

# Multivista Global Print Solutions

## **CARBON FOOTPRINT**

Calculation & validation report

FY 19 (Base Year) and  
FY 20 (Reporting Year)



Report & Data Validation by  
V4 Sustainability Consulting team









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## FOREWORD: CARBON FOOTPRINT, IMPORTANT GHG PROTOCOL & ISO 14064-1

### Carbon Footprint

The carbon footprint is a parameter that represents the total emissions of CO<sub>2</sub> and other greenhouse gases (GHG), expressed in mass of CO<sub>2</sub> equivalent, caused directly or indirectly by a product, organisation, service, or event throughout its life cycle. The carbon footprint is important to try to quantify the main emission sources and to have a complete picture of the impact of an organisation on climate change. It is also the first step to carry out a plan to reduce GHG emissions.

The carbon footprint of an organisation intends to quantify the GHG emissions implied by the activity flows of an interconnected entity or group of entities, which may be under its responsibility or on which it depends, over a period of one year with an expressed result in tonnes of CO<sub>2</sub> equivalent (CO<sub>2</sub>e).

The calculation of the carbon footprint is more than GHG emissions data, it allows to identify the main GHG emission sources of an organisation and to have a global image of its impact on climate change. Furthermore, it constitutes a necessary base to address and continue over time actions to reduce this impact. Therefore, although the calculation of the carbon footprint by an organisation is voluntary, its assessment has an important strategic aspect and involves a large number of environmental, economic and reputational benefits:

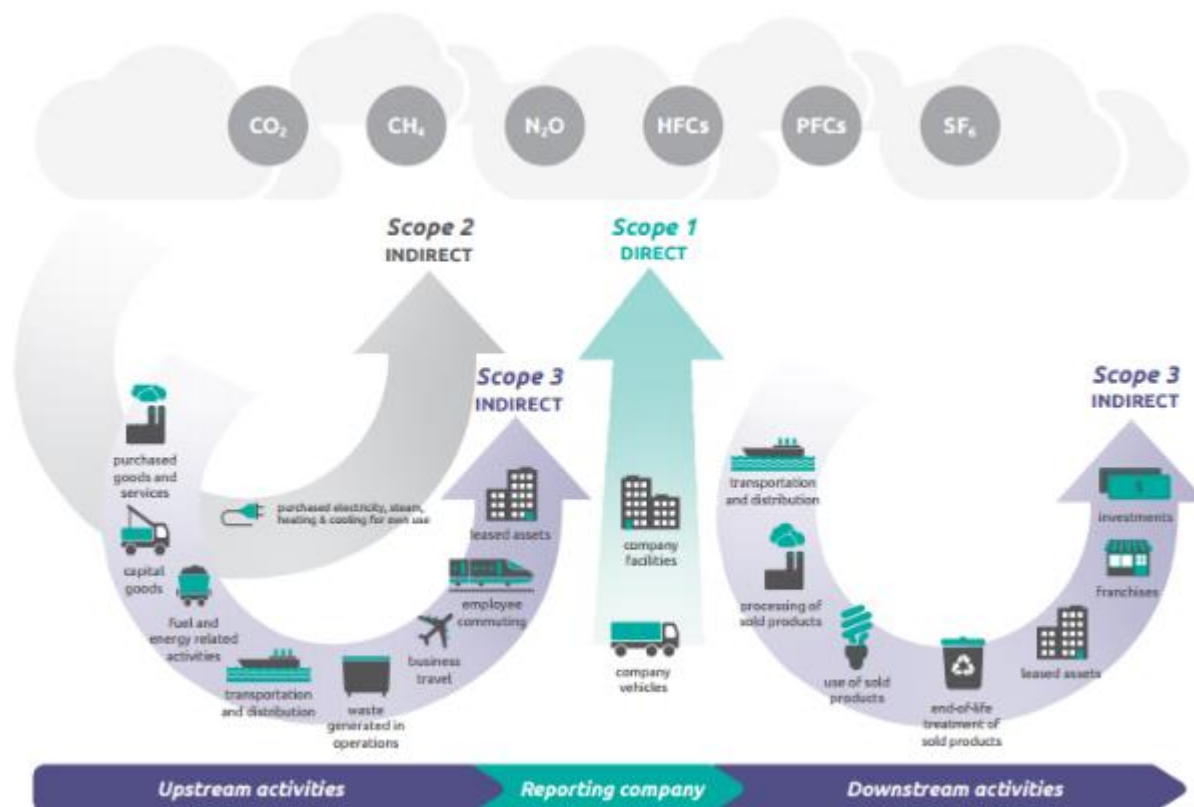
-  Knowledge about the environmental impact of an organisation and its contribution to climate change is enriched.
-  It allows to know and identify the energy consumption and the main GHG emission sources of an organisation, which is a point of reference to design strategies aimed at a better management of the energy used and to prioritise reduction actions with the application of more efficient techniques.
-  It allows to identify the company's activities with a greater potential for reducing GHG emissions and to set specific objectives for them.
-  It facilitates the assessment of the choice of raw materials, selection of suppliers, manufacturing methods and production options according to their associated GHG emissions.
-  It favours the application of more efficient techniques in different activities, thus assuming cost savings.
-  It is an advance to future regulations and policies on climate change. A clear example is that the EU is already working on how to introduce the calculation of the carbon footprint in the green public procurement.
-  It means more transparent communication about the company's commitments to sustainable development and, more specifically, the reduction of GHG.



