrous oxide (N<sub>2</sub>O). Emission of CO<sub>2</sub> occurred during farm operations, production of farm inputs, transport, processing and preparation of food.

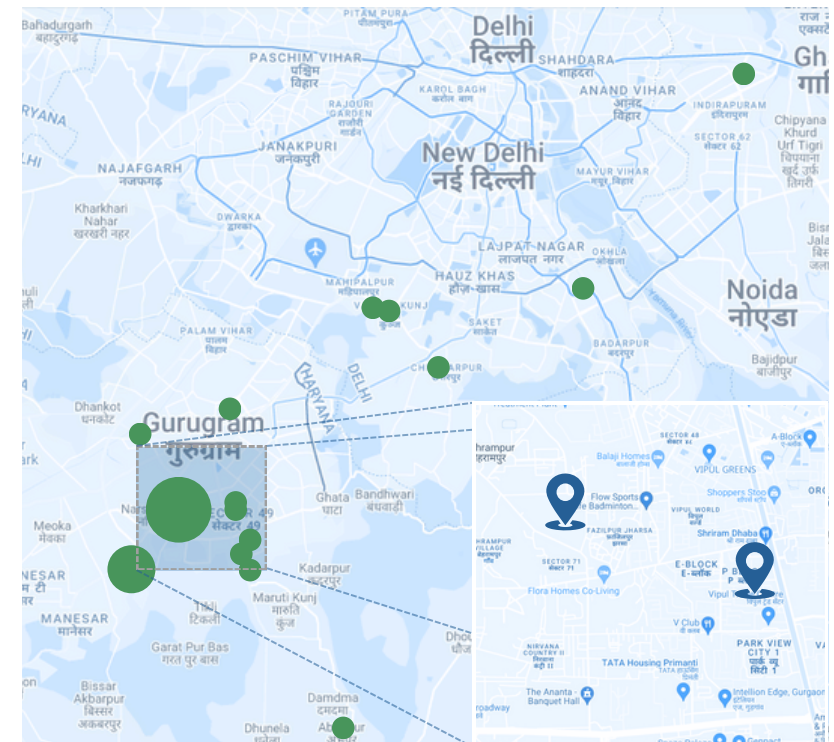
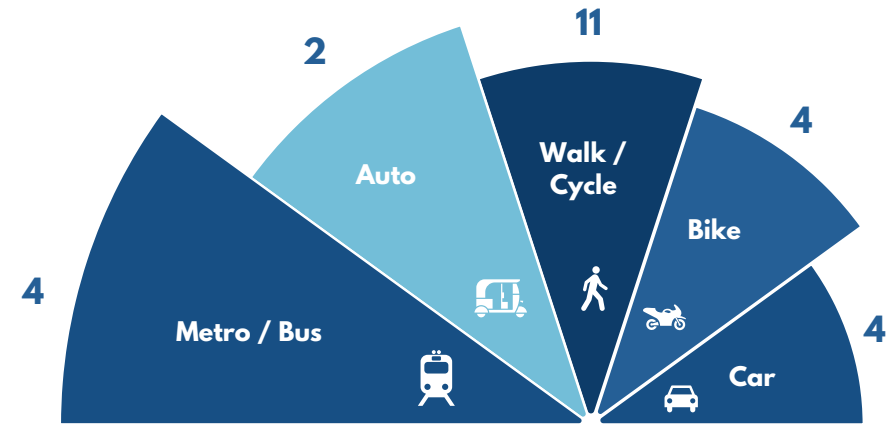
In case of YePrayas more than 80% employees bring homemade food and avoid contributing to the plastic packaging on food orders.

With 60% employees being Non-Vegetarian it becomes important awareing them about the effects of maintaining this diet

In case of the very nature of the organization both the working spaces are quite adjacent and provide a single stop for all commute paths. One of the steps to limit this category's emissions is to

