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125 Years - Since 1895

Promoting Sustainable Corporate Procurement Practices in India's Manufacturing Sector

BASELINE STUDY FOR THE AUTOMOBILE SECTOR



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CONTENTS

The Automobile Sector.....	6
Supply Chain: The Auto Components Industry.....	7
GHG Emissions from Manufacturing	10
Desk Research & Survey Design.....	11
Awareness Creation, Outreach & Sample Selection	11
Data Collection & Analysis.....	12
Supplier Survey.....	13
General Awareness & Perceived Relevance of Climate Change	13
GHG Accounting & Reporting Practices	15
Engagement with OEMs on GHG Emissions.....	18
Organizational Capacity on Climate Change.....	20
OEM Consultations	23
Supplier Capacity Development.....	25
Procurement Criteria & Incentives	26
Platform for Data & Knowledge Exchange.....	26
Annex-1: Survey Questionnaires	28
General Information about Supplier	28
Survey Questions for Suppliers	28
Survey Questions for Automobile Manufacturers (OEMs).....	30

List of Tables

Table 1 - The Tiered Supply Chain of the Automobile Industry	8
Table 2 - Company Classification Criteria per the MSMED Act, 2006.....	8
Table 3 - Summary of Action on Supply Chain GHG Emissions by OEM Participants	23
Table 4 - Suggested Topics for Supplier Capacity Development Workshops	25

List of Figures

Figure 1 - Product Segments in the Indian Auto Components Industry	7
Figure 2 - Tier wise representation in the study	9
Figure 3 - Region Wise Coverage	9
Figure 4 - General Awareness & Perceived Relevance of Climate Change	13
Figure 5 - GHG Accounting & Reporting Practices	15
Figure 6 - Engagement with OEMs on GHG Emissions	18
Figure 7 - Organizational Capacity on Climate Change.....	20

INTRODUCTION

For most companies manufacturing consumer goods most of their environmental impacts are found in their supply chains: the supply chain of a company on average produces more than five times the emissions from its direct operations, according to CDP¹. Supply chains of the Indian manufacturing industry largely consist of micro, small and medium enterprises (MSMEs), which face considerable challenges with respect to sustainable growth. A majority of MSMEs are still stuck with outdated technology, processes and business models due to a lack of access to financial and non-financial services, lack of trained personnel and low-level of awareness of standard environment management practices resulting in negative side-effects on the environment and society.

Sustainable growth of the MSME sector is critical given that it forms the backbone of the Indian economy, contributing around 9% to the GDP and accounting for about 45% of the manufacturing output of the country. The Indian Government has also recognized this announcing several initiatives for the MSME sector over the last decade. The focus of initiatives so far has primarily been on energy efficiency. The Technology and Policy Upgradation (TEQUP) scheme of the Government of India in effect from 2010-17 focused on awareness building activity with respect to energy efficiency and quality certification among MSME enterprises². The Bureau of Energy Efficiency (BEE), a statutory body under the Ministry of Power, is implementing the “BEE- SME Energy Efficiency Program” in energy intensive MSME clusters across the country³ as well as the Global Environmental Facility (GEF) funded project “Promoting Energy Efficiency and Renewable Energy in Selected SME Clusters”, in collaboration with United Nations Industrial Development Organization (UNIDO)⁴. In addition, most financial schemes of the Small Industries Development Bank of India (SIDBI), several in collaboration with international development banks, have focused on providing credit lines for energy efficiency investments, for example, the SIDBI-KfW energy efficiency credit line, the SIDBI-JICA energy saving credit line and the GEF-World Bank credit line for financing energy efficiency with SIDBI and BEE⁵.

Programs specific to accounting, reduction (beyond energy efficiency) and reporting of greenhouse gas (GHG) emissions are yet to be introduced and promoted for the MSME sector. Such programs with a focus on developing awareness and capacity in the MSME sector on GHG Inventorization and reporting or devising GHG reduction projects, have the potential to:

- ❖ Enable participation of the MSME sector in carbon markets, both voluntary as well as upcoming Government programs, such as the upcoming pilot carbon market scheme for the MSME sector in India by the Ministry of Environment, Forests and Climate Change (MoEFCC) and the World Bank under the Partnership for Market Readiness⁶.

¹ CDP Global Supply Chain Report 2019/20. Retrieved from: <https://www.cdp.net/en/research/global-reports/changing-the-chain>

² Ministry of MSME website: http://my.msme.gov.in/MyMsme/Reg/COM_TequpAppForm.aspx

³ Press Information Bureau, Gol: <https://pib.gov.in/newsite/mbErel.aspx?relid=144892>

⁴ BEE website: <https://beeindia.gov.in/content/gef-unido-bee-project-promoting-ee-re-msme-india>

⁵ TERI BCSD, Yes Bank Report. Retrieved from: http://cbs.teriin.org/pdf/Energy_Efficiency_Final.pdf

⁶ Partnership for Market Readiness Report. Retrieved from: https://www.thepmr.org/system/files/documents/India%20PMR%20Project%20Implementation%20Status%20Report_18%20Oct%202018.pdf

- ❖ Enable the SME sector to meet compliance demands with respect to GHG emissions of their corporate customers, primarily large enterprises with global operations that are increasingly required to collect and track relevant performance data of their suppliers, in order to manage and report on the environmental impact of their supply chains.

Against this backdrop, CII can play an important role as a cooperation partner MSME suppliers and

their corporate buyers in promoting sustainable procurement. The overall project envisages a capacity building program for MSME supply chains to improve GHG accounting, reporting and management practices with the support of their corporate buyers to incentivize participation of MSMEs in their respective supply chains in the program. This study identifies the project baseline for the Indian automobile sector that includes automobile manufacturers and auto component manufacturers supplying to them.

BACKGROUND

The Automobile Sector

The automobile sector, comprising the manufacture of passenger cars, two and three-wheelers, and commercial vehicles, is one of the key sectors of the Indian economy. The contribution of the sector to gross domestic product (GDP) has increased from 2.77% in 1992–1993 to over 7% since 2015-16 and 49% to manufacturing GDP⁷. Domestic automobile production has been increasing at a 6.96% compound annual growth rate (CAGR) between financial year (FY) 2013-19, with a total of 30.92 million vehicles being manufactured in the country in FY 2019. Overall domestic automobile sales have been increasing at a CAGR of 6.71% between FY 2013-19. India is also a prominent auto exporter, and exported 4.63 million vehicles in FY 2019, with exports growing at a CAGR of 8.11% between FY 2013-19⁸.

The Automotive Mission Plan 2026, drafted jointly by the automobile industry and the Government of India, sees the automobile sector as the engine of the government's Make in India program and is aimed at bringing the Indian automobile industry among the top three of the world in engineering, manufacture and exports of vehicles and components by growing in value to over 12% of GDP and generating an additional 65 million jobs by 2026⁹.



⁷ Automotive Achievement Report 2016, Department of Heavy Industries. Retrieved from: <http://www.makeinindia.com/article/-/v/automotive-achievement-report>

⁸ Data sourced from Society of Indian Automobile Manufacturers (SIAM), 2019.

⁹ Press Information Bureau, GoI: <https://pib.gov.in/newsite/printrelease.aspx?relid=159612>

Supply Chain: The Auto Components Industry

The automobile sector has one of the longest supply chains among the manufacturing industries, given that a single vehicle consists of thousands of individual components. Contributing around 2.3% to India's GDP and providing employment to 50 lakh people as of FY 2019, the auto components industry is an important subsector of the Indian automobile sector. Over the last decade, the auto components industry has shown robust growth registering a CAGR of over 10% and reaching USD 56.52 billion in turnover in FY 2019¹⁰.



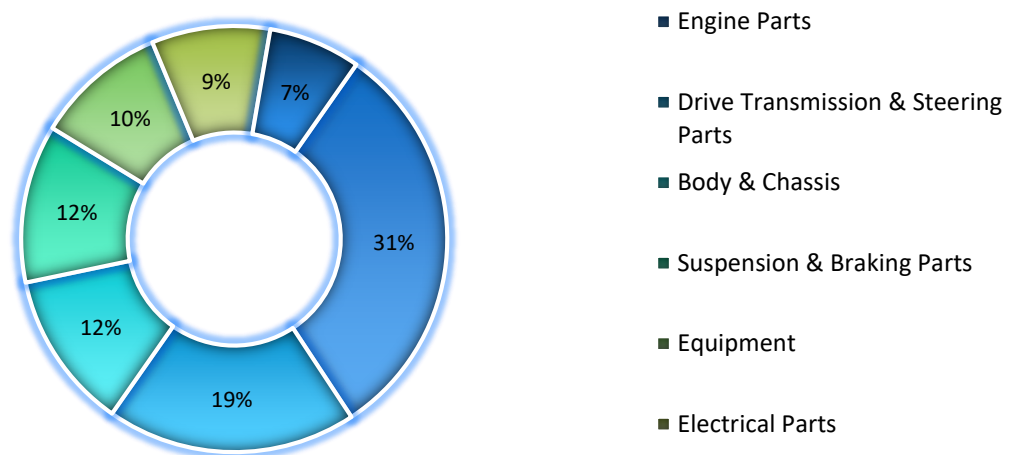
India is emerging as global hub for auto component sourcing and exports have grown at a CAGR of around 8.3% over the last five years. Backed by strong exports, turnover from the Indian auto components industry is projected to reach around USD 200 billion by 2026, making it the third largest in the world.

The Indian auto components industry offers a comprehensive product range, consisting of approximately 20,000 components required for vehicle manufacturing. The components can be grouped different product segments, which along

with their corresponding share in total industry turnover, are depicted in Figure-1¹¹. Engine parts and drive transmission and steering parts are the two main product segments, contributing to around 50% of the turnover of the Indian auto component industry.