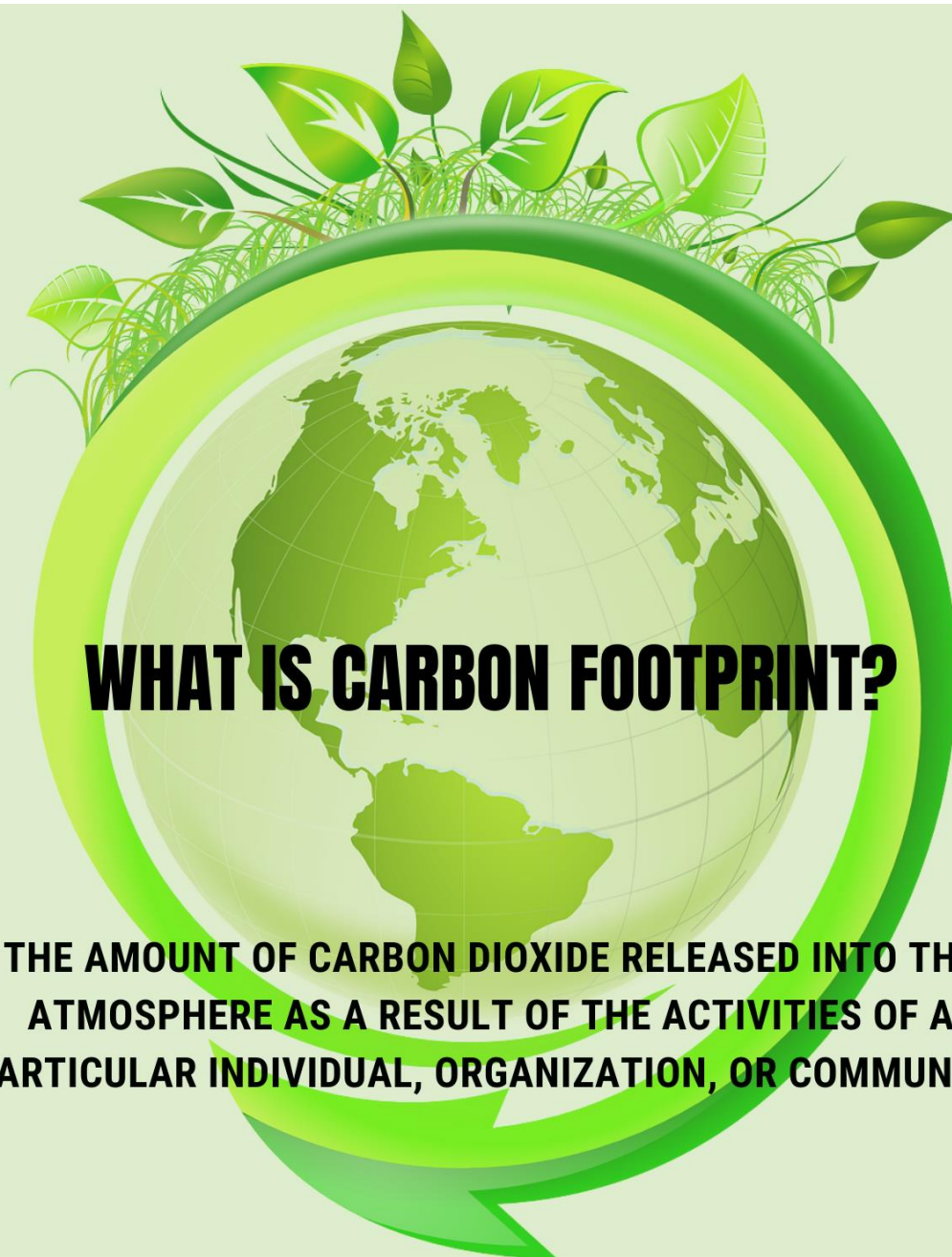
To achieve these objectives, it is necessary to work with the greatest accuracy, covering the maximum possible quantity of emissions for which the organisation is responsible.

Conducting an inventory of greenhouse gas emissions is an important first step a company can take towards developing an effective response to climate change. A greenhouse gas inventory provides valuable information on the risks and opportunities of operating in a carbon constrained economy. At a strategic level, greenhouse gas emissions may be relevant to a company's "license to operate", competitive environment, "carbon risk", and issues of corporate social responsibility. At an operational level, greenhouse gas emissions information may be relevant to decisions on what products to make, what materials and technologies to use, and from where to source energy.

The Greenhouse Gas Protocol, a broad collaboration of businesses, NGO's, governments and others, was convened by the World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI). It represents a voluntary international standard for accounting and reporting greenhouse gas emissions that will enable businesses to report information from global operations in a way that presents a clear picture of GHG risks and reduction opportunities, while facilitating understanding and comparison with similar reports.



**Figure 1- Direct & Indirect Emissions**



## **WHAT IS CARBON FOOTPRINT?**

**THE AMOUNT OF CARBON DIOXIDE RELEASED INTO THE ATMOSPHERE AS A RESULT OF THE ACTIVITIES OF A PARTICULAR INDIVIDUAL, ORGANIZATION, OR COMMUNITY**

The Greenhouse Gas Protocol, a broad collaboration of businesses, NGO's, governments and others, was convened by the World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI). It represents a voluntary international standard for accounting and reporting greenhouse gas emissions that will enable businesses to report information from global operations in a way that presents a clear picture of GHG risks and reduction opportunities, while facilitating understanding and comparison with similar reports.

## ISO 14064

ISO 14064 is a standard developed under processes of the International Standards Organization. A non-governmental organization located in Geneva, Switzerland, the International Organization for Standardization (ISO) coordinates efforts by groups of technical experts representing individual national standard institutes to develop consensus-based voluntary technical standards on variety of issues.

