



# SUSTAINABLE FINANCE IN INDIAN AUTOMOBILE INDUSTRY

**Snigdha Vanga**

**Student**

**SRMAP**

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## **Abstract**

Sustainability, a result of growing concern over climate change and other global issues, is slowly transforming into a way of life and way of doing business. All of the business organizations nowadays are finding their way to sustainable business strategies which are believed to have a positive impact on the environment and society. This transition from traditional business methods to sustainable ways involves a lot of changes and adoptions to be made by the organizations. Therefore, in this process companies are expected to make sustainable investments and indulge in green financing. In effort to track the development of Sustainability in one of the crucial sectors like Automobiles, we have done this qualitative study.

The research was conducted with an objective to evaluate and review the Sustainability and Green Finance initiatives and programs in the automobile industry in India and to develop a report on the ongoing Sustainable Finance activities in the Indian automobile industry. It was an explorative study where case studies and reports of the top 5 automobile companies were analyzed. All the five companies were compared in terms of their initiatives, spending and returns on Sustainability.

It was observed in the study that the Indian automobile sector is still in the growth phase of adapting to a sustainable way of doing business. The companies need to include sustainability in their products, supply chain, operations and organization as a whole. They should maintain transparency in projecting the investments made on the ESG initiatives and return on investment. Hence, the report concluded that the Automotive industry is in the adoption phase and recommended that Sustainability can be achieved through Government interventions, Technological advancements, and strong Research & Development in the Automotive sector.

## 1. Introduction

Sustainable Finance is a mechanism where we take environmental, social, and governance (ESG) into account and review when making investment decisions in the financial sector of an organization hence, leading to increased long-term investments into sustainable economic activities and projects. Issues like climate change, global warming are having adverse effects on biodiversity, sea level rise, food security and water level. To save the Earth and its people, the nations unitedly signed the Paris Agreement and set an agenda 2030.

In this transition to zero carbon, the corporate organizations play a key role in saving the planet. Companies should come up with investments and ventures that save the planet, people and gain profit. This process of sustainable development involves saving renewable resources, coming up with initiatives to save the environment, upgradation of governance mechanisms and financing projects in response to the United Nations Sustainable Development Goals.

Companies working towards Sustainability and operating with responsibility are viewed positively by all its stakeholders. Environmental, Social and Governance (ESG) are a set of standards for the operations of an organization that socially conscious investors use to evaluate a company. Thus, acting upon the sustainable development goals and reacting to climate change is an important thing these days for the companies. The financial sector holds enormous power in bringing awareness to issues of sustainability and funding related programs, by allowing for R&D of non-renewable energy resources or supporting businesses that follow fair and sustainable labor practices.

Sustainable finance plays a key role in helping the companies act responsibly towards the stakeholders and the environment. It does this by channeling the investment into the transition to a climate-resilient, resource-efficient and climate-neutral and fair economy as a complement to peoples' money. The financial sector has a vital role to play in reaching the sustainable development goals. Sustainable finance helps a company grow in a sustainable manner over a long term, align the investments towards more sustainable technologies and ventures and contribute to creation of a low-carbon, climate resilient and circular economy.

Nowadays, investors are demanding more transparency and accountability from companies. Thus, it is crucial for the companies to understand the salient features of sustainability and make investments accordingly. Coming to the capital, all forms of business are related to biodiversity, climate and environment directly or indirectly. Some sectors can be directly held responsible and linked to the alarming situation of the globe. Therefore, it is time for them to act and contribute towards betterment of the environment, social and human aspects. Sustainable investing in alignment with ESG and sustainable development goals can help companies in good governance, stakeholder engagement, employee satisfaction and being environment friendly.

## 2. Literature Review

Sustainable finance is an imminent and futuristic research topic in the field of Finance and Sustainable development. Descriptive and Experimental Research in the field of Sustainable Finance would help governmental and corporate organizations develop methods to attain the United Nations Sustainable Development Goals. This literature review throws light on the available research papers in the area and so as to identify a research topic with good scope and amplitude. Sustainable businesses offer higher returns for investors as they make the society fairer and inclusive and also contribute to the betterment of the planet. Companies with sustainable investments are viewed positively by stakeholders and gain a competitive advantage upon competitors. Therefore, organizations should take into account the Environmental, Social and Governance (ESG) into consideration while making investment decisions in the financial sector.

The literature available on the topic Sustainable Finance was mainly based on the perspectives, definitions, and principles of the topic. One of the papers outlined the literary advances which are happening in the fields of financial stability and financial sustainability (Dhaheri & Nobanee 2020). This paper was a review on available literature in the field of Sustainable Finance. Various papers have presented its implications in a circular economy and decentralized system. One such paper discusses a proposal that integrates the circular economy concept and financial valuation through real options (Rodrigo-González, Grau-Grau, & Bel-Oms, 2021, p. 7973). This paper was only in the context of Europe and the scenarios considered were not in relation with India. One of the papers tried to establish the relationship between existing Corporate Social Responsibility practices and Sustainability which highlights the major differences between the two and how the rating agencies are viewing the two (Liang & Renneboog, 2021). This literature was also in the context of the US. Thus, the review of the above literature gave me an insight that there is a lack of papers studying the condition of Sustainability and Green finance in India.

Few papers also discuss the effect of sustainable financing on investor behavior and ethical dimensions of corporate decisions on green financing. A research study provided a framework for the transformation towards a sustainable and inclusive economy (Schoenmaker 2018). There are papers accentuating the welfare consequences, risks, opportunities and trends in the field of Sustainable Finance. One of the studies highlighted in detail the condition of Sustainable finance in Japan (Schumacher 2020) thus inspiring to study regarding the condition of Sustainable finance in India.

Initial analysis of the papers gave me an insight into the dimensions in which sustainable finance was studied and evaluated. Few articles talked about the role of central banks in developing sustainable finance and combating climate change. Most of the papers were based on Europe and few developed Asian countries. This indicates that

sustainable finance and its practices are prominent in those countries. All of the papers talked briefly about the initiatives and their immediate impacts on the economy of their respective countries. There are papers which talk about ongoing green finance and development in countries like Japan and China. None of the research papers focussed on the world view of green finance/sustainable finance. The frameworks, principles, practices and recommendations were based on a particular economical setup. This clearly indicates that it is nearly impossible to apply the concept or conduct a study for a global set-up and the methods to be adopted and the results would be complex and intricate.