Figure 1 - Product Segments in the Indian Auto Components Industry

Figure 1: Product Segments in the Indian Auto Components Industry



The auto component manufacturers can be broadly classified into the organized sector and the

¹⁰ Data sourced from Automotive Components Manufacturers Association (ACMA), 2019.

¹¹ Data source ACMA, 2015.

unorganized sector. The organized sector manufactures high value-added, automotive-specific modules or systems, accounting for more than three fourths of the total turnover value. It caters directly to the original equipment manufacturers¹² (OEMs). Companies falling into this category are also known as tier-1 suppliers.

The unorganized sector manufactures lower value-added product segments and primarily caters to other auto component manufacturers or to the aftermarket. Companies that supply components to tier-1 (may also supply to OEMs) are known as tier-2 suppliers. Tier-2 suppliers are often experts in their specific domain but usually also support other, non-automotive, customers. Companies selling close-

to-raw materials or parts, usually to tier-2, are known as tier-3 suppliers. However, as OEMs, tier-1, and tier-2 companies all need raw materials, tier-3 can supply to all levels. Consequently, the line between a tier-2 and tier-3 supplier can be blurry. A comparative summary of the tiered supply chain of the automobile industry is provided in Table-1.

Table 1 - The Tiered Supply Chain of the Automobile Industry

The Tiered Supply Chain of the Automobile Industry		
Tier-1	Tier -2	Tier-3
<ul style="list-style-type: none"> Large firms (like Bosch, Cummins, Denso etc.) supplying directly to OEMs. Generally supply high value-added products such as automotive-specific systems or modules. Have R&D centers to carry out innovations and use modern technology as well as automation in production. 	<ul style="list-style-type: none"> Medium-sized firms, supplying to tier-1. May also supply to OEMs. Manufacture and supply multiple components per firm. Value-added is less than tier-1. Comparatively less access to the latest technical know-how and production technology as compared to tier-1. 	<ul style="list-style-type: none"> Smaller, largely unorganized firms. Supply to tier-2. May supply to tier-1 and OEMs. Low value-added, single component or part manufacturers. Use traditional technology with low operational efficiency.

In terms of turnover, most tier-2 and tier-3 companies fall under the micro, small or medium enterprise category as per the classification of the Government of India defined in the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006¹³. This is provided in Table-2.

Table 2 - Company Classification Criteria per the MSMED Act, 2006

Company Classification Criteria per the MSMED Act, 2006	
Enterprise Type	Annual Turnover (INR)

¹² Although the term OEM technically refers to the manufacturer of origin for any product, the convention within the Indian automobile industry is to refer to vehicle manufacturers as OEMs and their suppliers as component manufacturers. This report follows the same convention.

¹³ Available on Ministry of MSME website:

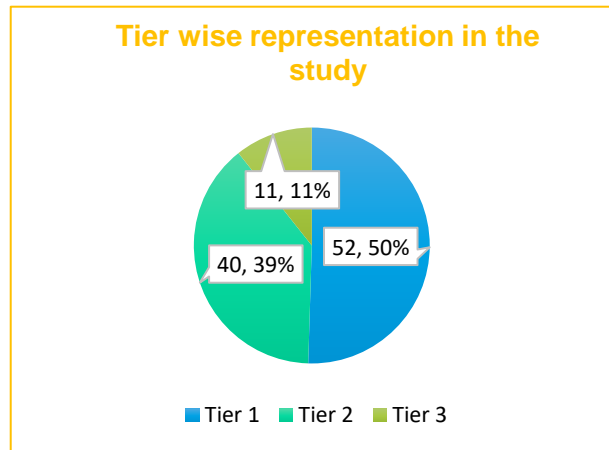
<https://samadhaan.msme.gov.in/WriteReadData/DocumentFile/MSMED2006act.pdf>

Micro	Up to 5 Crores
Small	From 5 crores to 75 crores
Medium	From 75 crores to 250 crores

Figure 2 - Tier wise representation in the study

Another feature of the auto components industry in India is the formation of clusters due to the presence of a large number of small and unorganized units. The clusters have OEMs as hubs or centers of growth, with suppliers forming their bases around the OEMs. The auto components industry in India has evolved around three major regional clusters, namely, the:

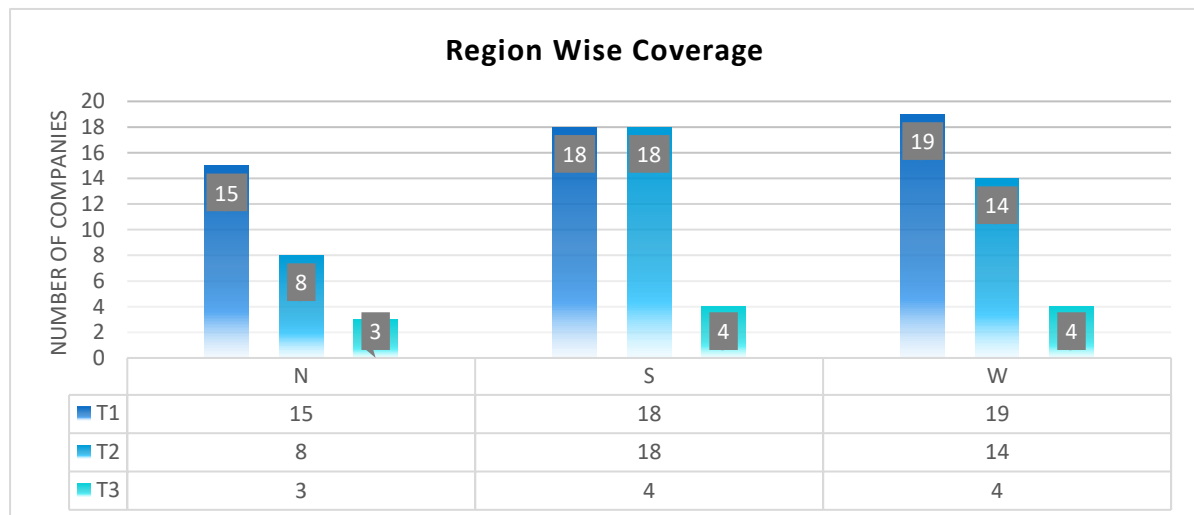
- ❖ Northern Cluster (Delhi – Gurgaon - Faridabad),
- ❖ Western Cluster (Mumbai – Pune - Nasik - Aurangabad),
- ❖ Southern Cluster (Chennai - Bengaluru - Hosur).



In the East, activity in the automobile sector is seen to some extent in Jamshedpur and Kolkata, but the development in this region has been to a lesser extent as compared to other regions.

The study involved fair share of Tier 1, 2 and 3 companies and also the geographical representations.

Figure 3 - Region Wise Coverage



GHG Emissions from Manufacturing

In terms of lifecycle CO₂ emissions, the production phase of an internal combustion engine (ICE) vehicle accounts for around 20% of total emissions, almost all of which occur in the supply chain of the OEM¹⁴. Although this is small in comparison to tailpipe emissions during the use of the vehicle, which constitute around three quarters of total lifecycle emissions, with the increasing adoption of more stringent fuel efficiency standards resulting in reduced emissions from the use phase of vehicles, as well as the displacement of ICE vehicles by electric vehicles (EVs), the share of emissions from the production phase of vehicles can be expected to steadily become more important over time.

This is certainly likely in the Indian scenario, with the government having already announced policies targeting both, fuel efficiency and promotion of EVs. With respect to the former, the Corporate Average Fuel Efficiency (CAFE), India's first light vehicle CO₂ standards, came into force in 2017, requiring car manufacturers to meet a fleet average emissions target of 130 gCO₂/km in April 2017 and reducing to 113 gCO₂/km by April 2022¹⁵. With respect to the latter, the government has set a target of 30% EV penetration by 2030 and announced the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME India) scheme in 2015 to support this target. Phase-1 of the scheme ended in March 2019, having supported the purchase of nearly 2.78 lakh electric and hybrid vehicles by providing a subsidy in consumer prices totaling around Rs 343 crore. The second phase of the scheme, which commenced in April 2019, has a total budgetary support of Rs 10,000 crore over a period of three years and will mainly focus on supporting the electrification of public and shared transportation¹⁶.

In the context of this evolving policy scenario, it is important for Indian OEMs to track and take steps to reduce emissions from the vehicle production phase, a majority of which occur in their supply chains, through sustainable procurement practices. This would be in line with the practices of most well-known global OEMs that have recognized this and already announced carbon neutrality targets covering their supply chains: Daimler, for example, has committed to a CO₂ neutral fleet (covering all lifecycle emissions) by 2039, Volvo has committed to the same by 2040, and Volkswagen and Toyota by 2050¹⁷.

PROJECT OVERVIEW

The overall objective of the project is to develop and implement a capacity building program for MSME auto component suppliers to improve greenhouse gas GHG accounting and reporting practices and facilitate GHG emissions reduction in the supply chain of Indian automobile OEMs. The project also aims to work out a system of incentives for participation of suppliers in collaboration with their corporate buyers, viz. automobile OEMs, which in turn would benefit through easy availability of supply chain (scope-3) emissions data, enabling them to meet their reporting obligations and planning scope-3 emission reduction targets and initiatives.

Project implementation is planned in a phased manner. This report is the outcome of Phase-1 of the project that dealt with the development of the project baseline.