ISO has issued over 16,000 standards including the well-known ISO 9000 and ISO 14000 standard series on quality and environmental management, respectively. The objective of ISO standards is to facilitate international cooperation, especially business and trade, by facilitating communication on technical issues between industry, government, consumers, and other stakeholders and allowing consistency of products and services within and across national boundaries.

The development of ISO 14064, an addition to the ISO 14000 environmental management standard series, began in 2002. Recognizing quickly emerging interest in addressing the environmental issue posed by climate change combined with the lack of international standards for businesses to take action, a work group was formed to attempt to define how to quantify and report GHG emissions from an organization, as well as how GHG reports could be verified. A key objective of the process was to create a technically rigorous but policy neutral product that would be applicable regardless a country's current climate change policy, especially its participation in the United Nation's Kyoto Protocol.

Through a process that included continuous interaction and cooperation of national technical advisory committees consisting of 175 experts representing 45 countries and a series of international in-person negotiating meetings, a standard on these issues was developed and issued by ISO for international use in March 2006. In August 2006, ISO 14064 was also approved by the American National Standards Institute as an American National Standard.

ISO 14064 Part 1 establishes a process for quantifying GHG emissions for the inventory. The first steps of this process are identification of specific emission sources within the operational boundaries as well as selection of an emissions quantification methodology applicable for the sources identified.

The next steps are the collection of data required by the methodology for the source and the identification of established emission factors for the data collected. Finally, the data and the emission factors, applied consistent with the quantification methodology, are used to quantify emissions from individual emission sources. The emissions quantified for each source are then consolidated with the other sources within the operational boundaries, but ensuring that direct and indirect sources are kept separate.

## 1. INTRODUCTION

### 1.1 ABOUT THE REPORT

This Carbon footprint assessment report describes Multivista Global Print Solutions – MVGP’s GHG emissions inventory in the financial year 2019-2020 & 2020-2021 covering its operations in India which is created in accordance with the combination of ISO 14064:2006 and GHG protocol. The report aims to improve the sustainability performance of MVGP by representing an accurate evaluation of the GHG emissions related to organization’s activities and facilities. Evaluating principle GHG emissions sources will further aid in finding ways to reduce them significantly.

### 1.2 REPORTING PERIOD

The GHG emissions inventory described in this report covers MVGP’s GHG Emissions for 2 years – 2019 (Base reporting year) & 2020 (Current reporting year)

### 1.3 BASE YEAR GHG INVENTORY

The sufficient information on GHG emissions is available and consolidated for the year 2019 which is the first GHG inventory period for MVGP. Therefore, following the requirements under clause 5.3.1 of standard, the organization has considered its first GHG inventory period as its base year. Thus, baseline GHG inventory is same as first year GHG inventory for the MVGP.

Following the requirements under clause 5.3.2 of the standard the organization has established procedure for recalculation of base year GHG Inventory.

In case of any changes to the operational boundary or change in ownership and control of GHG sources or sinks (transferred into or out of the organizational boundary) the base year GHG emissions and GHG removals will be recalculated based on the methodologies and tools used in preparing this GHG Inventory.

Furthermore, if there are any changes to quantification methodologies that results in significant changes to quantified GHG emissions or removals the base year GHG Inventory will be calculated based on the latest revised version of the calculation methodology.

### 1.4 ABOUT THE ORGANIZATION

Multivista Global Print Solutions is a leading Printing house in India, equipped with latest, state of the art Printing and Binding machines. They specialize in the art of printing and manufacturing educational books

Started in 1974 as a modest letterpress unit, over the years, they have grown into a fully integrated print house with a host of single, two and four color machines. Currently Multivista boasts of highly sophisticated Heidelberg and Ryobi printing machines and Muller Martini and Kolbus online binding machines.



Over the years they have become the preferred print house for various domestic and international clients primarily because:

1. Multivista believes in investing in state of the art machinery.
2. Multivista sources reliable and high quality raw materials.
3. Multivista employs skilled, efficient and technically qualified workforce.

This has not only improved their reliability but has also enhanced their capability to produce high quality books.

Multivista Global Print House is located in Chennai very close to a Sea and Air port. This not only gives the publisher the flexibility and choice for the mode of transport but also translates into quicker delivery of goods to destinations and is economical in terms of freight costs.

Their success is attributed mainly to the flexibility with which they adapt to different kinds of jobs. They specialize in the niche market of educational books and cater to large publications.

## 2. CARBON ACCOUNTING

Carbon Accounting can be considered as the key tool in the efforts to combat climate change. It not only provides ways to quantify carbon emissions but also helps us take informed decisions with respect to GHG mitigation strategies. In order to measure carbon emissions from its business activities, organizations calculate its carbon footprint annually or create quantified GHG inventory.

Each organization's GHG emissions profile encompasses a range of emission sources, each having different levels of impact or Global Warming Potential (GWP).

Carbon Accounting can be categorized into two types:

- 🌱 **Physical Carbon Accounting**
- 🌱 **Financial Carbon Accounting**

Physical Carbon Accounting is also called GHG inventory. It allows companies to calculate its GHG emissions that they are emitting into the atmosphere. Whereas, financial carbon accounting gives a market value for carbon.

### 2.1 METHODOLOGY USED

IPCC and GHG protocol are some of the common methodologies used for calculating carbon emissions. GHG protocol provides calculation tools for accurate measurements of carbon emissions. Hence, this report is made in accordance with ISO 14064:2006 guidelines and specifications and follows GHG protocol for calculations. The methodology can be summarized as follows:

- 🌱 Identification of emission sources
- 🌱 Collection of GHG activity data
- 🌱 Selection of emissions factors

- Selection of quantification methodology
- Calculation of Greenhouse gas emissions

## 2.2 CARBON ACCOUNTING STANDARDS

Most widely recognized international standards for carbon accounting is GHG protocol, ISO 14064-1:2006. The ISO standard framework helps organizations by providing a methodology on how to account emissions and identify carbon baseline values. For developing a GHG inventory for organizations, it requires three important aspects such as setting inventory boundaries, quantifying and reporting GHGs.