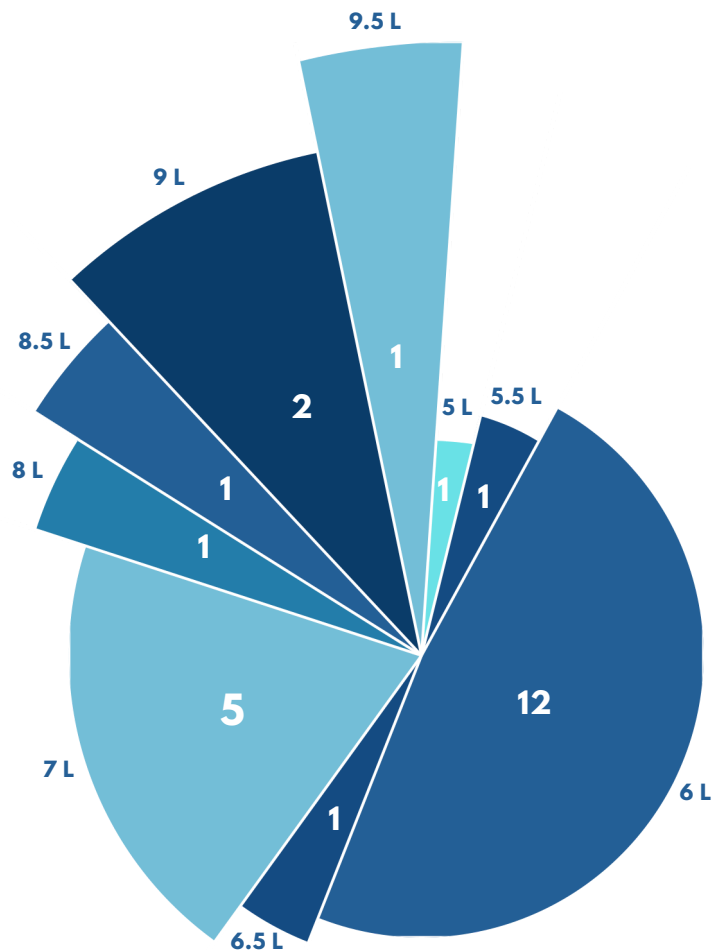
- Carpool
- RRTS
- Electric Bus Service
- Switching to personal electric vehicles

Few policy updates like offering incentives on switching to electric or non conventional means can further curb the emissions of the same.



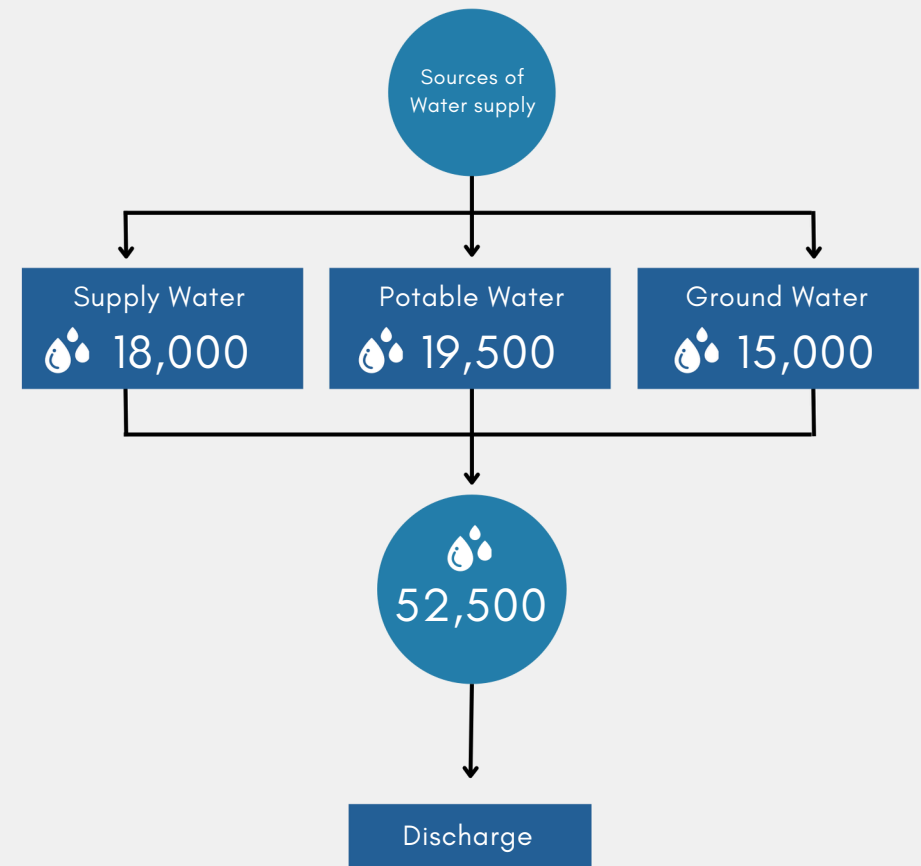
## Water Footprint

The water footprint of a business, the 'corporate water footprint', is defined as the total volume of freshwater that is used directly or indirectly to run and support a business. It is the total volume of water use to be associated with the use of the business outputs. The water footprint of a business consists of water used for producing/manufacturing or for supporting activities and the indirect water use in the producer's supply chain.



Water Flow of Employees

## Water Flow (in Litres)



The water footprint allows us to answer a broad range of questions for companies, governments and individuals. For example:

- where is the water dependence in my company's operations or supply chain?
- how well are regulations protecting our water resources?
- how secure are our food or energy supplies?
- can I do something to reduce my own water footprint and help us manage water for both people and nature?