METHODOLOGY

The activities, tactics and methods pursued during Phase-1 of the project were as follows:

¹⁴ Kawamoto et al. Estimation of CO₂ Emissions of Internal Combustion Engine Vehicle and Battery Electric Vehicle Using LCA. Sustainability 2019, 11, 2690.

¹⁵ Transport Policy Website: <https://www.transportpolicy.net/standard/india-light-duty-fuel-consumption/>

¹⁶ Press Information Bureau, Gol: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=191377>

¹⁷ Targets as currently available on respective company websites.

Desk Research & Survey Design

A review of relevant secondary literature on the Indian automobile and the auto components industry was conducted to develop an understanding of the sector. A survey questionnaire for MSME suppliers was designed for the collection of primary data. A questionnaire for structured consultations with OEMs was also designed. The questionnaires were mostly qualitative in nature and designed to understand the current status with respect to:

- ❖ general awareness around the issue of climate change mitigation,
- ❖ GHG accounting and reporting practices,
- ❖ engagement with value chain on GHG emissions reduction and
- ❖ organizational capacity and constraints relevant to climate change mitigation.

The full questionnaires are included in Annex-1.

Awareness Creation, Outreach & Sample Selection

A session to announce the project and create awareness about the project theme was organized as part of CII's Climate Leadership Conference in August 2019. The session was titled "Challenges faced by the Industry in accounting supply chain GHG emissions & the way forward", with speakers from Toyota Kirloskar Motors and United Nations Industrial Development Organization (UNIDO).



Outreach to all major Indian OEMs for participation in the study was made. Based on their response, 7 (seven) OEMs were finalized as study participants. The participating OEMs cover the two-wheeler, car, and tractor product segments.

Outreach to suppliers was made subsequently through their respective OEMs for participation in the study. Additionally, direct outreach was also made to suppliers with the help of the Automotive Component Manufacturers Association (ACMA), in order to get a more representative and diverse supplier sample. Based on the response received, a sample of 103 (One hundred three) MSME suppliers was finalized, covering almost all component segments and all the three major automobile clusters: 26, 37 and 40 from the Northern, Western and Southern clusters, respectively.



A workshop was conducted in the Belgaum foundry cluster in association with "Belgaum Foundry Cluster association" to understand awareness among companies w.r.t climate change and GHG emissions from their industry. In Belgaum cluster, supply chain of OEMs selected for the study were consulted and their input was considered in the overall study.

Data Collection & Analysis

Individual interviews (in-person or telephonic) using the prepared questionnaires were conducted with participating companies, as far as possible, to ensure the context and purpose of each question was understood and to capture additional information in relation to responses, wherever relevant to the purpose of the study. The interviewee was a relevant departmental (e.g. Environment, Sustainability, EHS, Compliance) head or the company proprietor if no relevant department existed within the company. However, in some cases interviews were not possible, and responses were obtained by email. The collected response data were consolidated and analyzed in Microsoft Excel.



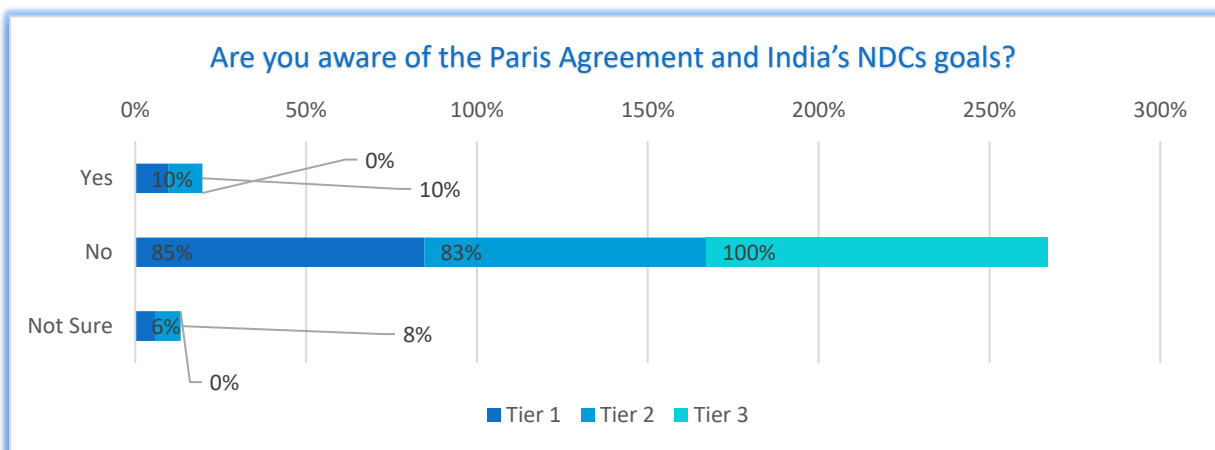
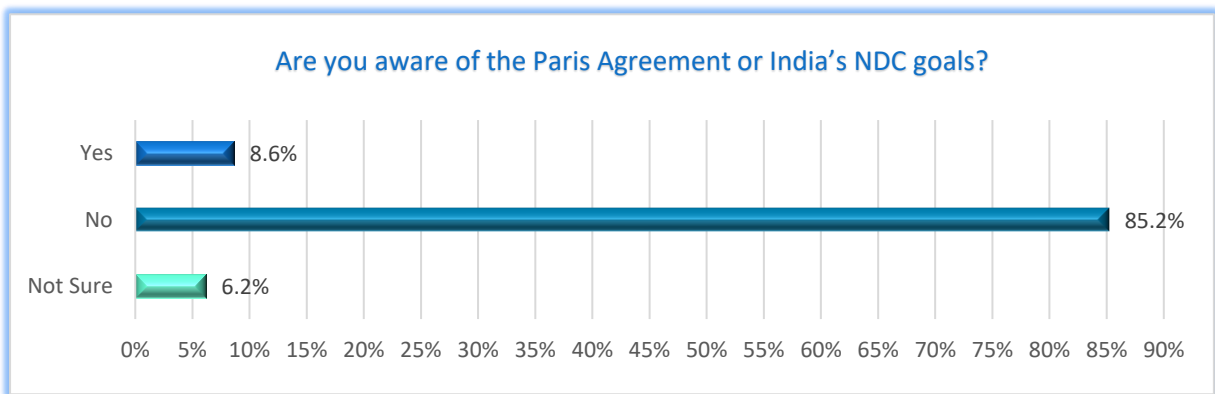
SUMMARY FINDINGS

Supplier Survey

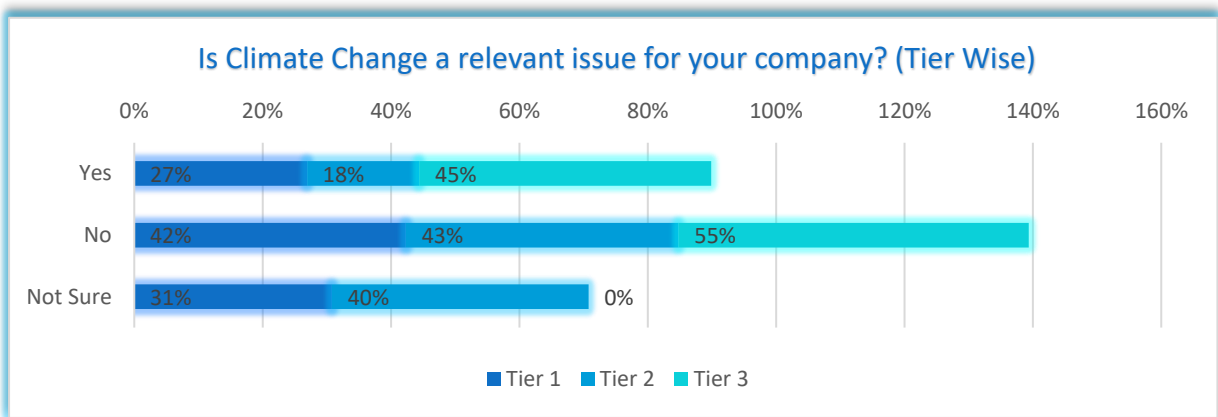
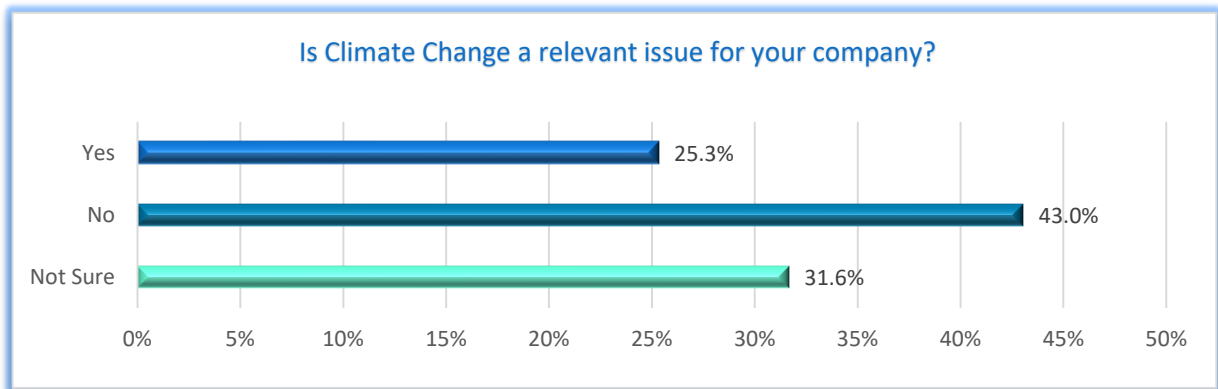
General Awareness & Perceived Relevance of Climate Change

The survey results show that general awareness on the issue of climate change is low among suppliers. Over 40% of the respondents some of them with highly energy intensive operations did not see a link between their business operations and climate change while around 32% were not sure of its relevance; 85% had neither heard of the Paris Agreement nor were aware of India’s Nationally Determined Contribution (NDC) targets or any other government policy on climate change.. Furthermore, only around 14% of the respondents said the company had an environmental policy that directly or indirectly addressed the issue of GHG emissions. Fig.- 4 reports the statistics on supplier responses to key questions relating to general awareness and the perceived relevance of climate change.