Studies conducted on Sustainable Finance in the country India are very minimal in number. The existing research papers are mainly focused on explaining what is Sustainable Finance. The development of the subject is an ongoing process and is prospering. The adoption of Sustainable Finance in the economy is progressing with introduction of green bonds and sustainable finance by various banks. The country is moving towards planet-friendly options like digital rupee and is highly encouraging digital transactions. The Securities and Exchange Board of India (SEBI) has also introduced a Business Responsibility Report as a requirement for the top 100 companies based on market capitalization. This report details about the ethics, product lifecycle, employee wellbeing, and environmental strategy etc. Therefore, the country in terms of governance is moving towards attainment of zero carbon emission through sustainable financing.

As the papers published related to Sustainable Finance in the context of India have only concentrated on its meaning and review of the concept, I have identified that there is a need to find out the process of transformation of companies in different industries. I felt it was important to track the sustainable investments and sustainable finance initiatives of Indian corporate companies. The gap which I have identified is that of a study on the spending of Indian companies on Sustainability and their sustainable financing programs for reaching the UN's Sustainable Development Goals.

The analysis of top companies in different industries is complicated to include under one study as the mechanisms and dimensions of the evaluation process keeps varying for each industry due to their different operating processes and investments. Therefore, I have chosen the Automobile industry and will be studying, analyzing and evaluating the Sustainable Finance initiatives, Business Responsibility Reports and ESG reports of the top players. There is a need to track and understand the strategies of the top automobile companies and the alignment of their mission, and vision with the sustainable finance objectives.

Sustainable finance promotes the invention, development and execution of financial instruments which are people-friendly, planet-friendly and profit-oriented. Finance is the backbone of any organization and it plays a vital role in the functioning of an organization. Thus, the research on sustainable finance initiatives in top companies in a significant

industry like Automobiles is helpful. Automobiles have played a pivotal role in the development of the society and

will be a key part of the society in the future. Consequently, the research topic based on the gap identified is Sustainable Finance in the Automobile Industry.

### 3. Research Objectives -

- Objective - To evaluate and review the Sustainable Finance initiatives and programs in the automobile industry in India.
- Objective - To develop a report on the ongoing Sustainable Finance activities in the Indian automobile industry.
- Objective - To investigate the remarkable measures of the top players in the Indian automobile industry.
- Objective - To compare the Sustainable Finance and ESG undertakings of the top Automobile companies of India.
- Objective - To analyze the opportunities and trends in the field of Sustainable finance in the Indian automobile industry.

### 4. Research questions -

Q1) What are the kinds of Sustainable finance activities ongoing in the Indian Automobile Industry ?

Q2) What is the view of different stakeholders of the Indian Automobile industry towards Sustainable Finance and initiatives related to Sustainability and ESG ?

Q3) What are the Automobile companies in India doing remarkable work in the development of Sustainable Finance ?

Q4) What are the trends and opportunities for Sustainable Finance in the Automobile Industry in India ?

### 5. Research Methodology -

After the evaluation and consideration of various research methods like Qualitative, Quantitative, Descriptive, and Exploratory research methods, Descriptive study seems to be the most appropriate research method in finding and analyzing the trends, downsides, opportunities and developments in Sustainable finance in the Indian automobile industry.

Descriptive research is evaluation of facts and analyzing case studies in the respective research area. This helps in determining and explaining the findings with appropriate examples and results can be foolproof. The data

collection process is useful to answer a wide range of questions like what, when, how, and why. Descriptive research utilizes diverse data collection methods like case studies, observations, surveys etc. The main purpose of descriptive research is to observe, describe and document.

This study is conducted in order to examine the situation of Sustainable finance in India and explore the possible developments and initiatives of top automobile companies in India. Descriptive type of research helps us to understand the various Sustainable finance programs, observe current trends and futuristic opportunities, evaluate the opinions of different stakeholders, find out the downsides in the development of Sustainable finance, and document an overview of Sustainable finance in the Indian Automobile industry. Therefore, the descriptive methodology is adopted to conduct the research.

The main emphasis would be on collection of various reports like ESG report, Business Responsibility report and Sustainability report of the top automobile companies. The companies include Tata Motors, Maruti Suzuki, Mahindra & Mahindra, Hero Motocorp, and Hyundai India. These reports and articles would be further examined and scrutinized into case studies and thus, comprehending the current situation of Sustainable finance and ESG in the Indian automotive industry. The process involves keen observation of the information provided in reports and articles related to companies and interpreting to conclude and provide with recommendations.

The case studies are useful in describing the characteristics of a particular subject i.e an automobile company in our study. Instead of gathering and collecting a large volume of data so as to identify patterns across time or location, case studies gather detailed data to find out the characteristics of a narrowly defined subject and thus, making the process clear and simple. Rather than aiming to describe general facts, reports focus on the predetermined objectives of the study and provide us with the appropriate data. On the other hand, articles and case studies help us in understanding the variations included in our subjects and also present us with sophisticated information instead of mere data and facts. Therefore, articles, case studies and reports are timely, accurate and relevant.

### 5.1. *Background of the industry -*

Automobile industry also called as Automotive industry comprises a wide range of organizations involved in designing, developing, manufacturing, marketing and selling of motor vehicles. It is one of the world's largest industries in terms of revenue and contributes a major portion in each country's GDP (Gross Domestic Product). It is also one of the industries where a huge amount is spent on Research and development.

The industry has seen major transformation since the Industrial Revolution and is considered one of the main fields where technology and its advancements play a vital role in the transition process. Automobiles play an important role in the development of means of transportation and are attracting a major stake of the public while competing

alongside other transportation means like air ways, waterways and railways.

Automotive industry in India is 4th largest in the world as per 2021 statistics. The industry contributes around 7% to the GDP of India and contributes around 40% to the manufacturing sector GDP. The rising young population and middle class income has resulted in steady growth of the automobile industry in India. India is anticipated to be the leader in shared mobility by 2030, providing opportunities for electric and autonomous vehicles. The focus of the Indian Automobile industry is shifting towards electric vehicles in order to reduce emissions and bring down the impact of climate change and global warming.

India is also an imminent auto exporter and has strong export growth expectations for the near future. Two wheelers and passenger vehicles are dominating the Indian domestic auto market. Passenger car sales are dominated by small and mid-sized cars. To cope up with the exponentially growing demand, several automakers have started investing a huge amount in various segments of the industry from the past few months. The industry attracted Foreign Direct Investment (FDI) worth US\$ 30.51 billion between April 2000 and June 2021 which constitutes about 5.5% of total Foreign Direct Investment.

Top players in the Indian automotive industry according to market capitalization are Maruti Suzuki, Mahindra and Mahindra, Tata Motors, Honda Motors, Bajaj Motors, and Hero Motocorp. These companies show diversification in their product list as well as their initiatives towards the Sustainability. They engage in various activities to showcase their responsibility towards the planet and people while aiming and operating for profit.