# Analysis







[R & O](#)

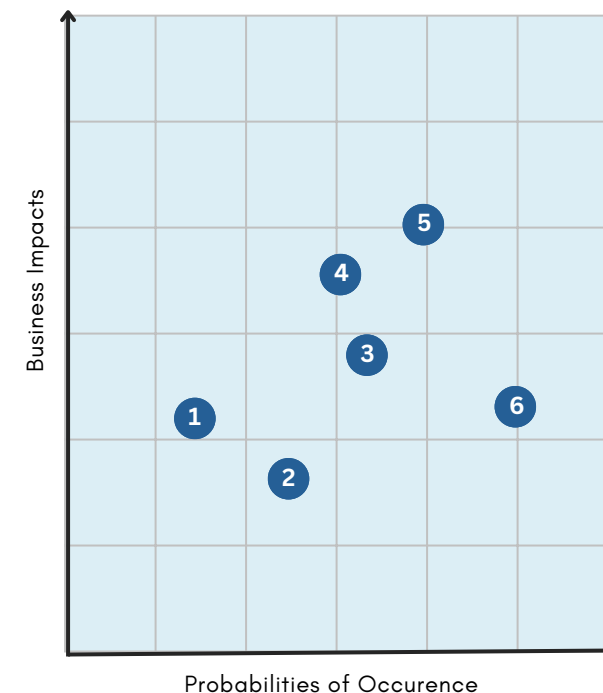
[SDG Allignment](#)

[Damage Impact](#)

[Scope 3 Reasoning](#)

# Risks and Opportunity Analysis









Risk and opportunity Factors Related to Climate Change		Financial Impacts of Climate Change Risks	Financial Impacts of Climate Change Opportunities
Transition Risks & Opportunities	<b>1 GHG emissions Trading system</b> 	<b>Short Term</b> <ul style="list-style-type: none"> <li>Increase in the costs of purchasing carbon credits Short term due to increasing carbon prices and tightening emission regulations</li> </ul>	<ul style="list-style-type: none"> <li>Minimize acquisition of carbon credit through reducing GHG emission.</li> <li>Revenue via Plastic recycling credits (Plastic and E-waste expertise of YePrayas)</li> </ul>
	<b>2 Adoption of High-Efficiency tech</b> 	<b>Short Term</b> <ul style="list-style-type: none"> <li>Increase in investments in high-efficiency equipment, and facilities for GHG reduction &amp; water recycling, etc.</li> <li>Increase in R&amp;D investments in carbon reduction technologies</li> </ul>	<ul style="list-style-type: none"> <li>Create business opportunities such as energy and waste management system leveraging the rising raw material cost</li> </ul>
	<b>3 Changes in Consumer Behavior</b> 	<b>Mid Term</b> <ul style="list-style-type: none"> <li>Increase in cost for certifications on highly efficient and sustainable products</li> <li>Decrease in sales for products that are rated with low energy efficiency</li> <li>Increase in R&amp;D investments for highly efficient and sustainable products</li> </ul>	<ul style="list-style-type: none"> <li>Leverage net-zero transactions to beat competition and acquire first mover advantage of providing the said service hence capitalizing on Increasing customer awareness</li> </ul>
	<b>4 Expansion of renewable energy use</b> 	<b>Mid Term</b> <ul style="list-style-type: none"> <li>Increase in production costs due to an increase in electricity charges</li> <li>Decrease in B2B sales due to the client's request on using Renewable energy</li> </ul>	<ul style="list-style-type: none"> <li>Purchase of I-RECs to claim 100% clean energy hence saving on infra cost.</li> <li>Contributing to Solar Energy grid producers to reduce Scope 2 emissions (SDG 7 &amp; 13)</li> </ul>
Physical Risks & Opportunities	<b>5 Natural Disasters such as typhoons &amp; Floods</b> 	<b>Short Term</b> <ul style="list-style-type: none"> <li>Increase in investments to prevent a natural disaster</li> <li>Increase in cost for loss in business opportunities and emergency reliance of a disaster</li> </ul>	<ul style="list-style-type: none"> <li>Training the staff to attain hybrid work mode and widen the talent pool which contributes to SDGs 5 &amp; 10</li> <li>Investing in nature-based solutions to prevent said disasters in a passive sense.</li> </ul>
	<b>6 Rise in temperature, Yellow dust</b> 	<b>Long Term</b> <ul style="list-style-type: none"> <li>Increase in worksite management costs including air conditioning and heating</li> <li>Increase in investment for equipment to prevent air pollutants</li> </ul>	<ul style="list-style-type: none"> <li>Expand business and increase sales of energy-efficient air conditioners, air purifier and dryers</li> <li>Promotes SDGs 3 &amp; 11</li> </ul>



- Evident rise in temperature with predictions of achieving as far as 3°C
- India has achieved its NDC target with total non-fossil based installed energy capacity of 159.95 GW which is 41.4% of the total installed electricity capacity.
- Sixty-two percent of Generation Z survey participants prefer to buy from sustainable brands, on par with Millennials, while 54 percent of Generation X and 44 percent of the Silent Generation say the same. (Gen Z Shoppers Demand Sustainable Retail)

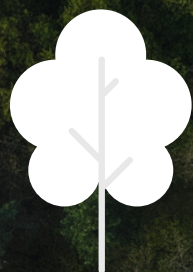
# Alignment with SDGs

In September of 2015, the United Nations General Assembly adopted the Sustainable Development Goals (SDGs) for the purpose of establishing a sustainable society across the world through community, environmental protection and inclusive economic growth. The timeline for these UN SDGS run from 2016 until 2030. As a responsible global business, YePrayas attempts to take account of the SDGs in running their business.