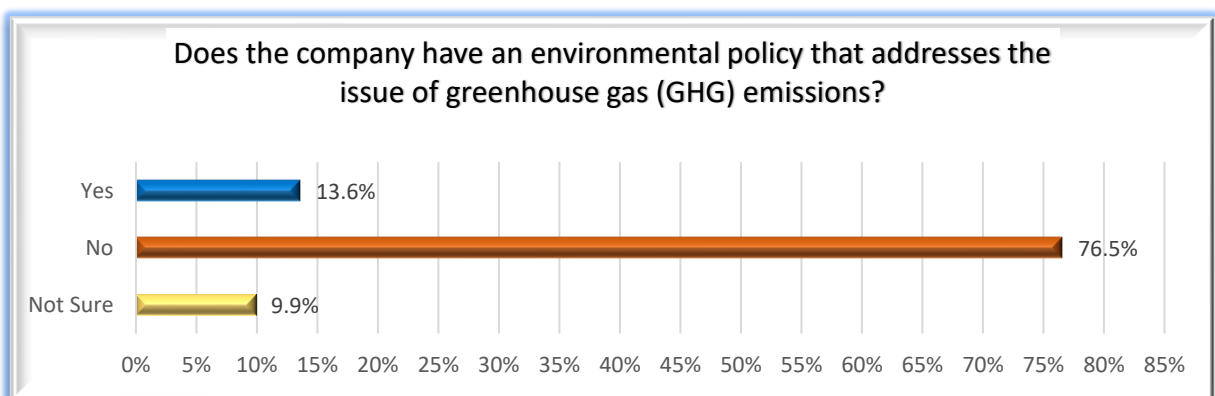
Figure 4 - General Awareness & Perceived Relevance of Climate Change

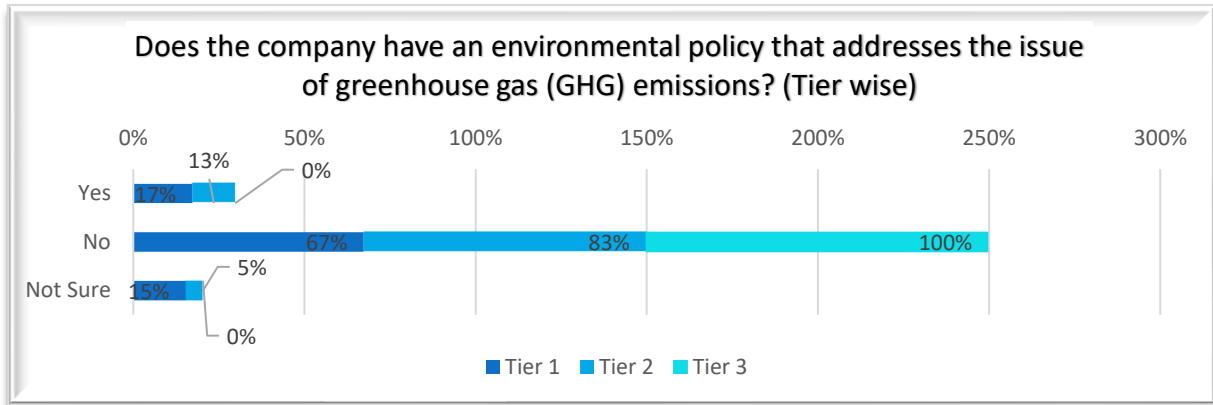


85% among Tier 1, 83% among tier 2 and 100% among tier 3, companies, were not aware of Paris agreement and related nationally determined Contributions goals. Only 10% in tier 1 and tier 2 have heard and read about it. Even after 4 years of Paris agreement and India submitting NDC goals, the information has not trickled that far among many industries.



Granular observation also points out that only 27% among the Tier 1, 18% among tier 2 and 45% among tier 3 feels that Climate change is a relevant issue for their company, whereas almost 50% in each tier felt that, there is no connection between their business and climate change.





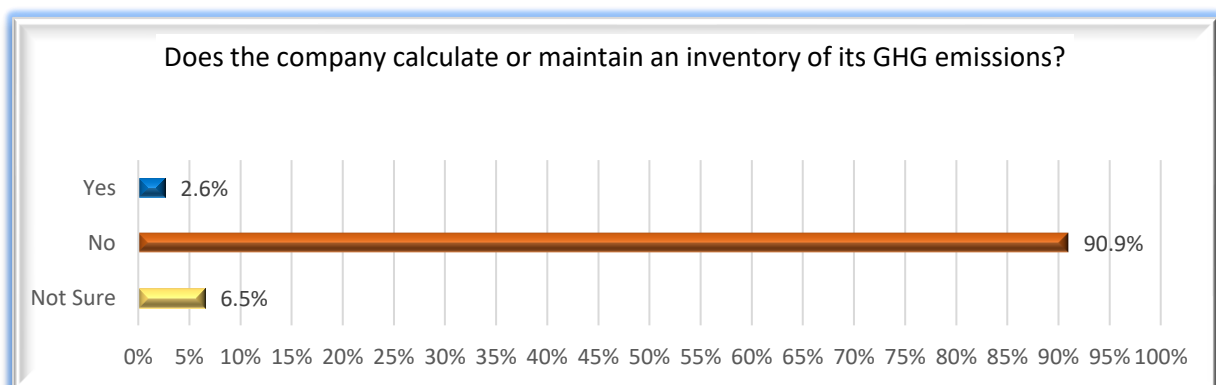
Over 65% in tier 1, 83% in tier 2 and 100% of tier 3, companies, surveyed, did not have any policy with regards to environment. Few of tier 1 and tier 2 were having ISO 14001:2015 certification, and therefore policy on environment was in place which included greenhouse gases.

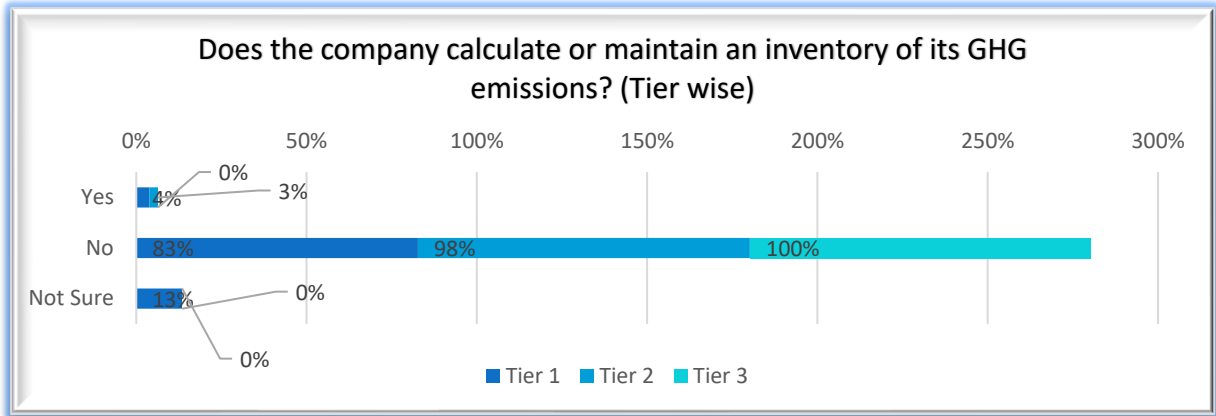
GHG Accounting & Reporting Practices

Barely any activity related to GHG accounting or reporting was found among the surveyed suppliers. Over 90% of the respondents said that their company did not calculate or maintain a GHG inventory either because they had no requirement to do so or lacked the required capacity, and only around 10% of the respondents reported they had adopted a direct or indirect (e.g. energy efficiency) quantitative GHG reduction target so far. Furthermore, almost 90% of the respondents said they did no reporting related to their GHG emissions or targets.