The automotive industry is subsidized by various factors like availability of skilled labor at low cost, robust R&D centers, and low cost steel production. The industry also delivers great opportunities for investment and direct and indirect employment to skilled and unskilled workers. The Indian Auto industry is expected to record strong growth in 2022-2023 post recovery from effects of the CoVID-19 pandemic. Electric vehicles, especially two-wheelers are likely to witness positive sales in 2022 onwards. Therefore, the automobile industry seems to be very appealing because of its growth perspectives and its contribution to the Indian economy.

## 6. Data Analysis

Here, I have taken the case studies and reports of a few top automobile companies to understand their ESG and Sustainable Finance Initiatives. The data analysis part of the report will include detailed analysis of the Sustainability and ESG reports of the top automobile companies.

### 6.1. TATA Motors

TATA Motors, one of the leading automobile companies in India is now focussing on making sustainable financial investments and is now aligning itself with the ESG. It was ranked among the 10 companies at the Responsible

Business Rankings 2019. Our topic Sustainable finance stresses on the investments to be made in consideration with sustainability and ESG. Being an automobile manufacturer and marketer, Tata Motors is diversifying its investments into various fields like CSR activities, Safety and Health measures, Value chain management, and investing in Sustainable Mobility.

Being one of the leading companies in the country it is trying to position itself as a company with sustainable positive environmental impact. It is putting efforts in environmental innovation and trying to reduce the impact of its operations on the environment by tracing its footprint across the whole lifecycle and value chain of its products. Tata Motors is working towards a low-carbon strategy and is aiming at environment-friendly fuel mobility in the country.

One of its initiatives include, 'Go Green' where the company plants a sapling on purchase and service of any of its commercial vehicles. Under this initiative, the company in association with an NGO, will plant a sapling on the occasion of sale of every new commercial vehicle and for every new customer who gets their vehicle/product serviced at the company's dealer workshop or Tata Authorized Service Station. The company will nurture the plant and give the customer a certificate and a link with the tagged location of the plantation, thereby allowing the customer to monitor the status of growth of the plant. Thus, contributing to the betterment of the environment as well as involving the stakeholders in the process.

The ESG and Sustainability investments and spending are as follows:

- *Environment* - The company aims at reducing the consumption of energy and emissions of GHG. Achieving resource efficiency and circular economy. Resource efficiency includes proper utilization of resources and using them till their complete efficiency and Circular economy is by which the waste is reduced to minimum by extending the product life cycle. In an effort to save the water, the company wants to reduce the consumption of water across its value chain and monitor water sourcing practices.

In accordance with the ESG measures and Sustainability, the company has taken several measures at all its manufacturing sites. They strongly aim at product innovations that improve eco-efficiency of the vehicles' operational life. The Safety, Health and Environment (SHE) councils at the business level, supported by the SHE Apex Committee at plant level are responsible bodies for reviewing the performance every month. The company's Destination Zero mission is for zero emissions, zero congestion and zero accidents is built on the foundation of a longstanding commitment to society and environment. Tata Motors plans to use resources responsibly therefore, helping in building a better society and a cleaner environment. Thus, driving sustainable and profitable growth.

- *Social* - Tata Motors aims at empowering the communities with interventions in health, education, skill development and rural development. Providing a diverse and inclusive workplace for its employees. The



company wants to attract and retain the best talent in the field by enhancing education and skills development, while also supporting diversity across business. Not only ensuring development community wise, the company also engages with suppliers and dealers so as to raise awareness of ESG aspects, health and safety parameters. It is indulged in developing technology by channeling talent, ideas and innovation to use technology to drive improvements and tackle some of the key challenges - from climate change and pollution to revolution in mobility.

Tata Motors developed sustainability guidelines and conducted capacity building workshops for dealers across the country. The guidelines cover topics related to Tata's code of conduct, management system certification, transparency and reporting, occupational safety and health, labor and human rights. As a part of its Dealers Sustainability Initiative, it is promoting safe driving practices and eco-driving habits among its channel partners. Customers and fleet owners.

Tata Motors also initiated a systematic and phase-wise implementation of Sustainable Supply Chain initiative in the Financial year 2017. The process began by initially shortlisting its suppliers based on ESG criticality. Then the company developed and formulated sustainability guidelines, conducted capacity building workshops and on-site sustainability assessments of suppliers. The results and learnings were shared with all the stakeholders and suppliers specifically and demonstrated how they can improve in the context of Sustainability. The company reports that a majority of its supply chain operations are technology-driven and comprises energy-intensive suppliers and continuous efforts are undertaken to increase the energy efficiency, implement rainwater harvesting, reduce carbon emissions and utilize renewable energy more efficiently.

- *Governance* - The company is ensuring good governance and is aligning its goals towards its mission and vision. It is also ensuring compliance by introducing supportive policies and appropriate monitoring systems. The board of the company aims at bringing in wide diversity in multiple areas like automobile engineering, finance, banking and economics. The board has a male to female ratio of 2:1. The company also has an audit committee, nomination and remuneration committee, stakeholders' relationship committee and a Corporate Social Responsibility committee.

Analyzing the recent ESG reports of the company, we can understand the projections and goals of the company in terms of sustainability and green finance. It is planning to get committed to renewable energy completely by 2030 and rely on the same with full utility. It also joined Gol's (airlines) Vision of Carbon footprint and is aiming to plant 1 million trees by Dec-2021. The company is consistently spending 200 million which is beyond regulations on CSR activities and has reported supporting 28,000 underprivileged young individuals in higher education. The company claims to be committed towards the UN Sustainable development goals like Good-health and well-being, Clean water and Sanitation, Sustainable Cities and Communities, Responsible consumption and Production, Life on land, Life below water and Climate Action.

The Fig 6.1.1 represents the areas where the company is spending on Sustainability and Green finance.

**Sustainable Mobility** - One of Tata Motors main investments under Sustainable Finance include Sustainable Mobility. The company is developing affordable Electric Vehicle solutions for goods, public and personal transport. Under personal transport Nexon EV is one of the company's preprints and under public transport it showcases India's first ever fully electric 4/12m low floor entry bus and Ultra T.7 ILCV truck. The Tata Group has established a unit namely Tata UniEVerse which is going to help Tata Motors in setting up the ecosystem for EV's functioning and operations. The norms in the sector are encouraging localization and the company is having constant support from the State Governments.