SDGs	Our Approach	Main Activities	SDGs	Our Approach	Main Activities
	<p>We are committed to minimizing health and environmental impacts related to the use of chemicals of concern.</p> <p>We strive to create an environment where our employees can work without concerns over their health and safety in the manufacturing processes.</p>	<ul style="list-style-type: none"> <li>• Disclosure of regulated substance in manufacturing process</li> <li>• Well handling of the biohazard materials in the waste recycled</li> </ul>		<p>We offer equal opportunities to all employees and applicants. In addition, we do not tolerate any kinds of discrimination on the grounds of gender, race, nationality, religion, age, marital status, sexuality, social status, physical disabilities, pregnancy, military service, genetic information or political propensity.</p>	<ul style="list-style-type: none"> <li>• Support system for employees</li> <li>• Leave benefit in case of unexpected crisis</li> </ul>
	<p>YePrayas has created the KNOW modules. A knowledge book for children of grade 5. The module is enriched with awareness about the Environment and promotes caring about the Environment</p>	<ul style="list-style-type: none"> <li>• Development of the KNOW Module. Environmental Book for school children</li> <li>• Collaboration with the Shri Vishwakarma Skill University</li> </ul>		<p>We minimize the environmental impact through reuse and recycling. We pursue the expansion of the use of recycled materials, product durability improvement, compact product packaging.</p>	<ul style="list-style-type: none"> <li>• Expanded eco-package</li> <li>• Expanded renewable or recycled materials such as recycled plastics</li> </ul>
	<p>We believe that ensuring equal opportunities is key to economic growth &amp; social change. We endeavor to find new ways to support women across the globe and prepare the youth for a better future.</p>	<ul style="list-style-type: none"> <li>• Female leadership training and mentoring</li> <li>• Work support for childbirth and childcare</li> </ul>		<p>We prioritize climate change issues according to the degree of their importance and impact, devising a strategy to respond to them. The calculation of Carbon Footprint is one of the first steps towards this goal</p>	<ul style="list-style-type: none"> <li>• As a response to our Carbon Footprint calculation - GHG emission reduction efforts in working with suppliers, logistics and others.</li> </ul>
	<p>We are committed to minimizing the impact of our operation on bio-diversity. In particular, we have consistently undertaken ecosystem protection activities, including the identification of endangered species near our worksites and protection of their habitats.</p>	<ul style="list-style-type: none"> <li>• Stream Ecosystem protection activities</li> </ul>		<p>We are constantly striving to collaborate with organizations to promote ESG &amp; the importance of SDG goals. By offering our services we commit to the same - recycling of waste &amp; promoting our KNOW module</p>	<ul style="list-style-type: none"> <li>• Working with IKEA to clear out their waste and promote the three R principle - Reuse, Reduce, Recycle</li> </ul>

## Damage Impact

Climate change directly impacts business' directly, such as physical damage from floods or bushfires, or forced closures. Indirect impacts are the flow-on effects of climate change or extreme events, such as a supply chain being disrupted by extreme weather, or income being reduced.



**3400 Trees**

YePrayas' annual footprint accounts for loss of 3400 trees on an annual basis further affecting biodiversity



**17.75 Tonnes**

17.75 tonne Coal equivalent burned to generate electricity for YePrayas's operations



**216.9 sq.m. ice**

216.9 sq.m. ice melted resulting in rising sea levels and contributing to coastal submergence

# Methodology -> Scope 3 reasoning

YePrayas calculates and reports Scope 3 emissions for all relevant categories. The following table summarizes which categories are relevant and a description of the methodology.