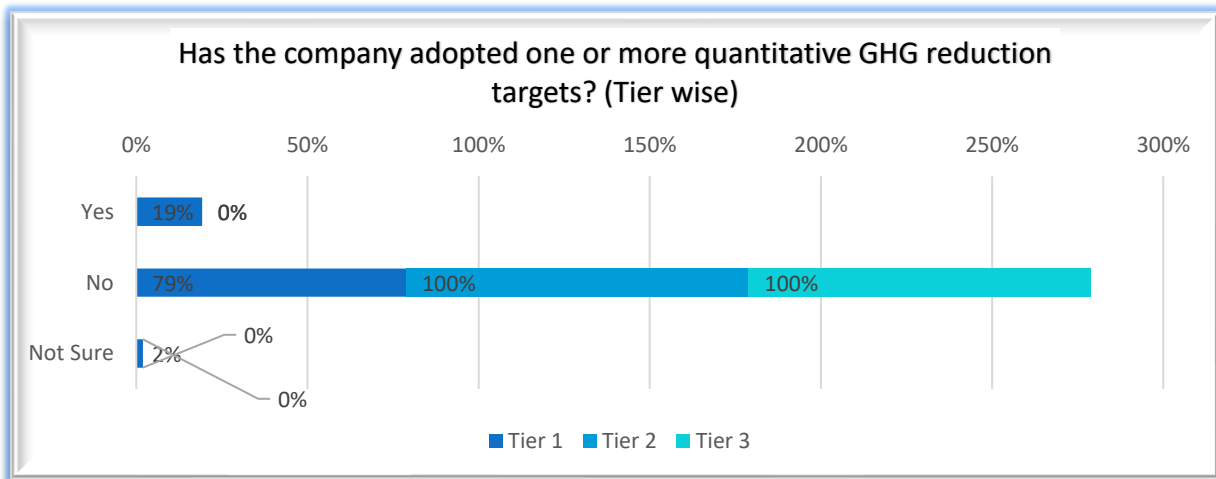
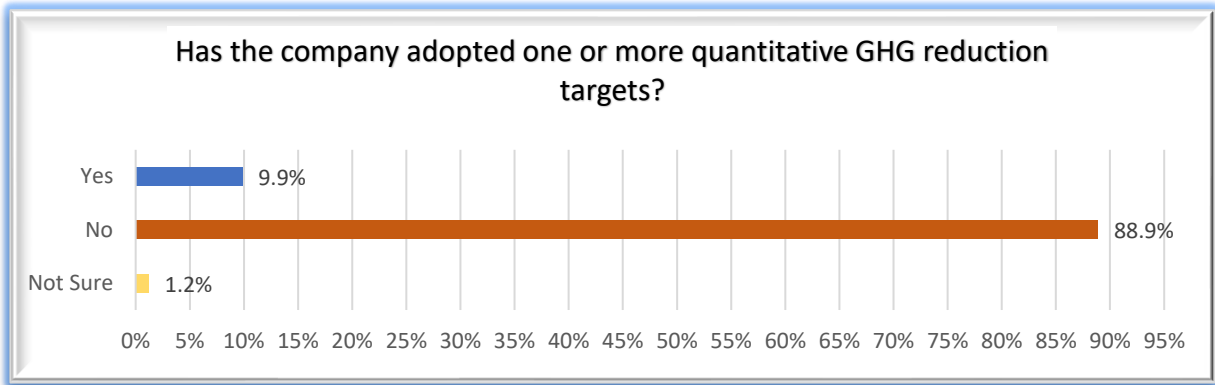
When asked to pick potential drivers for the company for undertaking GHG accounting, reporting or reduction activity, regulatory compliance was the most popular choice, picked by almost three quarters of the respondents. This was followed by meeting requirements set by the company's customers (OEMs), which was chosen as potential driver by over half the respondents, indicating a promising potential role of the use of sustainable procurement criteria by OEMs. Economic benefits (e.g. reduction in energy costs) was chosen as a potential driver by around one fifth of the respondents. Fig.-5 reports the statistics on supplier responses to key questions relating to GHG accounting and reporting practices.

Figure 5 - GHG Accounting & Reporting Practices

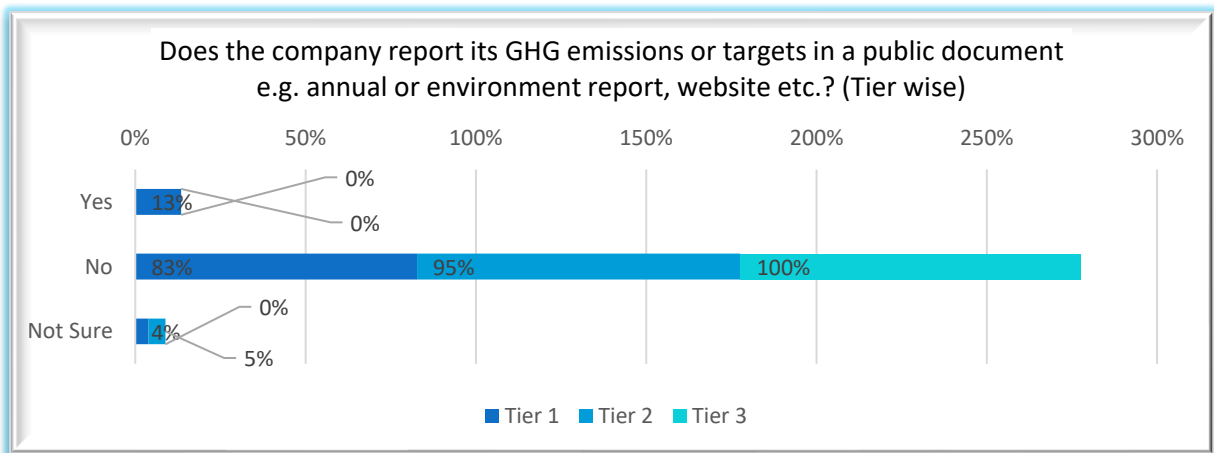
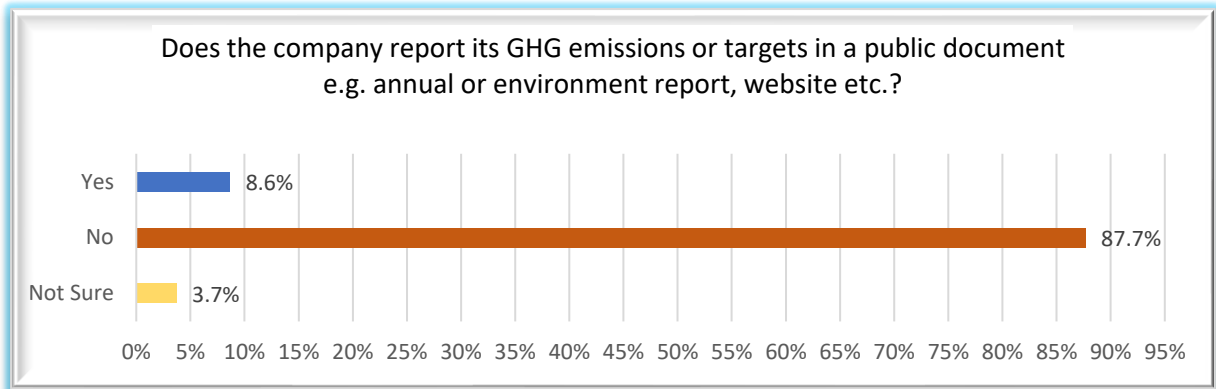




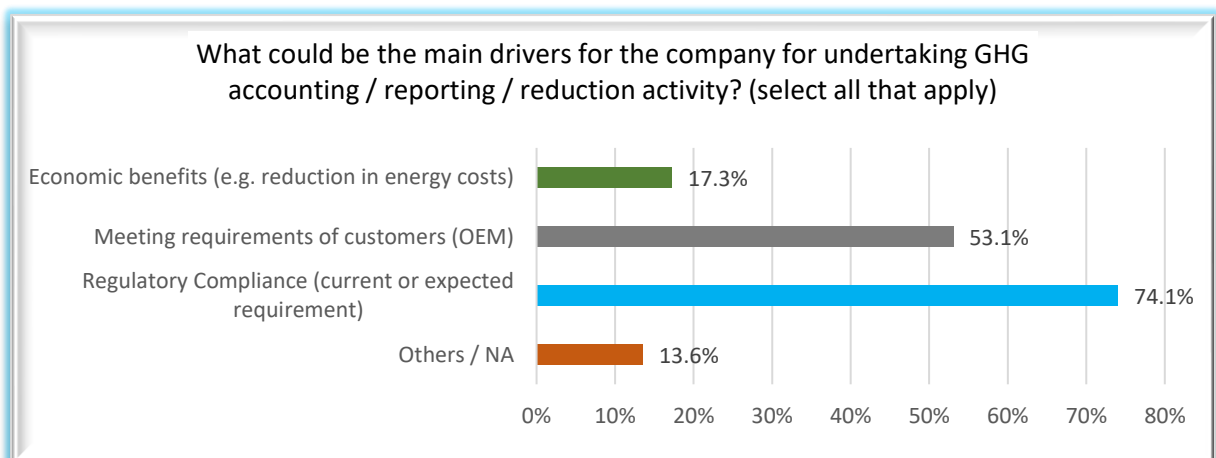
Only 4% of tier 1 and 3% of tier 2 compnaies are calculating and maintaining an inventory of its GHG emissions. None of tier 3 compnaies were aware of GHG inventory or

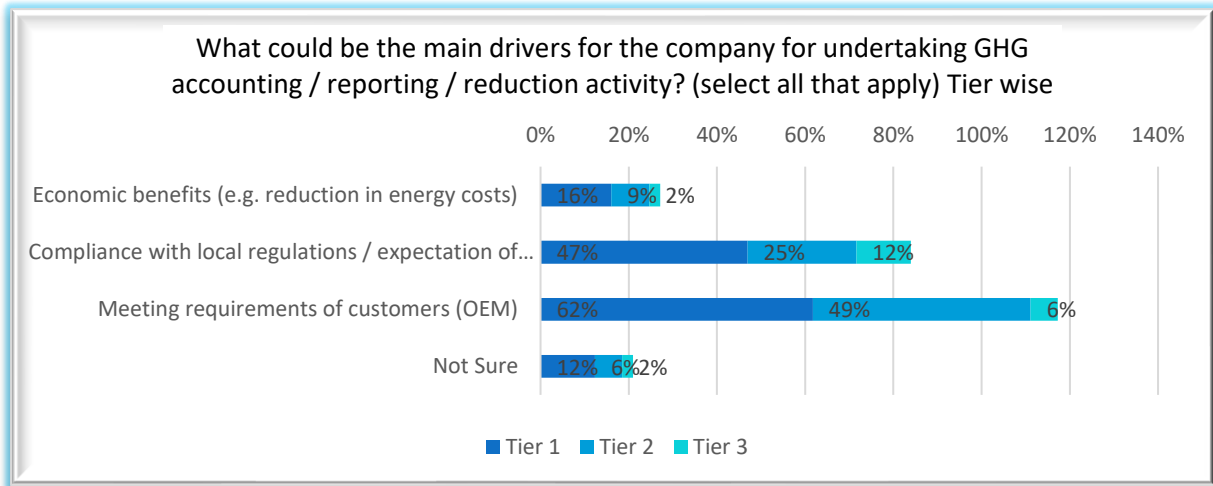


Even though many companies surveyed, did not have GHG inventory or accounting, however certain tier 1 had received targets from their OEM as energy efficiency targets (quantitative GHG targets) and believe it is helping them reduce cost as well.