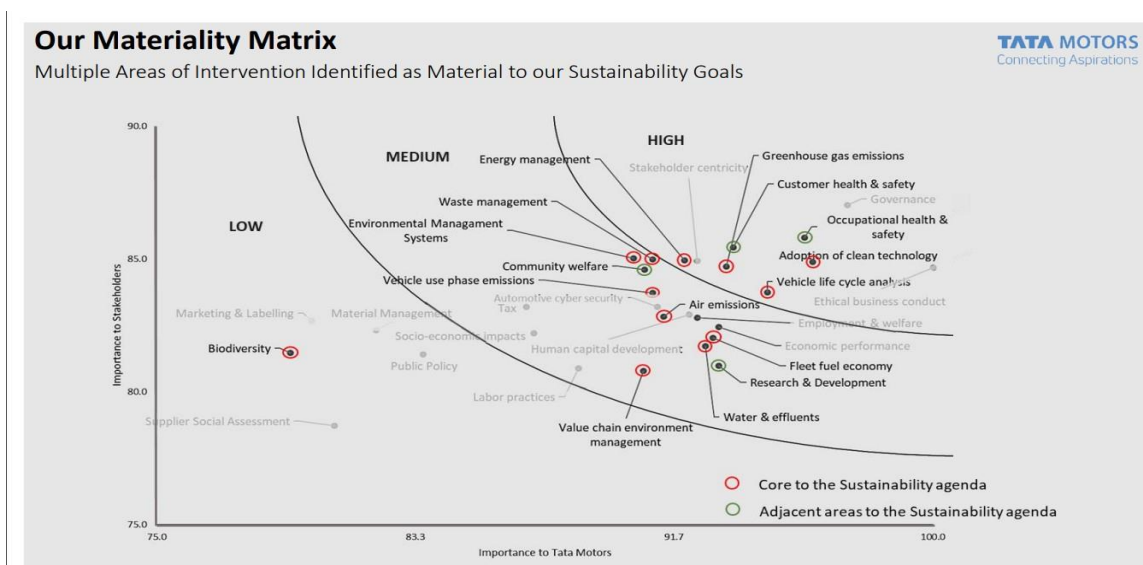


Fig 6.1.1 - Source - Materiality Matrix : Tata Motors ESG Presentation

**Sustainable Operations** - The company's Sustainable Operations include Reducing GHG emissions, reducing water consumption, achieving zero waste to landfill, and reducing hazardous waste generation. The Fig 6.1.2 highlights the key trends in the aspect of sustainable operations.

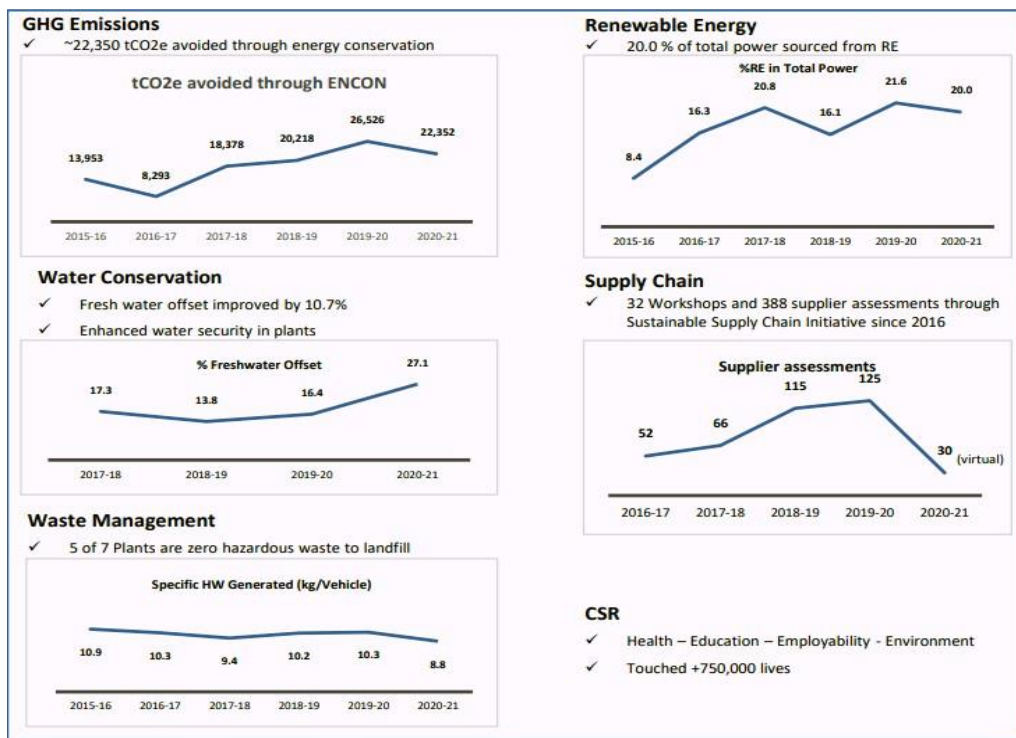


Fig 6.1.2 - Source - Key trends in Sustainable Operations - Tata Motors:ESG Presentation

Road ahead - Tata Motors is bringing the Business strategy of all its horizons to one point to meet its Net Zero targets. The company is aligning its targets with the Sustainability goals of Tata Group. It is developing a framework to record and report the circularity of products and setting targets and scorecards to monitor execution. The Fig 6.1.3 indicates the projected timeline and actions of the company in building a green financed sustainable ecosystem.

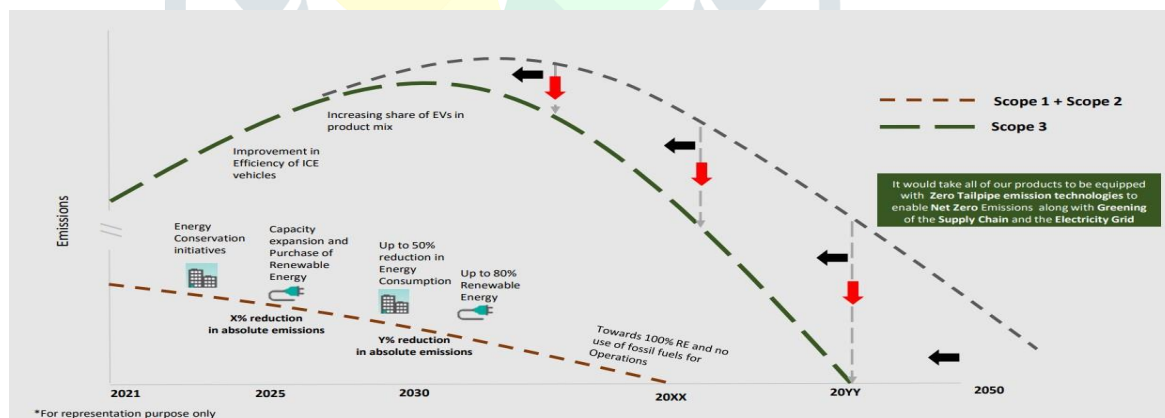


Fig 6.1.3 Source - Projections - Tata Motors ESG presentation

6.2 MARUTI SUZUKI

Maruti Suzuki, one of the leading auto manufacturers and marketer is also diversifying its sustainable investments thus, trying to optimize the benefits in the Environment as well as Social Aspect. The company has launched its

BS-VI engine models in recent years and is also aligning towards the national energy security and emission standards. Most of the initiatives like reducing greenhouse emissions, improvement in fuel efficiency and green logistics are more inclined towards the environment aspect. The auto company has published very less information regarding the governance and compliance rules. Let us have a keen look at each of the categories and further analyze.