Scope 3 category	Emissions calculation methodology	Impact
Category 3, 8 - 15	These categories don't apply as there are no end products sold by YePrayas. There are no leased assets, any franchises or investments. Hence as a result categories 10,11 and 12 also don't apply.	Not Applicable
Purchased goods and services   Capital Goods	This category includes emissions from upstream purchasing of goods and services, including direct and indirect goods. YePrayas mainly deals in handling the waste of organizations. So as such there are no sizable entries for this category.	Negligible
Upstream transportation and distribution	This category includes emissions from upstream transportation of goods, including all transportation of goods. YePrayas's business expansion will heavily contribute to this category as more and more logistics will go into managing the waste.	Very High   Directly Proportional to Revenue
Business travel	This category includes emissions from the transportation of employees for business-related activities in vehicles owned or operated by third parties, such as aircraft, trains, buses, and passenger cars. As the business development spreads across multiple locations, this category's impact also increases	High   Directly Proportional to Business Development
Waste generated in operations	Due to the very nature of YePrayas operations this category has a medium impact and can be kept under non alarming levels very easily	Low to Medium
Employee Commuting	Over 90% of employees are local based and roughly 60% are within 5km vicinity and use non-conventional means to commute like RRTS, Walk, Bus, Cycle. Hence, this category has a very low impact and will increase in the nature of employee expansion	Very Low   Will depend on nature of employee expansion

# Appendix

[Emission Factors](#)

[Gas wise Spread](#)

[Glossary- 1, 2, 3](#)

# Emission Factors

Emission factors are representative values that relate a quantity of gas emitted to the atmosphere with an activity associated with the emission of said gas. Normally, these factors are expressed as the weight of the gas divided by the weight, volume, distance or duration of the activity that generates the gas.

The emission factors used in the calculation of Elecnor's footprint to transform energy consumptions or consumables into GHG emissions must be transparent and consistent. Therefore, the most suitable and reliable emission factors have been used geographically

Capacity (Freight Vehicles)	Emission Factor
LDV (<3.5T)	0.307
MDV (<12T)	0.5928
HDV (>12T)	0.7375

Petroleum Product	Emissions per tonne (kg CO <sub>2</sub> e/L)
Diesel	2.70
Petrol	3.07
LPG	2.98
CNG	2.69

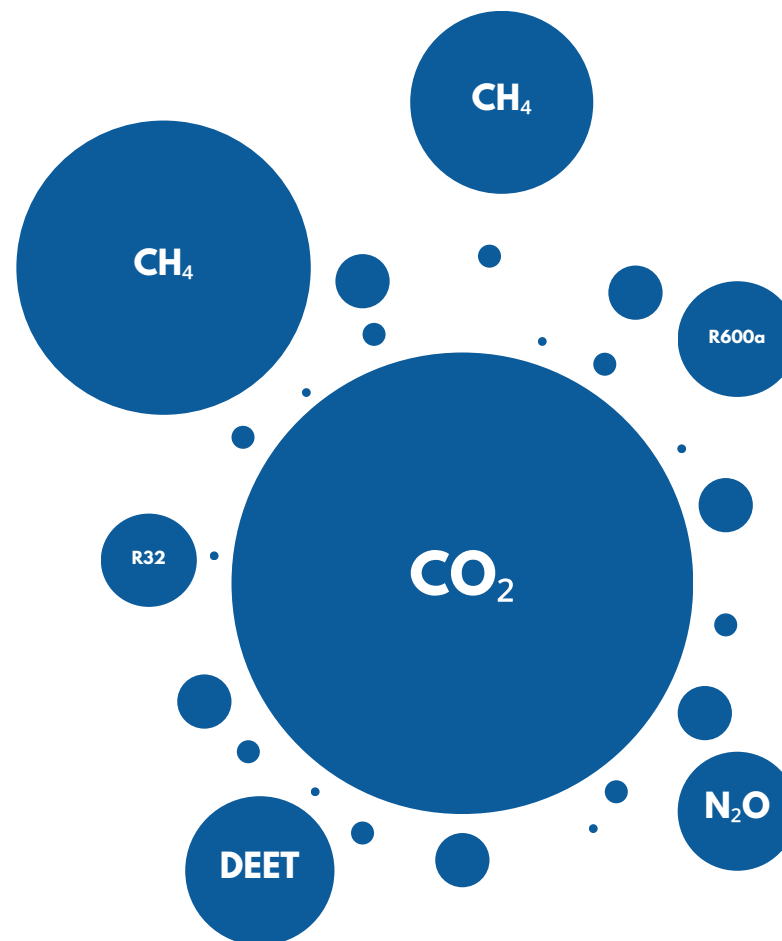
Waste Material Type	EF Gross kg CO <sub>2</sub> e/t
Mixed glass	395
Paper	1576
Mixed paper& card	559
Steel cans	529
Aluminium cans	1113
Other scrap metal	883
Mixed plastics	339
Furniture	502
Fluorescent tubes & other light bulbs	518
LDAs	428
SDAs	463