**ISO 14064-1 guides organizations in identifying specific emissions sources within the operational boundaries as well as provides methodologies to quantify those emissions.**

## 3. BOUNDARIES

### 3.1 ORGANIZATIONAL BOUNDARIES

Location: Multivista Global Print Solutions (MVGP) located at 43, Vandalur Kelambakkam Road, Pudupakkam, Chennai - 603 103

In accordance with the GHG Protocol – Corporate Standard for setting the scope and boundary of the organisation, MVGP’s Pudupakkam site has been considered for carbon accounting. MVGP’s Scope 1 and Scope 2 emissions from all its operations are accounted.

Reporting Period:

- Base Year: Apr 19 – Mar 2020
- Current Reporting Year: Apr 2020 – Mar 2021

### 3.2. OPERATIONAL BOUNDARIES

MVGP has confirmed and documented its operational boundaries and has identified the GHG emissions from its operations and removals associated with the company. It has included its facilities and operational requirements – energy, and fuel consumption as part of this report.

Operational boundaries are defined in two different scopes:

**Scope 1** emissions include all direct CO<sub>2</sub> emissions emitted from its operational activities. These emissions include sources owned or controlled by MVGP such as energy and fuel consumption and other emissions in the form of refrigerant.

**Scope 2** emissions include energy indirect emissions emitted from the consumption of purchased electricity by MVGP. This emission occurs at the source where electricity is produced.




## 4. DATA COLLECTION AND QUANTIFICATION METHODOLOGIES

### 4.1. COLLECTION AND MONITORING METHODOLOGY

Activity data is collected at the site level by the facility management team and consolidated by management team. Although, currently there is no automated data collection system in place, data is accurately collected every month for better management of scope wise emissions.

Multivista facility management constantly explores several ways to collect and aggregate data using existing processes and infrastructure. For instance, energy consumption data is monitored and collected manually to ensure there is no leakage.

Below are the sources used to collect data

-  Interval meter information
-  Utility invoices
-  Bills (Electricity, Diesel, Fuel, AC, Propane)

### 4.2. GHG EMISSION ACTIVITY DATA SOURCES

DESCRIPTION	GHG ACTIVITY DATA IS BASED ON
<b>Direct GHG Emissions</b>	
<b>1. Diesel Consumption for company owned vehicles, DG Set,</b> <b>2. Utility emissions – fire extinguisher recharge, Air conditioner refrigerant recharge,</b>	<b>Bills/ Invoices/ Meter Information</b>
<b>Energy Indirect GHG emissions</b>	
<b>Electricity board electricity consumption</b>	<b>Bills/ Invoices/ Meter Information</b>

**Table 1- GHG Emission Activity Data Sources**

### 4.3. GHG SOURCES AND GHG INFORMATION MANAGEMENT TEAM

There is a team appointed by management for maintaining data and corresponding evidences for GHG emission sources. Mainly Utility team is responsible for data collection in the organization with help of support functions for data collection and validation.

### 4.4 Assumptions

For all emission sources an emission factors were identified as per India GHG Protocol & Defra 2018 emission factors and CEA database.

### 4.5 Frequency of report

The GHG Inventory report will be prepared annually hereafter. Being the first GHG Inventory Report, this includes base year (Apr 2019- Mar 2020) as well as current reporting year (Apr 2020- Mar 2021). MVGP is planning to release this report every year from 2021.

### 4.6 Uncertainty of assessment

The data for GHG emissions from MVGP has been derived directly from electricity, logbook/invoices/meter information of DG & Electricity Board, and MIS records and then conversion factors are employed to convert into GHG reporting metrics. The uncertainty lies in the conversion factors.

### 4.7 Explanation for the exclusion of any GHG sources or sinks from the quantification

Below sources of emission are not considered for emission calculation.

Scope 3 is not included as it is not mandatory to report as per ISO 14064:2006

**Table 2- Source of emission excluded from Emission calculation**






### 4.8 Reason for exclusion:

It is not mandatory to report scope-03 emissions as per ISO 14064: 2006 Std. Hence scope 3 is excluded from the emission calculation.

## 5. RESULTS

### PRINCIPLES OF GHG ACCOUNTING

GHG accounting and reporting practices are continuously evolving along with advancing knowledge on the science of climate change. The GHG protocol and ISO 14064:2006 standards advise that GHG emissions inventories be carried out in accordance with the following principles:

- 
**RELEVANCE-** For an organization’s GHG emissions inventory to contain information that users might need for making “informed” decisions. Accordingly, MVGP has identified the appropriate boundaries that reflects their business operations.
- 
**COMPLETENESS** - All relevant emission sources within the chosen inventory boundary have been accounted in the GHG inventory so that a comprehensive and meaningful inventory of total emissions are compiled.
- 
**CONSISTENCY** - The GHG inventory has been compiled in a manner that ensures that the overall emissions estimate is consistent and comparable over time.
- 
**TRANSPARENCY** –All necessary information has been recorded, compiled, and analysed in a manner that enables internal reviewers and external verifiers to attest to its credibility.
- 
**ACCURACY** - Data reported is sufficiently precise to enable us to make decisions with reasonable assurance and the reported information is credible. Uncertainties in measurements, recording and calculations has been reduced as far as possible and practicable.