- *Environmental Performance* - Maruti aims and strives to improve its performance in terms of environment in divisions like manufacturing operations, products and supply chain. The company identifies and forecasts how their processes affect the environment and thus develops strategies to mitigate these impacts. It believes that all this can be achieved through Green technology. The very first step towards a sustainable environment is with the introduction of an environmental policy which conveys Maruti's commitment towards reducing the pressure on environment, working along with stakeholders like customers, suppliers and surrounding communities, and controlled and efficient usage of natural resources.

Green manufacturing is one of the main initiatives by Maruti Suzuki under the Environment segment. The objectives and related investments by the company in this regard are on Water, Waste, Emissions, Effluents and raw materials. The company claims to be paying attention to optimum utilization of raw materials in manufacturing of vehicles. The major materials used by the company in manufacturing constitute steel coils, ferrous and non-ferrous castings, paints, thinners etc. The company also uses a large number of finished products that are sourced from suppliers thereby, reusing the raw materials for manufacturing cars. The reports show that at Gurgaon and Manesar locations the Maruti Suzuki is generating electricity in-house through natural gas-based captive power plants. These power plants provide stable and constant electricity for manufacturing operations. Water conservation is said to be one of the integral parts of the Environment Management System at Maruti Suzuki.

The company uses the canal water for the majority of its manufacturing operations and this helps the company contribute to conservation of groundwater. All the manufacturing sites of Maruti Suzuki have reported zero waste discharge and the company claims not discharging any amount of water outside the manufacturing site/factory premises. The recycled water from the operations will further be used for some processes, irrigation and cleaning. The company also has STP - Sewage Treatment Plants for treating sewage water. At Maruti Suzuki, the hazardous wastes which are produced as a by-product manufacturing include paint sludge, phosphate sludge, effluent treatment plant (ETP) sludge, incinerator ash and used oil. This hazardous waste is being sent to the cement industry for further co-processing thus reducing landfills and incineration. The solid wastes which are feasible for sale were sold thus encouraging Circular economy.

- *Social Performance* - Maruti Suzuki believes that people are the center of any business, be its customers, manufacturers or other stakeholders. Therefore, the company considers as a responsibility to look after the well-being of people who are directly or indirectly impacted by its operations, products and services. It offers a healthy working environment to its customers, offers the latest technology and comfort to its customers and undertakes social initiatives for the welfare of local communities.

*Sustainability Report Highlights* mentioned in the report of the company are related to product, safety and emissions. Maruti Suzuki reports to be saving 696,756 carbon dioxide CO<sub>2</sub> since 2006 as a result of its alternative clean and fuel-efficient technologies. Total Effective Control Technology (TECT) based platforms in new models of its products like Ignis and Baleno RS. This TECT is a technology said to be increasing fuel efficiency and passenger safety. The company is said to be procuring most of the required materials (around 87%) from local tier 1 suppliers

who are located within 100km radius from operating facilities stating it as Green Procurement where the environment is not harmed due to transportation.

The figure 6.2.1 indicates the contribution of Maruti Suzuki in reduction of CO<sub>2</sub> emissions. Maruti Suzuki is systematically working to reduce vehicle emissions and the impact of manufacturing on the environment. The company has been consciously and constantly introducing innovative technologies to make products eco-friendly. The HEARTECT initiative of Maruti Suzuki is an innovative next generation platform to lower CO<sub>2</sub> emissions by 6-8 % and thus offering superior performance and safety. Therefore, the figure indicates the cumulative CO<sub>2</sub> emissions while usage of Hybrid vehicles and LPG vehicles.

Around 95% of the energy required for manufacturing is extracted from Natural gas and Solar energy without relying upon energy through fossil fuels and thus supporting renewable energy sources. It also reportedly saved 0.12 Joules of energy per vehicle manufactured. The Gurugram's plant of Maruti Suzuki is extracting zero amount of groundwater as a part of protection of groundwater resources. The company is supporting its suppliers to adopt sustainable practices to make sure there are environmentally conscious practices in the supply chain and 86% of supplier plants are ISO 14001 certified. Figure 6.2.3 shows the environmental consideration during the vehicle life cycle.

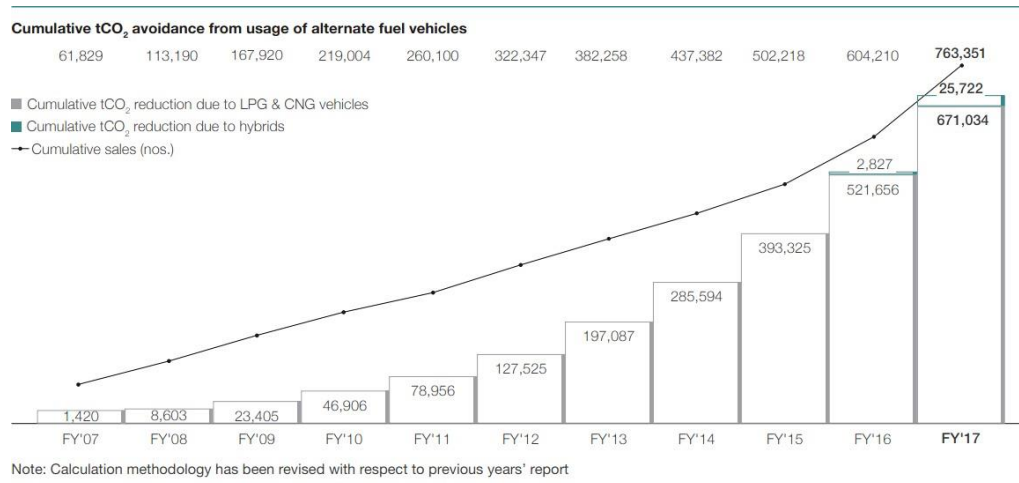


Fig 6.2.1 - Emissions of CO<sub>2</sub>. Source - Maruti Suzuki Sustainability Report

The fig 6.2.2 shows the progress of the company in achieving its sustainability aspects in each of its manufacturing plants.