## Gas wise spread

Gas wise Spread	FY22
<b>Scope 1</b>	
Scope 1 – CO <sub>2</sub>	23.8
Scope 1 – CH <sub>4</sub>	0.02
Scope 1 – N <sub>2</sub> O	0.003
Fugitive Emission	
R32 - (677 GWP)	0.2
R600a - (3 GWP)	0.25
<b>Scope 2</b>	
Scope 2 – CO <sub>2</sub>	34980
Scope 2 – CH <sub>4</sub>	2.5
Scope 2 – N <sub>2</sub> O	0.3
<b>Scope 3</b>	
Scope 3 – CO <sub>2</sub>	25520
Scope 3 – CH <sub>4</sub>	1.1
Scope 3 – N <sub>2</sub> O	0.6
DEET (C <sub>12</sub> H <sub>17</sub> NO)	2

Fuel Material	Calorific Value (TJ/Gg)	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Anthracite (raw coal)	19.63	95.81	0.001	0.0015
Diesel	43	74.1	0.003	0.0006
Liquidified petroleum gas (LPG)	47.3	63.1	0.001	0.0001
Fuel, aviation turbine	44.3	69.3	0.003	0.0006

### Gas wise spread within the organization



1. The Kyoto basket encompasses the following six greenhouse gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and the so-called F-gases (hydrofluorocarbons and perfluorocarbons) and sulphur hexafluoride (SF<sub>6</sub>).
2. Additionally some of the fugitive emission gases are being phased out successively.



# Glossary

## Carbon Calculator

An online tool that calculates your carbon footprint based on your home energy use, driving and flying habits, food, trash, recycling, and other factors.

## Carbon Credits

Equal to the offsetting of one tonne of carbon dioxide or carbon dioxide equivalent. A monetary value is ascribed to the reduction or offset of greenhouse gas emissions; this is a general term for any tradable certificate or permit reflecting emissions reductions.

## Carbon Cycle

For as far back as geological evidence shows – at least 650,000 years – the Earth's natural carbon cycle has maintained a steady equilibrium of carbon dioxide in the atmosphere – around 275 parts per million (ppm). We discovered this by examining the contents of Antarctic ice cores. As a result of the natural carbon cycle: People and animals (source) use respiration to turn oxygen into carbon dioxide. Plants (sinks) absorb CO<sub>2</sub> and release it back into the atmosphere. Over the seas, oceans both produce (source) and absorb (sink) carbon dioxide. Dead organic matter traps carbon underground in various forms such as fossil fuels (sink), while volcanic eruptions (source) can release CO<sub>2</sub> from carbonate rocks deep inside the Earth.

## Carbon dioxide

A heat-trapping gas composed of one part carbon and two parts oxygen. Too much CO<sub>2</sub> in our atmosphere causes the Earth to retain too much of the sun's heat, leading to global warming. And excessive global warming eventually leads to various complications that are detrimental to our planet and its inhabitants, such as rising sea levels or certain areas becoming too hot for humans to live in.

## Carbon Footprint

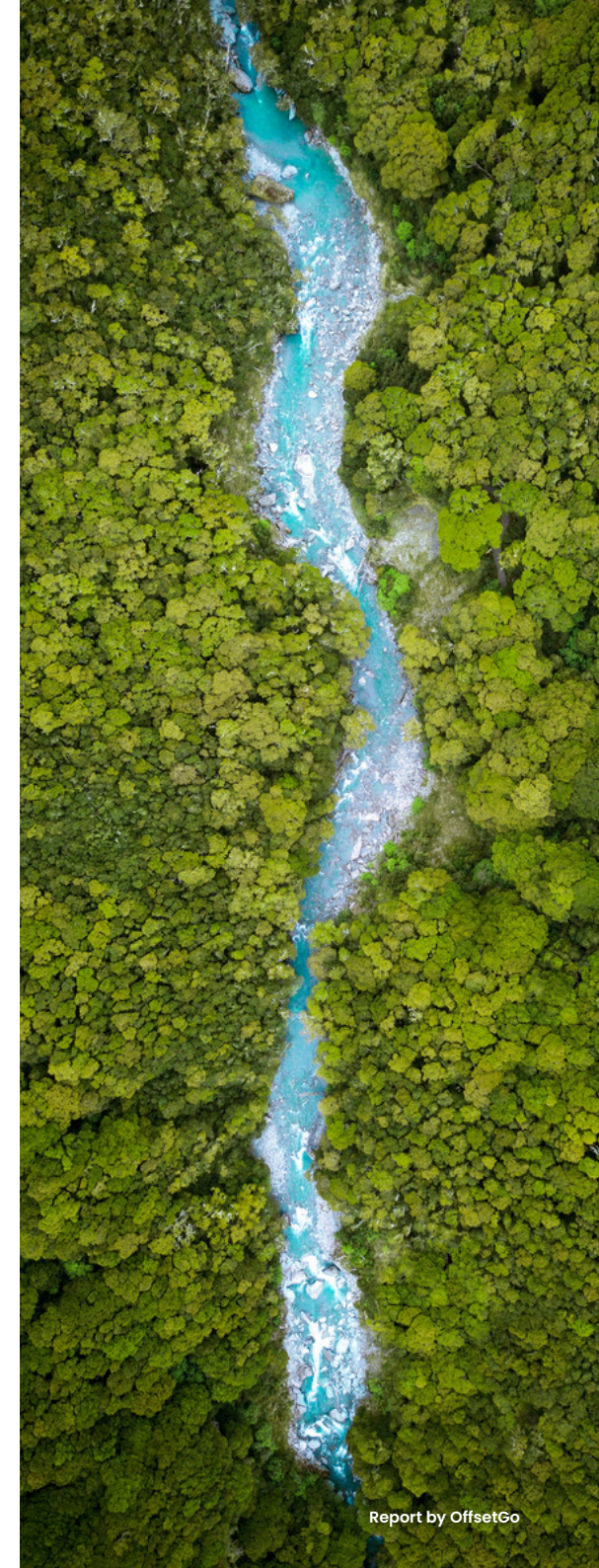
The quantity of carbon dioxide emitted into the atmosphere as a result of any given entity's actions. Individuals, corporations, and even nations can have a carbon footprint.