### TOTAL GHG EMISSION IN Apr 2019- Mar 2020 (BASE YEAR)

Scope	Tons Co2e/annum
Scope 1 Emission (tons Co2e/annum)	255
Scope 2 Emission (tons Co2e/annum)	1502
<b>Total Emissions (Scope 1 + Scope 2) (tons Co2e/annum)</b>	<b>1756</b>

Table 3- Total GHG Emissions for Base Year Apr 2019 – Mar 2020

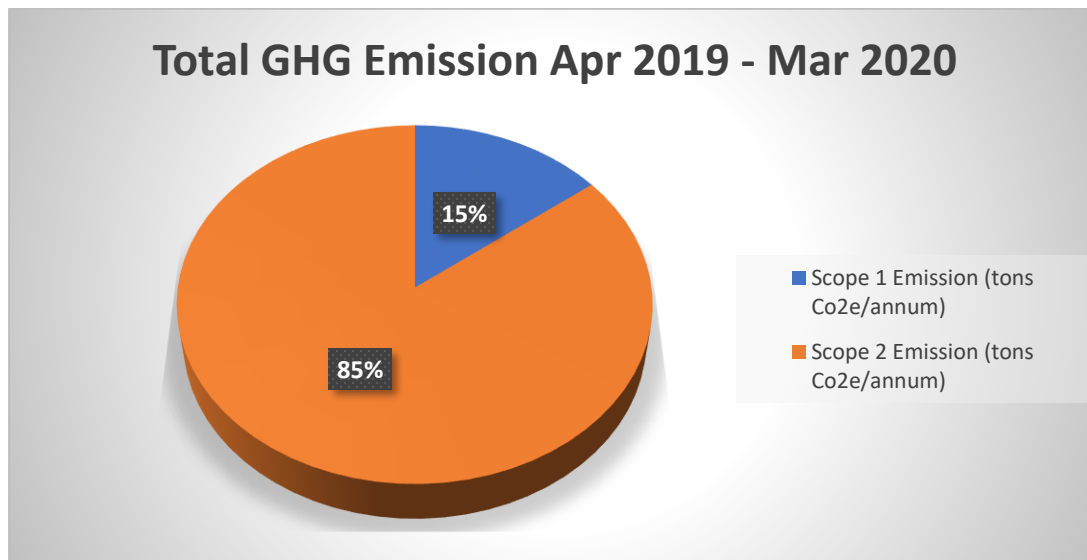


Figure 2- Total Emissions for base year Apr 2019 – Mar 2020

## TOTAL GHG EMISSION IN Apr 2020 – Mar 2021 (Current Reporting year)

Scope	Tons Co2e/annum
Scope 1 Emission (tons Co2e/annum)	230
Scope 2 Emission (tons Co2e/annum)	460
<b>Total Emissions (Scope 1 + Scope 2) (tons Co2e/annum)</b>	<b>690</b>

Table 4- Total GHG Emissions for Current Reporting Year 2020

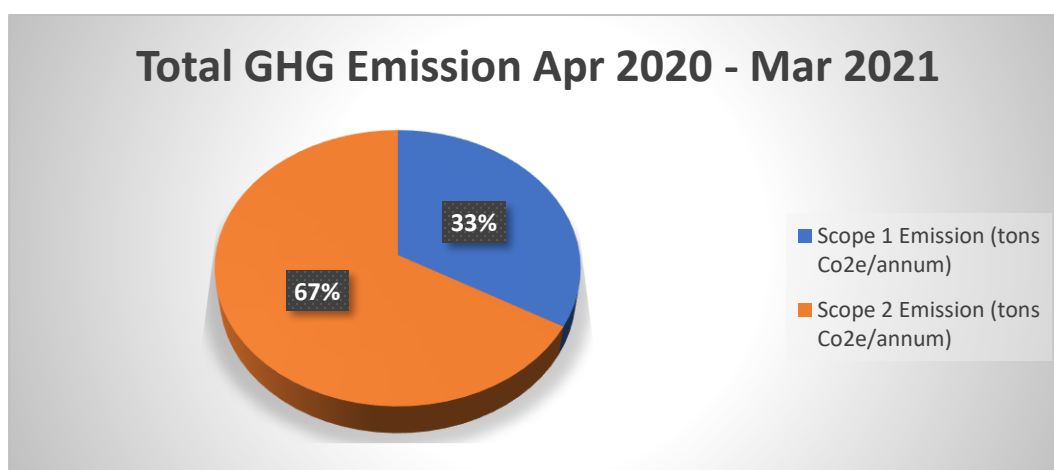
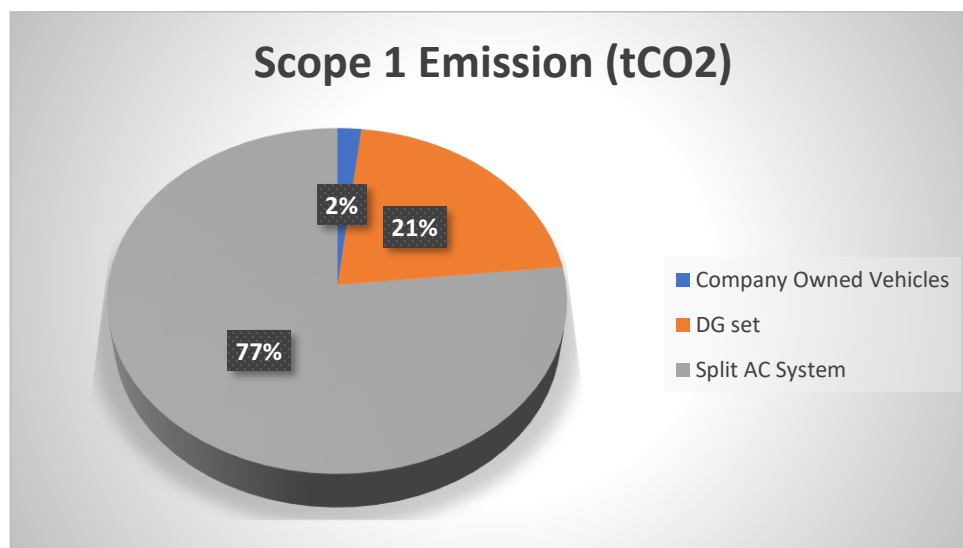