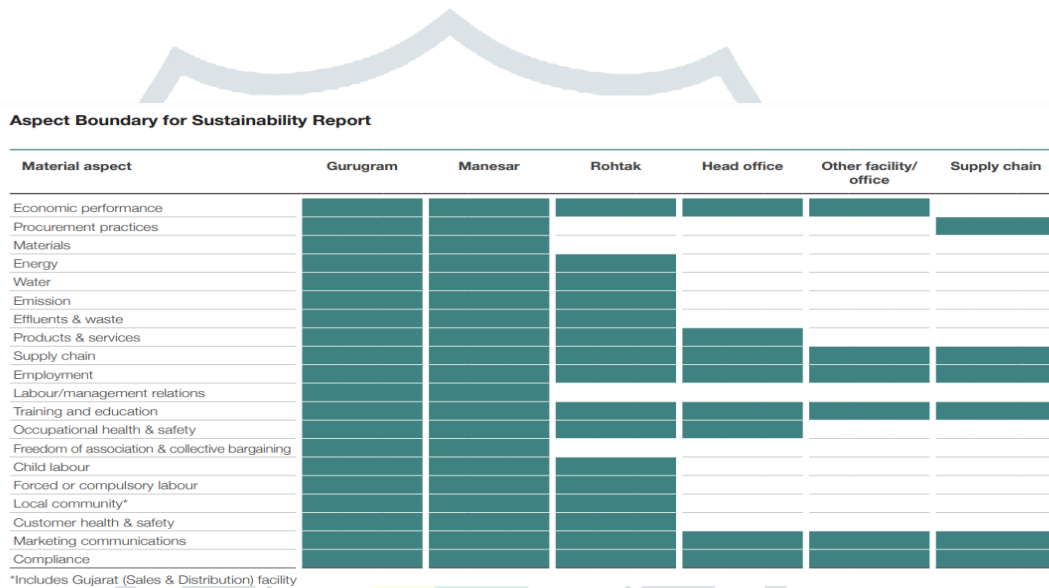


Fig 6.2.2. Source - Maruti Suzuki Sustainability Report

Environmental considerations during vehicle life cycle

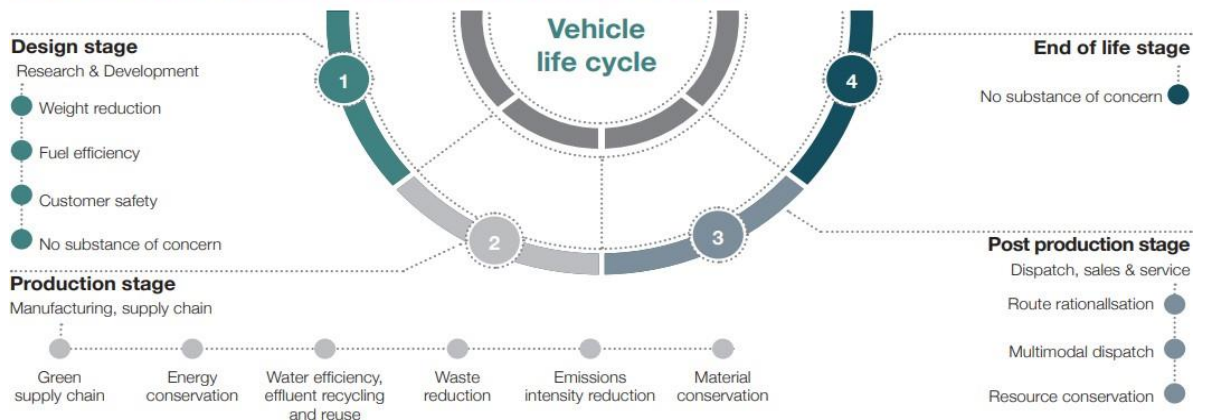


Fig 6.2.3 Source - Maruti Suzuki Sustainability Report

The company has adopted 24 villages in order for community development in areas of education, water sanitation and infrastructure. It is also supporting 141 industrial training institutes and providing quality vocational training in automobile and other trades. The automaker's regular workforce are represented by recognised trade unions and regular management-worker interactions take place. Coming to the Governance aspect of the Maruti Suzuki, it is reported to have a well- institutionalized Risk Management System and Whistle Blower and Internal Complaints resolution mechanism so as to ensure that it deals with the internal and external governance and management issues effectively. The company has a robust Corporate Governance System in compliance with legal requirements. The Board of Directors are of diversified skill sets adding value to decision-making for sustained growth.

The company has set up a Corporate Social Responsibility Board where the committee meets twice a year to review the implementation of approved projects and to suggest new products. The company has a dedicated team of employees working with communities, sarpanch and ward members to improve water and sanitation facilities in rural and urban areas. These programmes by Maruti are aligned with the Government's flagship programme – Swachh Bharat Abhiyan. Therefore, the standards of sanitation and hygiene have improved with the laying of sewer lines, construction of household toilets and undertaking of solid waste management.

The report highlights that Maruti Suzuki is committed to improving safety on Indian roads by imparting quality driving training and education institutions. By providing skills, knowledge and attitudinal inputs to both road users and road drivers, the automake has strategically reached out to key segments of society since the year 2000. Established in partnership with state governments, IDTRs offers training to passengers and commercial vehicle drivers on scientifically designed tracks and simulators.

Maruti Suzuki believes that the organizations and individuals that are impacted by the company's operations and those who can in turn potentially impact sustainability and growth of the company are identified as the key stakeholders. The company has a well-established process for an evolving phenomenon like Stakeholder Engagement. The Company frequently engages with entire stakeholder groups during its day-to-day operations, irrespective of the significance and size of the group.

The company implements robust Governance practices at all hierarchical levels. Maruthi is committed to practicing good corporate governance and upholding the highest business standards. The Company nurtures a holistic culture which in turn promotes high standards of ethical behavior, individual accountability, and transparent disclosures across its business operations.

*Analysis of Business Responsibility Report* - Here, the key aspects of the business responsibility report of Maruti

Suzuki which are related to ESG and Sustainable investments are discussed. In this report, the company has mentioned about its products whose design has incorporated social, and environmental concerns. Five vehicle models Ignis, S-Cross, Baleno, Ertiga and Ciaz are compliant with the norms given by Government of India. The company strives to increase the fuel efficiency of its cars, resulting in lower emissions. The product Ignis is designed with Maruti Suzuki's TECT technology and ensures pedestrian safety. The Baleno RS has a direct-injection system which allows enhanced control over fuel injection directly into the combustion chamber which will result in better engine performance and lesser CO2 emissions.