## Carbon Neutral

Often known as having a net zero carbon footprint, this is achieved by either reducing carbon emissions to zero, or by balancing a measurable quantity of carbon emitted with an equivalent amount offset.

## Carbon Market

A marketplace that treats emissions reductions as a commodity, where participating members can buy and sell carbon credits.



# Glossary (cont.)

## Carbon dioxide equivalent

The globally accepted standard measure of greenhouse gas emissions, and it permits other greenhouse gas emissions to be represented in terms of CO<sub>2</sub> based on their proportional global warming potential (GWP). The following gases are included under the term CO<sub>2</sub>e:

Greenhouse Gas	GWP
Carbon Dioxide (CO <sub>2</sub> )	1
Methane (CH <sub>4</sub> )	21
Nitrous oxide (N <sub>2</sub> O)	298
Hydrofluorocarbons (HFCs)	124 - 14,800
Perfluorocarbons (PFCs)	390 - 12,200
Sulphur hexafluoride (SF <sub>6</sub> )	23,900
Nitrogen trifluoride (NF <sub>3</sub> )	17,200

Each of the above seven gases was to be mitigated under the Kyoto Protocol, and this objective has been carried forward under the Paris Agreement.

## Carbon source

Any source of carbon dioxide or equivalent greenhouse gases. People and animals, as well as seas and volcanic eruptions, are all natural carbon sources. Carbon emissions from human-caused sources include the use of fossil fuels, automobile exhaust, deforestation, and manufacturing, building, and mining activities.

## Climate change

As defined by the UN Framework Convention on Climate Change, climate change is: “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”. In other words, in most contexts, climate change refers specifically to anthropogenic climate change, and not the Earth’s natural climate cycles. This includes both global warming as well as extreme weather events.

## Extreme Weather Events

Unexpected weather events and patterns that are considered extremely unusual outliers in the regions where they occur. Unexpected heat waves, such as the 2021 Western North America heat wave that set new record-high temperatures in Canada, or the February 2021 North American cold wave that caused significant damage in the state of Texas, are examples of such events. There is some evidence to suggest that climate change is causing extreme weather events to occur both more frequently as well as more severely.



# Glossary (cont.)

## Global Warming

An increase in the world's average surface temperature, as compared to a baseline reference period. The average temperature of world has increased by approximately 1°C since the late 19th century, and the scientific consensus is that human activity is the primary contributor.

## Fossil Fuels

Fuels derived from hydrocarbon deposits formed by fossils, such as coal, oil, and natural gas. The combustion of these products, for example in car engines or coal-fired power plants, produces greenhouse gases like carbon dioxide.

## Global Warming Potential (GWP)

A scientific measure that compares how harmful each greenhouse gas is to the atmosphere, in terms of how long they stay there and how much heat they trap, relative to carbon dioxide.

## Greenhouse Gases (GHG)

Gases that trap heat in the atmosphere. Carbon dioxide, methane, nitrous oxide, and fluorinated gases are the primary greenhouse gases.

## Greenwashing

The use of false or misleading promotion and marketing to exaggerate an organization's environmental or sustainable activities.

## Kyoto Protocol

A global accord signed in 1997 that aimed to decrease greenhouse gas emissions. The phrase "carbon credit" appeared for the first time in the Kyoto Protocol. The Kyoto Protocol would later be superseded by the Paris Agreement.

## Leakage

When a reduction in emissions from a carbon offset project in one location produces a rise in emissions in another area. For example, when preserving a forest in one region transfers logging activities to another area of forest.

## Megawatt (MW)

A power measurement unit equal to one million watts. One megawatt is approximately equal to the amount of energy produced by ten car engines.

## Megawatt Hour (MWh)

Equivalent to 1,000 kilowatts of continuous power consumption for one hour. It's about comparable to the amount of power consumed by 330 households in a single hour.