Figure 3- Total GHG Emission Reporting Year Apr 2020 – Mar 2021

## 5.1 SCOPE 1: DIRECT GHG EMISSIONS

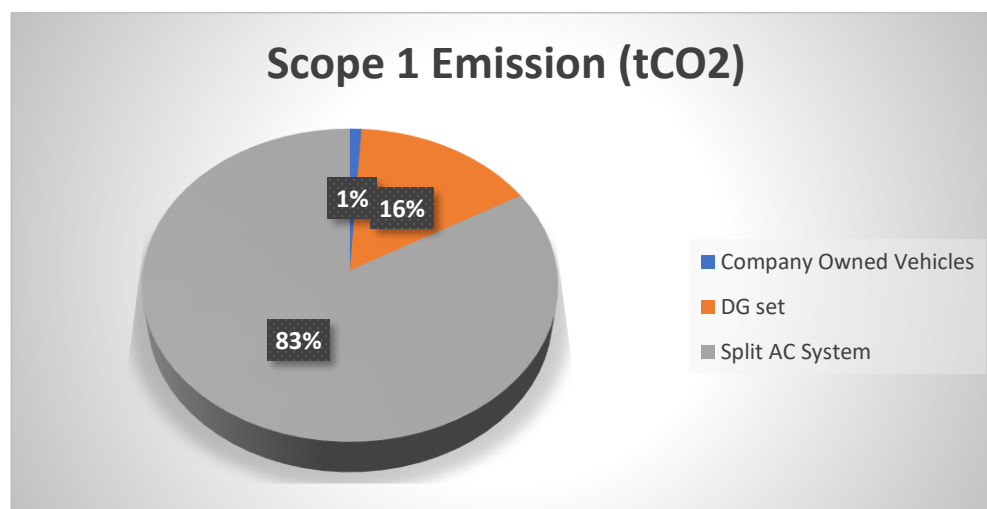
Direct GHG emissions occur from sources that are owned or controlled by the company, for example, emissions from Refrigerant & Fire extinguisher

Following is the chart that shows various emission sources of scope 1 in 2019. Among all areas, emissions from split AC system has the highest emission.



**Figure 4- Scope 1 Emissions Apr 2019 – Mar 2020**

Following is the chart that shows various emission sources of scope 1 in 2020. Among all areas, emissions from split AC has the highest emission.

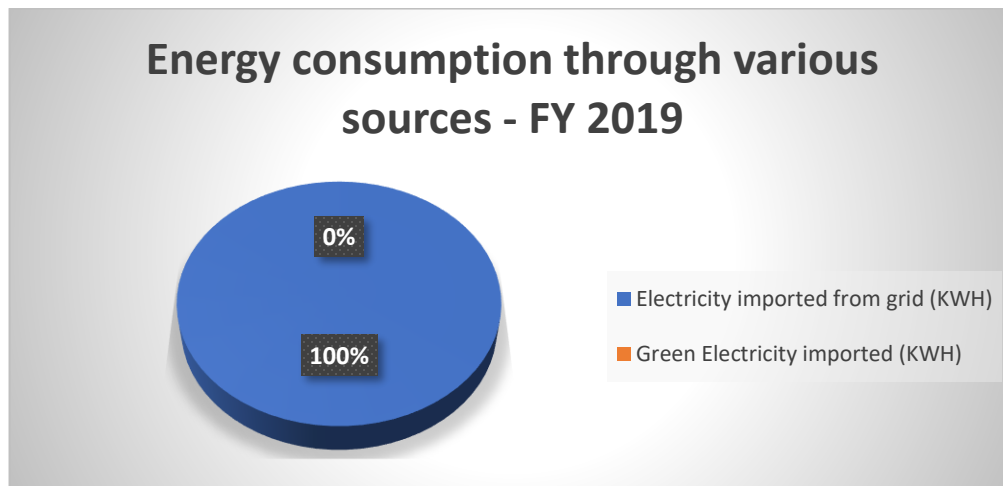


**Figure 5- Scope 1 Emissions Apr 2020 – Mar 2021**

## 5.2 SCOPE 2: ELECTRICITY INDIRECT GHG EMISSIONS

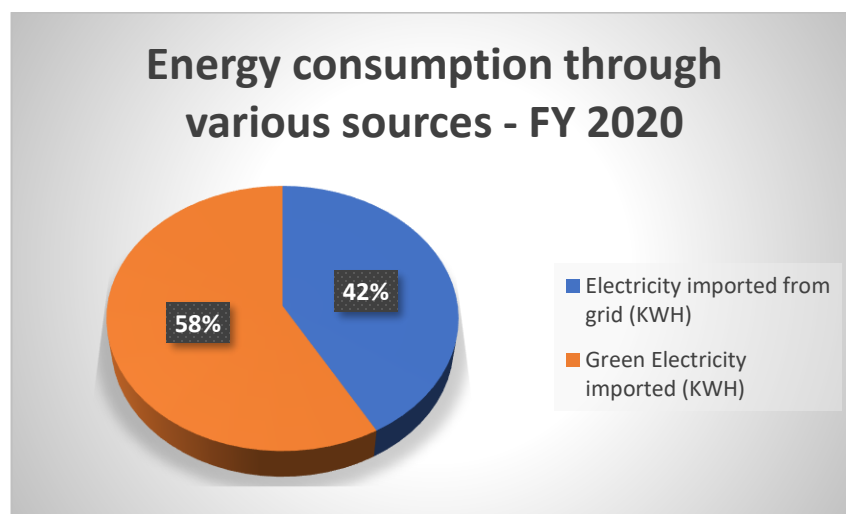
Scope 2 accounts for GHG emissions from the purchased electricity consumed by a company. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the company. Scope 2 emissions physically occurs at the facility where electricity is generated.