When questioned about the reduction of resource usage during sourcing, production and distribution and reduction during usage by consumers to which the company answered that it is difficult to track the resource usage and other factors. Coming to the waste recycling and disposing aspect, the company ensures that certain streams of metal wastes which are generated during the process of vehicle manufacturing are further recycled to make child parts and ingots. The waste and water generated from the activities of manufacturing are recycled to the extent possible. The hazardous waste generated during the process are carefully given to respective vendors either for disposal or recycling.

The company further mentioned about the Safety of its employees, the schemes and initiatives provided to look after their welfare. The Business Responsibility report also talked about how the company deals with internal and external stakeholders and also answered the questions regarding its ESG initiatives.

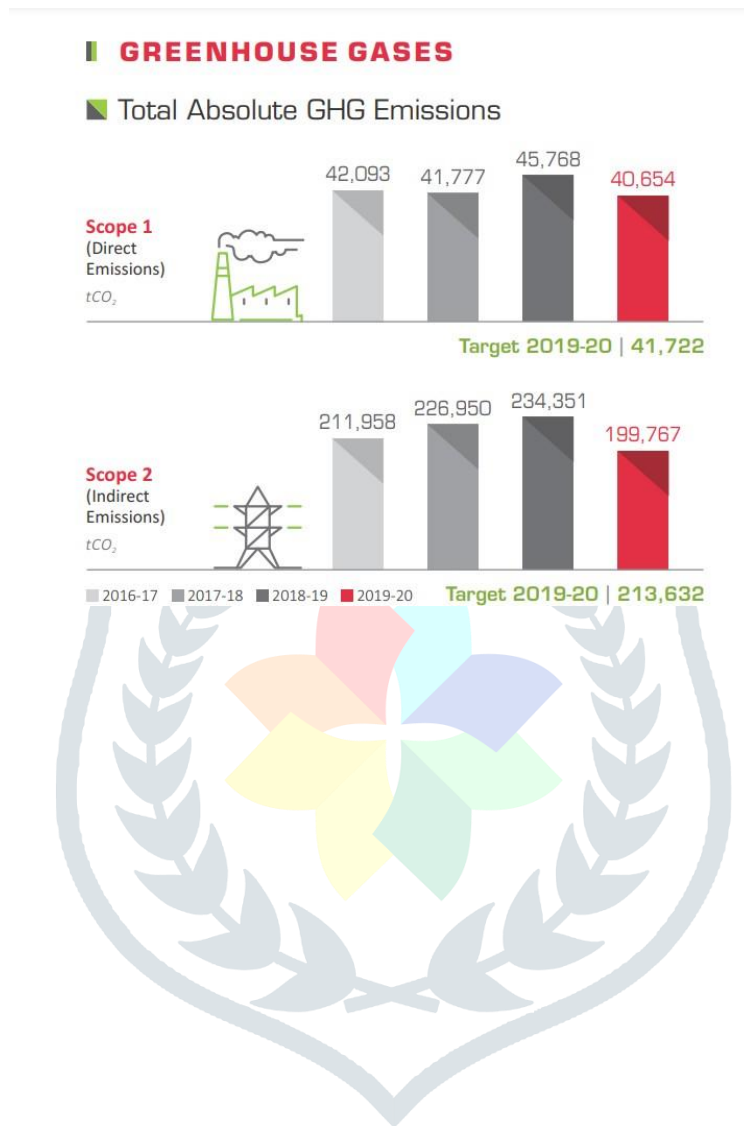
### 6.3 MAHINDRA AND MAHINDRA

The flagship company of the renowned Mahindra Group is Mahindra and Mahindra Ltd. The firm is a provider of mobility products and farm solutions and commenced its operations in 1947. They are manufacturing vehicles which are environmentally friendly, fuel efficient, reliable and durable. Unlike, Maruti Suzuki Mahindra also produces farming and agriculture related automobiles. The company considers Electric Vehicles as one of the fastest growing segments therefore, it is working on development of Electric Vehicles. Mahindra & Mahindra's sustainable investments are related to aspects like Carbon emissions, Water Security, Waste to Wealth, Sustainable Supply Chain, Health and Safety, CSR Management and Product Stewardship.



- Carbon Emissions* - Mahindra as a group is reportedly committed to Carbon Neutrality by 2040. Reports indicate that at Mahindra carbon emissions are reduced by adopting cleaner and greener processes and also by increasing energy and resource efficiency. Therefore, lowering the cost of fuel and electricity. They also believe that increasing the usage of non-fuel based renewable energy sources in the energy mix is yet another possible way of decreasing emissions. The fig 6.3.1 shows that Mahindra & Mahindra has reduced its Scope 1 and 2 emissions by 14% as compared to previous years.

Fig 6.3.1. GHG Emissions. Source - Mahindra & Mahindra Sustainability Report



The company has decided an emission intensity reduction target 4.1% year-on-year for the next 15 years. In order to achieve energy efficiency, it has decided to focus on minimal aspects like Air-conditioning in vehicles and thus replaced the old-conditioners with new ones. As a result, the energy cost-saving was of value Rs 3.43 crores per annum with an investment of INR 5.5 crores and CO<sub>2</sub> mitigation of 3312 tons CO<sub>2</sub> per annum. The company is also reducing the emissions due to transportation by following alternative methods like Route optimization and Load consolidation.

Reports indicate that the company increased the renewable energy consumption 300 MWh and decreased the usage/consumption of Fuel and electricity by around 27,000 and 30,000 MWh respectively. The company is growing the share of RE(renewable energy) in the total energy mix where the share of RE has increased from 2% in F18 to 3% in F19 and 4% in F20 thus, ensuring environmental custodianship as well as sustainable growth. While in the case of motors used in automobiles, by adoption of energy efficient motors the company is estimated to save Rs 2.5 crore per annum with an investment of 5.6 crore and revenue generation from disposal of old motors. This instance clearly shows the benefits the company is enjoying because of sustainable investments.

- Water Security* - At Mahindra, belief is water positiveness -creating more water than the usage for a sustainable future. It is a holistic approach which involves optimizing consumption and recycling as much water as possible. With the increase in production, the demand for water keeps on growing but 'alternativism' adopted by Mahindra will help them to become water positive. Some of our continuing initiatives include rainwater harvesting, drip & micro irrigation, water recharging etc. These initiatives resulted in an increase in water recharge from 0.12 million m<sup>3</sup> to 0.64 million m<sup>3</sup> and 40% of water which was consumed was reused or recycled.

The fig 6.3.2 indicates the reduction in usage of water by M&M over previous years.



M&M Ltd. has reduced its total water consumption by 14% as compared to previous year.

Fig 6.3.2 Water consumption graph. Source-Mahindra & Mahindra Sustainability report.