13% of the tier1 companies said, they were publishing the data as part of sustainability requirement requested by their OEM. As they have not calculated GHG emissions themselves, they were sharing data on fuel consumptions and electricity consumptions to their OEM.



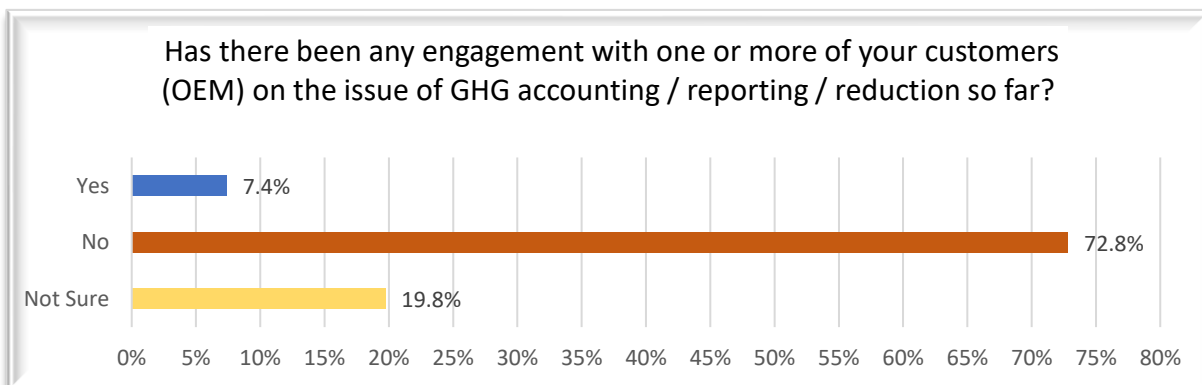


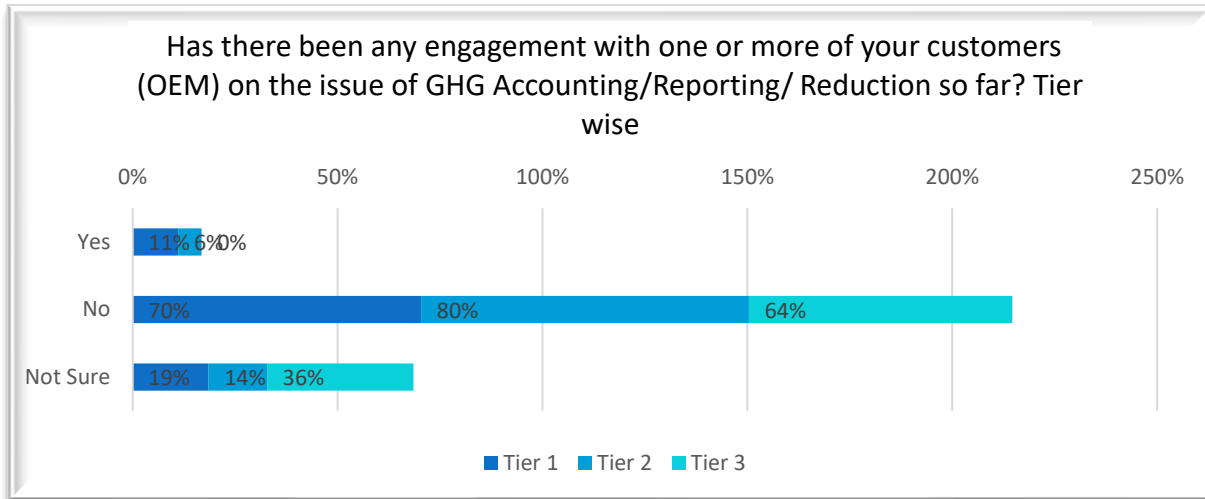
62% of tier 1 companies and 49% of tier 2 companies felt if OEM brings it in as requirement, they would be interested to calculate GHG emissions and also set targets for reductions. 47% of tier 1, 25% of tier 2 and 12% of tier 3 felt regulations can drive such actions in their business.

Engagement with OEMs on GHG Emissions

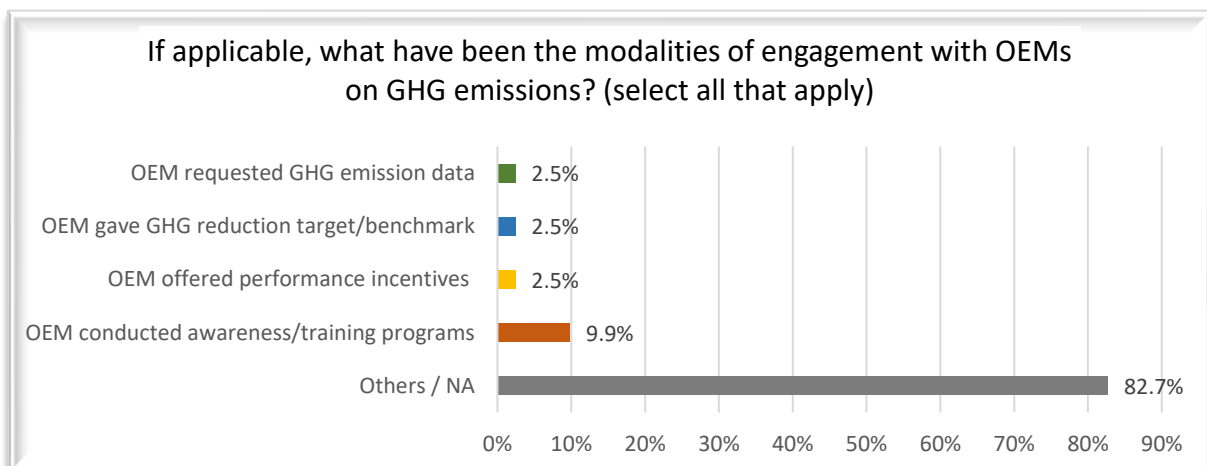
Most suppliers report there has been no engagement with their OEM customers on the issue of GHG emissions accounting, reporting or reduction: over 90% respondents either said they have not engaged with OEMs so far on the issue or that they were not sure. With respect to the modalities of engagement with OEMs, the most common response (chosen by around 10% of respondents) was that an OEM had conducted some awareness or training program for them. Less than 5% of the respondents picked any of the other options provided: that the OEM had requested GHG emissions data, given a GHG reduction target or offered a relevant performance incentive. Fig.-6 reports the statistics on supplier responses to key questions relating to their engagement with OEM customers on GHG emissions.

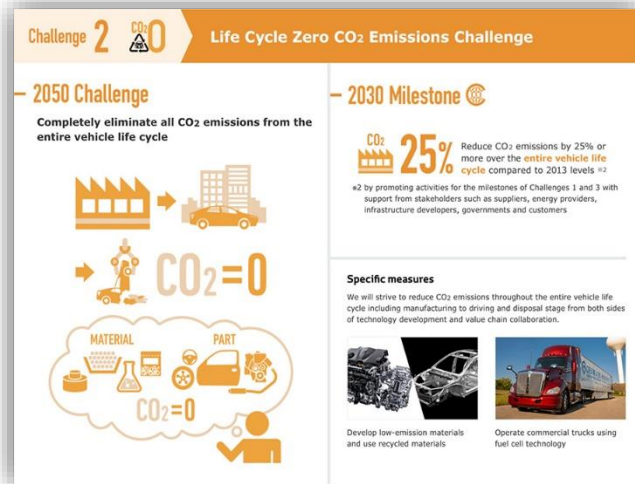
Figure 6 - Engagement with OEMs on GHG Emissions





Only 11% of the tier 1 companies said there was some engagement with their OEMs on green-house emissions and reductions, barely 6% of tier 2 companies were engaging with their suppliers on GHG emissions data submission. At tier 3 level no companies were engaged with any of their suppliers on GHG emission calculation or reduction.



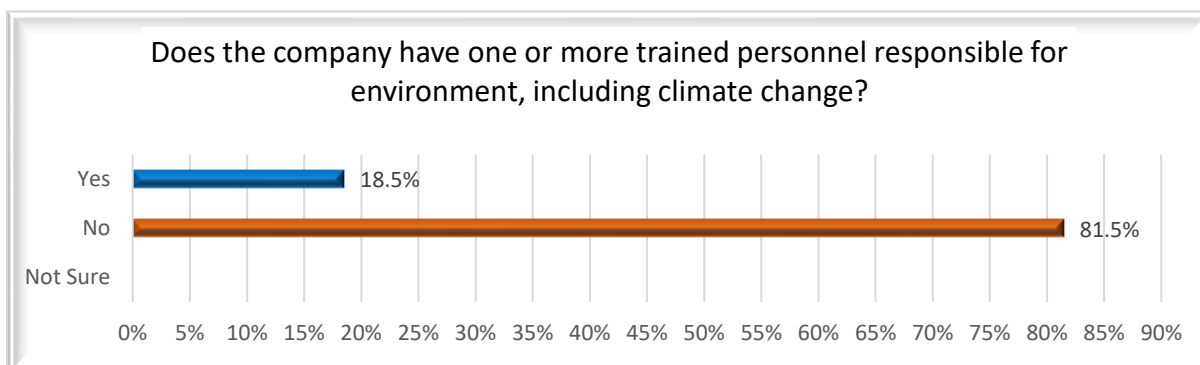


Toyota has announced a plan to reduce CO₂ emission from not only manufacturing but also from their supply chain, through “Life Cycle Zero CO₂ Emissions Challenge¹”. They have published a Green Procurement Guidelines (GPG) with detailed step by step plan for bringing tier 1 companies under the supply chain Programme and help them calculate and reduce emissions. As part of the survey, couple of companies who were already working with Toyota, under Toyota’s supply chain work were surveyed to record the current work being undertaken.