For the year 2019, below chart shows the split of various energy sources of MVGP. Zero percentage of electricity consumption in 2019 is from renewable sources. For scope 2 only emissions of electricity imported from Grid has been considered.



**Figure 6: Energy sources – Apr 2019 – Mar 2020**

For the year Apr 2020 – Mar 2021, below chart shows the split of various energy sources of MVGP. From 0% in 2019, renewable energy sources have been increased to 58% of total energy consumption thus showcasing MVGP’s commitment towards carbon footprint reduction. For scope 2 only emissions of electricity imported from Grid has been considered.



**Figure 7: Energy sources – Apr 2020 – Mar 2021**



### 5.3 IMPROVEMENT IN FY 2020 CARBON EMISSIONS AGAINST FY 2019

MVGP has implemented initiatives towards renewable energy, optimisation of resources etc to reduce their total emissions by 61% in 2020 against base year 2019. Major reduction can be seen in Scope 2 emissions due to usage of renewable energy sources.

Year	Scope 1 emissions Tons Co2e	Scope 2 emissions Tons Co2e	Total emissions Tons Co2e
2019	255	1502	1756
2020	230	460	690
<b>Reductions in emissions</b>	<b>10%</b>	<b>69%</b>	<b>61%</b>

**Table 5- Comparison and improvement in carbon emissions (Base year FY 2019 vs Reporting year FY 2020)**

Since absolute numbers can be correlated with the productivity, it is advisable to do intensity measurement of energy and carbon emissions against per ton of paper/board

Below table shows the carbon intensity/book produced for both base year (FY 2019) and current reporting year (FY 2020). MVGP is able to reduce their carbon intensity/ton of paper/board produced by 47% in FY 2020 against FY 2019 carbon intensity.

Reporting Financial Year	Carbon Intensity/ton of Paper/Board
2019	0.56
2020	0.30
<b>Reduction in intensity</b>	<b>47%</b>

**Table 6- Comparison and improvement in carbon intensity/ton of Paper/Board (Base year 2019 vs Reporting year 2020)**

## 6. TOWARDS CARBON REDUCTION

MVGP's Net Carbon Commitment means that they are responsible for the carbon emissions from the direct and indirect emission and in next reporting cycle may consider reporting emissions in their value chain.

**MVGP can plan to implement following carbon reduction strategies in future.**

### 6.1 Use of renewable energy.

(Scope 2: Emission Reduction Strategy)

MVGP can either generate renewable energy on site or purchase renewable energy whenever possible.

These include expanding the use of a low-carbon and non-carbon energy supply to reduce scope 2 emissions,

- 🌱 Installing renewable energy -solar or
- 🌱 by purchasing IEX or Power Exchange Renewable Energy Certificates (REC) or
- 🌱 by signing the PPA contract with the renewable energy provider / plant through Open Access.

A combination of these strategies, with a particular focus on energy supply for scope 2 reduction, will form the basis of a short-term carbon reduction program. MVGP most likely has easy and cost-effective options for obtaining 100% renewable or 100% carbon-free energy and projects are already in discussion.

### 6.2 Reduction of energy consumption.

(Scope 1 and Scope 2: Emission Reduction Strategy)

MVGP can reduce energy consumption at the source through processes such as Energy Efficiency in Buildings and energy efficiency projects at the plant level

- 🌱 Conduct a detailed energy audit to identify the high energy consuming Machines and Process.
- 🌱 Conduct an Electrical Safety Audit to calculate Electrical Leakages in the Industry.
- 🌱 Curb emissions related to growth through green industry practices
- 🌱 Lighting Retrofit with latest technologies.
- 🌱 Reduce consumption through the exchange of knowledge, training, awareness campaigns.
- 🌱 Replacement of old Equipment with Energy Efficient latest technologies,
- 🌱 Implementation of ESCO projects.

### 6.3 Carbon credits:

(Scope 1 and Scope 2: Emission Reduction Strategy)

Considerations for carbon offset mechanisms.

- 🌱 Carbon offsetting is a reduction in emissions of carbon dioxide or other greenhouse gases produced to offset emissions made elsewhere. Offsets are measured in tons of carbon dioxide equivalent (CO<sub>2</sub>e).
- 🌱 Through any Verified Carbon Standard (VCS), Gold Standard VERs or Kyoto compliant offset credits purchased from the market will comply with the offsetting portion of the PAS 2060 guideline on carbon neutrality, thus ensuring their carbon neutral claims.
- 🌱 MVGP can offset up to 100% emissions by buying carbon credits.

### 6.4 Voluntary Compensation Schemes (Short-Term and Long-term Projects)

(Scope 1 and Scope 2: Emission Reduction Strategy)

MVGP can offset the carbon emissions that remain after reducing carbon footprint. This is accomplished by assigning a clear cost to carbon and ensuring that each affiliate assumes responsibility for their emissions by paying their carbon offset.