# Glossary (cont.)

## Net Zero

A condition in which greenhouse gases emitted into the atmosphere are balanced by the amount of greenhouse gases being removed from the atmosphere.

## Offset Certificates

Paper licences provided in exchange for the purchase of carbon credits. Offset certificates should include a serial number unique to the offset, total tonnage bought, the verifier's name and signature, project location, owner's name and address, and a vintage date.

## Paris Agreement

An international treaty on climate change that superseded the Kyoto Protocol. Signed in 2016, the agreement has been ratified by all but six countries in the world. The long-term goal of the Paris Agreement is to keep global warming below 2°C, and the treaty contains various provisions to enforce this target.

## Renewable Energy

Energy derived from sources that can be naturally renewed in a relatively short amount of time. The five most common renewable sources are biomass (such as wood and biogas), hydropower, geothermal (heat from inside the earth), wind, and solar.

## Renewable Energy Credits (REC)

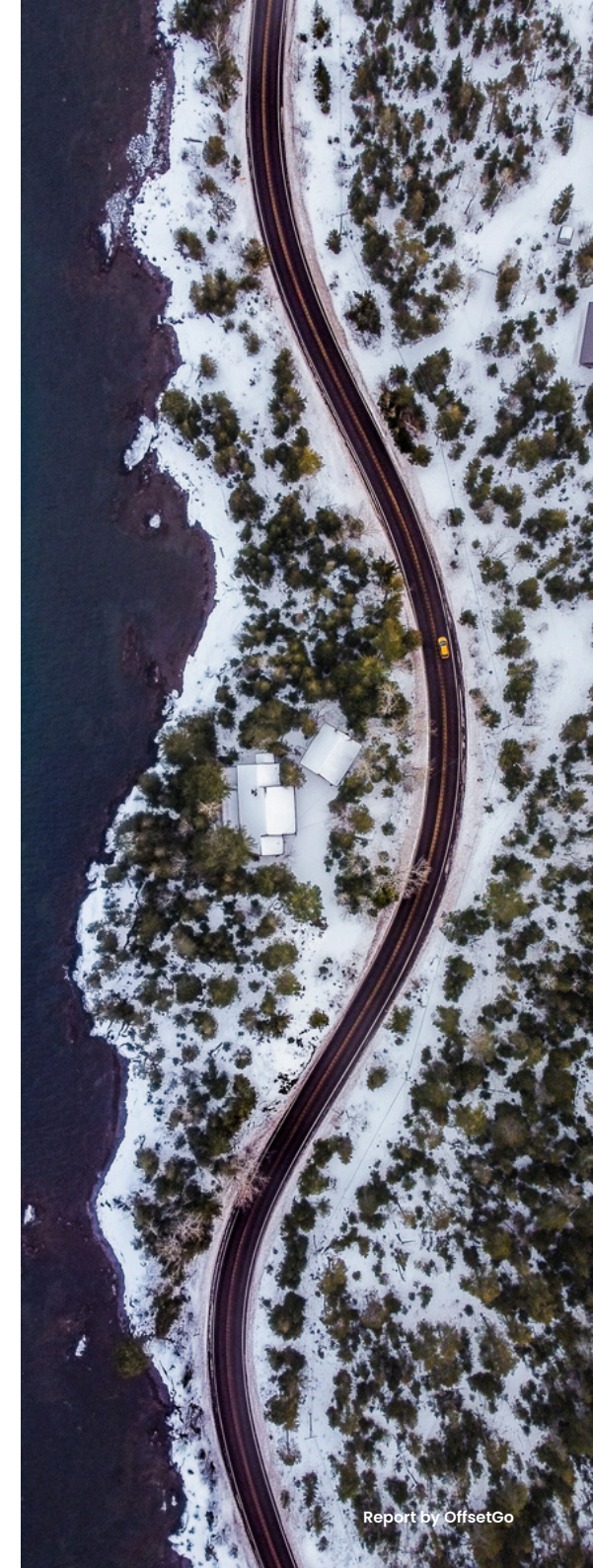
Unlike a carbon offset, which represents one tonne of CO<sub>2</sub>e emissions reduction, a renewable energy credit represents one MWh of energy produced by a renewable energy source, such as solar, wind, or hydroelectric power.

## Sequestration

The removal of carbon dioxide from the atmosphere through biological (for example, photosynthesis in plants and trees), chemical (for example, turning CO<sub>2</sub> into carbonate minerals), or physical processes (for example, storage of carbon dioxide in underground reservoirs).

## Sustainable Development Goals (SDG)

The United Nations established 17 global development goals for all countries through a participatory process, elaborated in the 2030 Agenda for Sustainable Development. These goals include ending poverty and hunger, ensuring health and well-being, education, gender equality, clean water and energy, and decent work; and building and ensuring resilient and sustainable infrastructure, cities, and communities.



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