Organizational Capacity on Climate Change

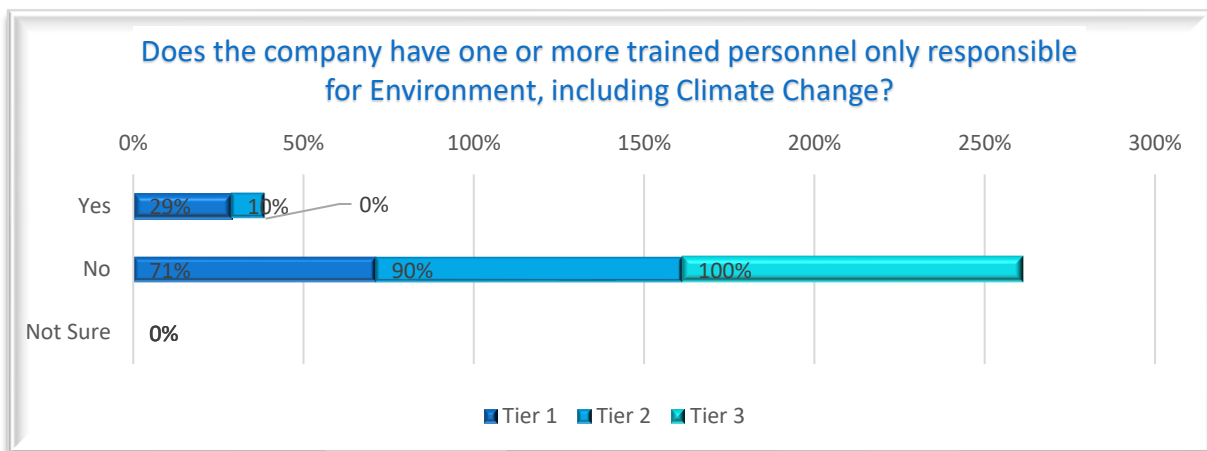
There was a clear lack of organizational capacity on climate change among the surveyed suppliers. More than 80% of respondents said they did not have even one trained personnel who was responsible for the environment (including climate change). When asked about the need for capacity building on climate change within the company, around 43% of the respondents said yes, while around 49% said they were not sure, due to their lack of familiarity with the issue of climate change. Only around 7% of the respondents said they did not feel any necessity for capacity building on climate change. Fig.-7 reports the statistics on supplier responses to key questions relating to organizational capacity on climate change.

Figure 7 - Organizational Capacity on Climate Change

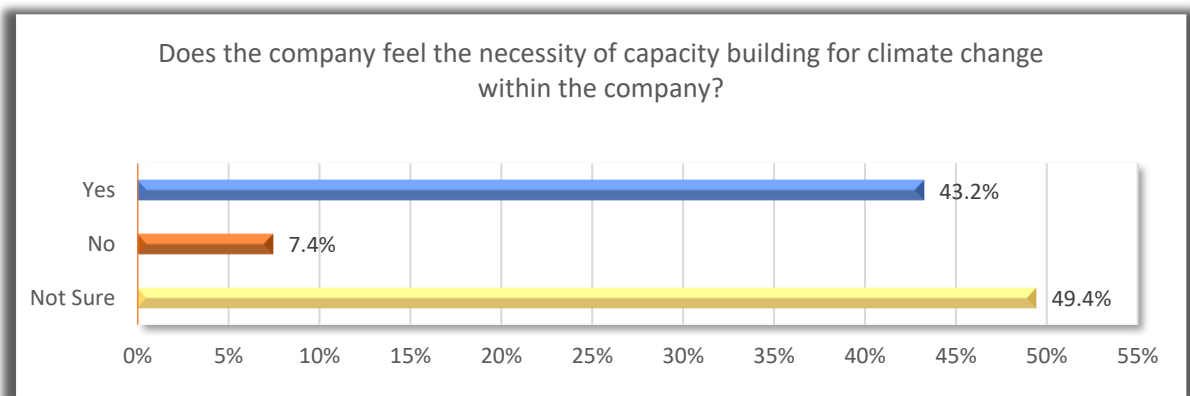


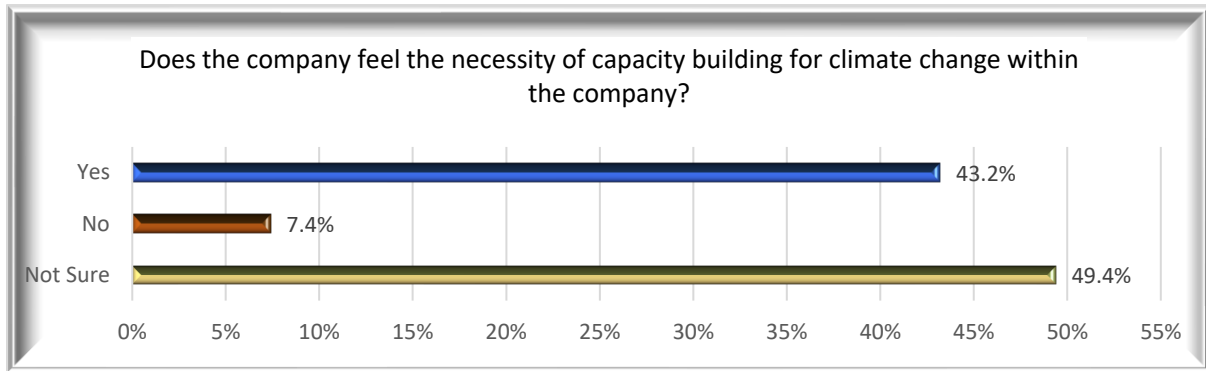


Hero MotoCorp Initiated a Green Vendor Development Program for its supply chain, to extend the corporate environment responsibility down the supply chain. It is based on one-to-many mentoring program. As the production is increasing at Hero MotoCorp facilities, the manufacturing activities at the vendor's end are also increasing in the same proportion, thus giving rise to the environmental load.



71% in Tier 1, 90% in tier 2 and 100% of tier 3 surveyed did not have a trained person responsible for environment, including climate change. Couple of reason were cited by the companies, such as size of the company, cost of the resource, ease of compliance currently and low demand from OEMs.





OEM Consultations

The seven OEM participants were consistent in their responses to some questions: All perceived climate change as a relevant business issue, were aware of the Paris Agreement and broadly familiar with the domestic policy framework on climate change. All of them maintained an inventory of GHG emissions, covering at least direct (scope-1) and indirect emissions from purchased electricity (scope-2), and had one or more dedicated personnel responsible for this. All OEMs also had a public, quantitative GHG reduction target covering their scope-1 and scope-2 GHG emissions.

However, there was divergence in their approach to addressing sources of other indirect (scope-3) GHG emissions: only two of the seven participating OEMs currently accounted one or more sources of their scope-3 emissions. Furthermore, just two OEM accounted emissions from purchased goods, in other words the emissions of its suppliers, within its scope-3 emissions¹⁸. Although all OEM participants reported that they have adopted procurement guidelines that address environmental impacts in the supply chain in some way, the issue of GHG emissions was explicitly addressed in the procurement guidelines of only one OEM, which required suppliers to report their GHG emissions and any reduction initiatives undertaken on an annual basis.

Three (3) out of the Seven (7) OEMs, that were part of this survey, are part of Science Based Target initiative (SBTi). Only one (1) among the three (3) OEMs who are part of SBTi have submitted their targets, other two are yet to set.

In terms of engagement with their supply chains on climate change so far, all OEM participants reported they have conducted training or awareness programs for suppliers that directly or indirectly (e.g. covering initiatives like energy efficiency) addressed climate impacts of suppliers. However, the reach of such programs was still relatively low, covering on average around 30-40% of suppliers. None of the participating OEMs have so far prescribed GHG emission reduction targets to their suppliers or offered performance related financial incentives in this regard. However, they expressed their interest and willingness to do so going forward, acknowledging that the majority of GHG emissions from automobile production lay in their supply chains. Table-3 summarizes the current status of key parameters with respect to the action taken by OEM participants on their supply chain GHG emissions.

Table 3 - Summary of Action on Supply Chain GHG Emissions by OEM Participants

Summary of Action on Supply Chain GHG Emissions by OEM Participants	
Parameter	Status
Training & Awareness Programs for Suppliers	All OEM participants have conducted training or awareness programs that directly or indirectly (e.g. covering initiatives like energy efficiency) addressed climate impacts of suppliers and covered around 30%-40% of the supply chain, on average.
Procurement Guidelines	All OEM participants have procurement guidelines, however, GHG emissions were explicitly addressed in the procurement guidelines of only one OEM, which required suppliers to report their GHG emissions and any reduction initiatives undertaken on an annual basis.
Accounting of Suppliers' Emissions	Only two among seven OEM participants has accounted the GHG emissions of its suppliers in its scope-3 emissions.