Can seek carbon offset projects approved by the Gold Standard that directly benefit the communities where have an impact. This process supports community investment strategy and enables to deliver benefits to local communities around the world

The Gold Standard A / R requirements are for projects that include planting trees on land that does not meet the definition of forest<sup>1</sup> at the start of planting.

Projects can apply all silvicultural systems:

- 🌱 Conservation forests (without the use of wood)
- 🌱 Forests with selective harvesting

### 6.5 : Align business strategies with Sustainable Development Goals (SDGs)

MVGP can align business strategies with Sustainable Development Goals (SDGs) to create a positive business impact on environmental, social and economic development.

**Some of the recommended SDGs that MVGP can focus on:**



Investing in more resilient infrastructure and technological innovation to support sustainability.



Efficient consumption of resources such as energy, water and waste.



Partnering with vendors, government agencies to implement green projects.



Incorporating renewable energy into organizational energy mix by procuring green energy from independent power producers using PPA (Power Purchase Agreement)



Investments to enhance campus biodiversity.



Mitigation of Climate Change impacts through sustainable business

## 6.6 Other Recommendations

- ④ Utilize Energy Star –Energy Label certified products such as Energy Star lighting, heating, computers, printers and more to improve upon sustainability performance. For instance, Energy Star rated computers utilize 40-50% less electricity than the regular computers.
- ④ Employee commute and business travel generates majority of the emissions even though it is part of scope 3. Opting for green travel such as electric vehicles, renting hybrid cars, encouraging carpooling, having reward programs for employees opting public transport and carpooling, staying in green hotels will help cutting down significant amount of MVGP’s carbon footprint when Scope 3 measurements are included.
- ④ Robust automated data collection and monitoring systems like “sustainability performance management software” in place to accurately collect activity data and monitor environmental impacts of organizational activities. Additionally, Installing Building Management System to control and monitor building’s electrical and mechanical equipment.
- ④ Focus on “Green Building projects” for LEED certification, especially while building new office campuses. Investing in green projects to obtain high level of green building rating will effectively improve resource efficiency and reduced carbon footprint.
- ④ Drafting Biodiversity strategy and action plan
- ④ Contributing to existing building campuses to create biodiversity zones through enhancement of natural habitat.
- ④ Integrated approach on biodiversity conservation with focus in reducing carbon and energy intensity and improving air quality and water management.
- ④ Hot Aisle/Cold Aisle Design and Containment: Building a data center with a hot and cold aisle containment design allows cool air to be delivered directly where it is needed in order to reduce power consumption.
- ④ Facility Preparation: White reflective roofing-Coating/Insulation can be used to decrease the surface temperature of the roof
- ④ Hosting your network offsite and in a data center is considered a smart alternative to the traditional in-house server room because not only does it leverage the aforementioned green technologies but also minimizes your energy consumption.

## 7. CONCLUSION

MVGP's environmental action plan covers all of MVGP's Direct and Indirect emissions for the year FY 2019 and it is considered as a baseline year for MVGP. MVGP is also committing towards SBTi (Science Based Targets initiative) to showcase their leadership in climate change.

MVGP is **aligned with India's ambitious goal** to ensure that 40 percent of its electricity-generation capacity comes from non-fossil fuel sources by 2040. It will also reduce its "**emissions intensity**" — a ratio of total **emissions** to gross domestic product — by at least one-third compared with 2005 levels.

MVGP's Organizational carbon footprint is **690 tCO<sub>2</sub>e for the financial year 2020** and are determined to help industry-wide transition to a low-carbon economy; That is why MVGP is planning to make a commitment in Carbon report 2021 to become carbon neutral in future by considering short term and long-term carbon reduction targets.

## 8. REFERENCES

For the purpose of calculating and reporting GHG emissions, the following standards and protocols are applicable:

1. Greenhouse Gas Protocol on Corporate Accounting and Reporting by World Resource Institute (WRI) / World Business Council for Sustainable Development (WBCSD)
2. ISO 14064-1:2006 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.
3. India GHG Protocol for Business travel of employees, local travel, emissions from bus commuting
4. UNFCCC methodologies, AMS I.C [Thermal energy production with or without electricity --- Version 20.0](#)
5. UNFCCC methodologies AMS I.F [Renewable electricity generation for captive use and mini-grid --- Version 3.0](#)
6. UNFCCC methodologies AMS-III.B, [Switching fossil fuels --- Version 18.0](#)
7. UNFCCC methodologies AMS I.D, version 18.0: [Grid connected renewable electricity generation --- Version 18.0](#)
8. Defra Greenhouse Gas Protocol <https://ghgprotocol.org/Third-Party-Databases/Defra>
9. GHG Protocol [https://cea.nic.in/wp-content/uploads/baseline/2020/07/user\\_guide\\_ver15.pdf](https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver15.pdf)

For any further questions/clarifications, please contact [sales@vfbcgroup.com](mailto:sales@vfbcgroup.com)

## ANNEXURE 01: LIST OF ABBREVIATIONS

GHG		Green House Gas	
AC	Air Conditioning	Km	Kilo meter
Avg.	Average	KV	Kilo Volt
CEA	Central Electricity Authority	kWp	Kilo Watt peak
CO2e	Carbon dioxide equivalent	LPG	Liquefied Petroleum Gas
EE&EC	Energy Efficiency and Energy Conservation	MT	Metric Tonnes
GCM	Gramm Cubic Meter	MTCE	Metric Tonnes Carbon Equivalent
GWP	Global Warming Potential	MU	Million Units
IPCC	Intergovernmental Panel for Climate Change	MW	Mega Watt
Kg	Kilo gram	MVGP	Multivista Global Print Solutions