¹⁸ <https://sciencebasedtargets.org/companies-taking-action/>

Emission Reduction Targets for Suppliers	No OEM participant has so far prescribed any quantitative GHG emission reduction targets to its suppliers.
Relevant Performance Incentives for Suppliers	No OEM participant has so far offered any performance-related financial incentives to its suppliers with regard to GHG emissions.

RECOMMENDATIONS

Supplier Capacity Development

The supplier survey results indicate a clear need for capacity development among suppliers in relation to awareness of climate impacts of operations, accounting an inventory of GHG emissions and understanding available opportunities for GHG reduction. This is a pre-requisite for OEMs to engage with their supply chains on GHG reduction targets (and target-linked incentives) for suppliers. The potential for GHG reduction through such an engagement program is likely to be significant and include several “low-hanging fruit”, or, in other words, cost-effective GHG reduction opportunities, due to a lack of any activity in this area so far.

The recommended route for supplier capacity development is through either one-day cluster-level workshops to introduce participants to relevant concepts and tools followed by one-on-one engagement, wherever necessary. In this route, CII can involve partners like Automotive Component Manufacturer Association of India (ACMA) and Society of Indian Automobile Manufacturers (SIAM) for scaling work. Both these bodies work with their members extensively on many areas related to manufacturing and policy work with government. In addition to these bodies, partnering with other institutions working particularly with MSMEs like UNIDO, GEF and others will also be useful, to scale the work.

The second route of work can be driven directly with help of the OEMs and their respective supply chain companies. OEMs are involved with their supply chain for increasing production, health and safety issues, supply chain management etc, therefore running extensive Programme on back of these existing work can yield many benefits for the OEMs. Few OEMs were already doing it either on their own and with help of third parties. OEMs realize that supply chain development on these issues is important, but sheer number of companies to touch and resources required typically act as barrier.

Table-4 provides a suggested list of topics to be covered in the workshops, on the basis of the requirements identified from the supplier survey.

Table 4 - Suggested Topics for Supplier Capacity Development Workshops

Suggested Topics for Supplier Capacity Development Workshops	
S. No.	Topic
1.	Introduction to Climate Change – Background, Policy & Business Impacts.
2.	Corporate Standards for Greenhouse Gas (GHG) Inventorization – Principles & Requirements.
3.	GHG Accounting – Identification of Emission Sources, Quantification Methodologies & Tools.
4.	GHG Management – Identification of Emission Reduction Opportunities, Planning & Implementation of Targets.

5.	Relevant Case Studies & Best Practices.
6.	Demonstration of Spreadsheet Tools for GHG Inventorization and Management.

The expected results from the proposed capacity development for suppliers would be the following:

- ❖ Availability of a GHG emissions inventory and an understanding of the opportunities for GHG emissions reduction in operations among participating suppliers.
- ❖ Preparedness of suppliers to meet potential requirements of their OEM customers or the government related to climate change mitigation.
- ❖ Awareness of their supply chain GHG footprint and reduction potential for OEMs, enabling them to set scope-3 targets and plan relevant supply chain initiatives.

Procurement Criteria & Incentives



The survey results indicate that adoption of procurement criteria addressing GHG emissions of suppliers by OEMs is potentially a key driver for supplier action on the issue, however a majority of OEMs have not yet adopted such procurement criteria. Furthermore, given that a typical supplier supplies to several OEMs in the automobile industry, it is important that:

- ❖ all or a significant number of OEMs adopt such procurement criteria, since one particular OEM may not be able to exert significant influence on supplier behavior due to low procurement volume in comparison to the total turnover of the supplier, and
- ❖ procurement criteria are harmonized across OEMs to enable suppliers to meet corresponding customer requirements more easily and efficiently.

The formation of a high-level working group with representation from key OEMs is therefore recommended to develop consensus-based procurement criteria addressing the issue of supply chain GHG emissions for the Indian automobile industry.

An issue closely linked to procurement criteria is that of financial incentives for compliant suppliers. Owing to the fragile financial condition of MSME suppliers, such a system would be crucial in enabling suppliers to retain trained personnel in climate change and act in line with procurement requirements of OEM customers. Therefore, the same high-level working group should also explore modalities of a such a system of financial incentives that is acceptable to various OEM stakeholders.

Platform for Data & Knowledge Exchange

An automobile OEM typically sources material from several suppliers, while a supplier also supplies to several OEM customers. The development of a web platform to facilitate the periodic exchange of data between suppliers and OEMs in a consistent and streamlined manner, is therefore recommended. The platform should enable:



- ❖ Each registered supplier to share data pertaining to GHG emissions and progress with respect to targets in a predefined format with all its OEM customers registered on the platform.
- ❖ Each registered OEM to retrieve relevant data of all its suppliers registered on the platform.
- ❖ Access to data insights, e.g. anonymous emissions benchmarking of suppliers with similar operations, for all registered members of the platform.

- ❖ Access to relevant information, tools, knowledge and best-practices for all registered members of the platform.

ANNEXURES

Annex-1: Survey Questionnaires

Questionnaire for OEM Suppliers

GHG Inventorization and reduction: Capacity building in the Automobile and auto-component manufacturing SME sector for climate change mitigation.

Phase-1

General Information about Supplier

Name & Contact of Supplier: _____

Primary Business/Parts Supplied: _____

Name(s) of OEM(s) Supplied: _____

Survey Questions for Suppliers

1. Is Climate Change a relevant issue for your company?
 - a. Yes
 - b. No
 - c. Not sure
2. Are you aware of the Paris Agreement or India's NDCs goals?
 - a. Yes
 - b. No
 - c. Not sure
3. Does the company have a Policy / Code of Conduct related to Environment or Climate Change that addresses the issue of Greenhouse Gas (GHG) Emissions?
 - a. Yes
 - b. No
 - c. Not sure
4. Does the company have one or more trained personnel only responsible for Environment, including Climate Change?
 - a. Yes
 - b. No
 - c. Not sure
5. Does the company calculate or maintain an inventory of its GHG emissions?
 - a. Yes
 - b. No
 - c. Not sure
6. If answer to Q.5 is option a., which emissions are covered in GHG inventory?
 - a. Scope-1 & 2
 - b. Scope-1,2&3
 - c. Not sure
7. If answer to Q.6 is option b., has the company calculated GHG emissions of its suppliers (tier-2) or contacted them for any relevant data so far?
 - a. Yes
 - b. No
 - c. Not sure
8. Has the company adopted one or more quantitative GHG reduction goals?

Questionnaire for OEMs

GHG Inventorization and reduction: Capacity building in the Automobile and auto-component manufacturing SME sector for climate change mitigation

Phase-1

Survey Questions for Automobile Manufacturers (OEMs)

1. Is climate change one of the top five issues of the organization's business?
 - a. Yes
 - b. No
 - c. Not sure

2. Does your business have a climate strategy?
 - a. Yes
 - b. No
 - c. Not sure

3. Does your business have an emission reduction target in place?
 - a. Yes
 - b. No
 - c. Not sure

4. Is the progress of GHG reduction targets monitored and reported?
 - a. Yes
 - b. No
 - c. Not sure

5. Is GHG emission and other climate change information gathered for management decision-making ?
 - a. Yes
 - b. No
 - c. Not sure

6. Are you aware of the Paris Agreement and India's NDCs goals?
 - a. Yes
 - b. No
 - c. Not sure

7. Are you aware of the industry benchmark in terms of carbon intensity?
 - a. Yes
 - b. No
 - c. Not sure

15. What is the percentage of suppliers who take active part in company initiatives on climate change (GHG reduction)?

- a. 10-30% b. 30-60% c. 100% d. at planning stage

16. What is the percentage of supply chain GHG emissions in your overall GHG emissions (Approx)?

17. Has the company set any targets to reduce supply chain GHG emissions?

- a. yes b. No c. not sure

18. What is the coverage of your suppliers in GHG reduction target?

- a. Tier 1 b. Tier1&2 c. Tier1,2 &3

19. What activities are being planned by the company to achieve reduction targets for suppliers?

- a. financial incentives for reduction b. assurance on long term PO
c. technology transfer d. capital investment for EE or RE
e. preferential section criteria f. others (specify)

20. Challenges that is faced while accounting supply chain GHG emissions?

- a. availability of data with suppliers b. administrative constraints in collecting data
c. others (specify)

21. Challenges faced while setting reduction targets for supply chain GHG emissions?

- a. lack of awareness among suppliers b. capacity constraints
c. financial constraints d. others (specify)
-

Annex-2: About CII-ITC Centre of Excellence for Sustainable Development



CII-ITC Centre of Excellence for Sustainable Development (CESD) is a not-for-profit, industry-led institution that helps business become sustainable organizations. It is on a mission to catalyze innovative ideas and solutions, in India, and globally, to enable business, and its stakeholders, in sustainable value creation. Its knowledge, action and recognition activities enable companies to be future ready, improve footprints profiles, and advocate policymakers and legislators to improve standards of sustainable business through domestic and global policy interventions.

CESD leverages its role of all-inclusive ecosystem player, partnering industry, government, and civil society. It has been a pioneer of environment management systems, biodiversity mapping, sustainability reporting, integrated reporting, and social & natural capital valuation in India, thus upgrading business in India to sustainable competitiveness.

With two locations in India, CESD operates across the country and has also been active in parts of South and South East Asia, Middle East, and Africa. It has held institutional partnerships and memberships of the United Nations Global Compact, Global Reporting Initiative, International Integrated Reporting Council, Carbon Disclosure Project, development agencies of Canada, the USA, the UK, and Germany.