AD Kandivali, a major plant of the company has implemented the project 'Water Security and Water Neutrality through Deep Aquifer Charging at AD Kandivali'. The project has helped in raising the groundwater table from 85 (in F19) to 40 (in F20), augmented 6 bore wells to improve their yields, and created 107,665 kl/annum water usage capacity, through bore wells. One more plant, Swaraj has constructed water recharging wells and the in-house groundwater recharge capacity is 42,500 kl/year. FD Rudrapur has reported to have the lowest water consumption in M&M since the last 4 years. Check dams have been constructed in Nainital which has resulted in conserving 38,000 kl/year. Yet another plant MRV Chennai has saved 17,053 kl of water per annum by adoption of water reduce and reuse projects.

Untreated water from industries contribute much towards the contamination, pollution and destruction of natural habitats and the wildlife that live in those areas by exposing them to harmful chemicals. Mahindra has implemented safe wastewater management practices to protect the ecosystem. It includes treating effluents before releasing them into natural water bodies, and continuous monitoring of wastewater discharge to ensure that it is free from pollutants and adhering to the limits specified by the state and national pollution control boards.

- *Waste To Wealth* - The growing population is leading to exponential growth in the waste as there is a rising demand for varieties of goods. At Mahindra, belief is in creation of a restorative, zero waste economic model, in which resources are used to full capacity and natural systems are regenerated. There are various other benefits of 'alternativism' which include better realization of environmental regulations, more efficient processes, and enhanced brand perception. The company's endeavor is fostering a circular economy by minimum use of materials, reduction in waste generated, and usage of waste as a valuable resource.

Across M&M plants, 14 locations are now certified as Zero Waste to Landfill (ZWL) by M/s Intertek, USA. A plastic collection drive was conducted to ensure that no plastic waste goes to landfill and there 2,232 kg of plastic collected was handed over to Shakti Plastics, a government certified waste management company. Of 648 kg waste generated at the Mahindra Kabira Festival, 2019, 569 kg was recycled, composted, and sent to a biogas plant for conversion into energy or to a Kulhad crushing unit. There is a reduction of 49% in the usage of Paper over the last 4 years in the Swaraj Division and hazardous waste got reduced by 35% in one year at Rudrapur FES. In the Mahindra Blues Festival, of 3089 kg generated, 2,921 kg was sent to recycling, composting, reusing, or for co-processing in cement plants. The Figure 6.3.3 shows the amount of hazardous waste which is treated and the reduction in the amount of disposal of waste.

### HAZARDOUS WASTE DISPOSED TO LANDFILL

Waste disposed	Unit	2016-17	2017-18	2018-19	2019-20
Total waste generated	Ton	3,458	3,695	4,800	3,268
Total waste used/recycled/sold	Ton	0	1,922	3,225	2,572

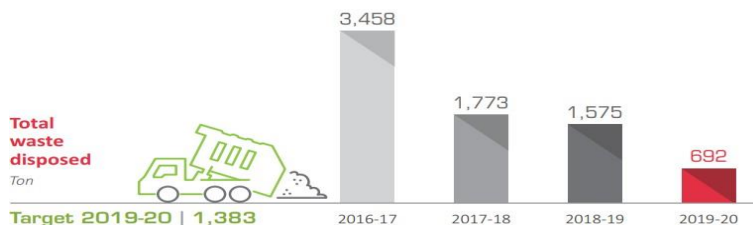


Fig 6.3.3 Hazardous waste graph. Source - Mahindra & Mahindra Sustainability report

The firm has specific targets while dealing with Spills and hazardous waste disposal. They have a target of reducing total hazardous waste disposal by 60% from 2016 values. Against the target of 1,383 MT for F20, the waste disposal stood at 692 MT. The hazardous waste will be sent to authorized recyclers and for co-processing to cement industries. The total hazardous waste generated in the current year was 3,268 MT, out of which 2,572 MT was recycled. Therefore, 79% of the hazardous waste generated is being recycled by authorized recyclers.

Waste from different plants was collected and was sent to further recycling and co-processing. Hazardous waste like paint sludge, cotton waste and ETP sludge was sent to cement industries for co-processing. This action by the company against waste disposal achieved a total saving of Rs 3.65 crores in the last 3 years.

In terms of materials, the company without compromising the quality of the outcome they use optimum amount of raw material to convert it into a product. Methods like recycling and reusing of waste also helps in minimizing the amount of material used.

One more crucial aspect where Mahindra wants to minimize waste is Packaging. Mahindra works on the design, material and process of packaging to get the optimum fit. It not only reduces waste, but ensures the product is eco-friendly, cost-effective and convenient, enhancing the productivity of resources and environmental performance. The company moved from wooden and cardboard-based packaging to returnable packaging thus, making Igatpuri AD plant the first zero disposal plant in M&M. From 2016, the auto division of M&M has achieved 91% wood reduction, 25% corrugated box reduction, and 62% paper usage reduction.

Mahindra believes that policies play a great role in building a coherent culture across businesses towards environmental management and also serve as a standard operating procedure while making strategies or taking decisions. When executed these policies create environmental sustainability and drive sustainability, and reduce our impact on the environment. All the initiatives of Mahindra related to carbon and water neutrality, renewable energy plans and circular economy and these are linked to rejuvenating the environment. Based on the long-term

commitments, they have devised a strategy, roadmap, yearly targets, and initiatives. These targets and initiatives are monitored at all levels including the company, divisions and individual units.

- *Supply Chain Management* - Mahindra has been taking constant actions to improve the social, environment, and economic segments of the supply chain as they in turn have a significant impact on their growth. Effective management of supply chain supply chain helps a company in reducing costs, conserving resources, and increasing productivity. The company focussed on enhancing skills at the supplier's end. As a part of the Supplier skill program, Mahindra took up an initiative of PARIVARTAN, and has trained personnel till the Financial year; 1,014 under Mahindra Yellow Belt, 3,013 under Mahindra Green Belt. Supplier Sustainability meets are organized regularly urging supplier partners to make sustainability a way of life and implement similar initiatives to their respective manufacturing facilities. Few other initiatives of Mahindra include Dealer Service Quality Index, Mahindra Dealer Excellence Program. In FY20, 268 Dealers out of 302 have taken part in an MDEP sustainability drive, which amounts to 88% of the total number of Dealers.

- *Health and Safety* - The company believes that its strength comes from its people. The employees at Mahindra have the opportunity and the right set of tools to be the very best at their expertise field, along with the reassurance that their health and safety are in good hands. In the year 2020, there is a 61% reduction in injuries and 20% improvement in Health Index.

The company's health and wellness pillars include Food nutrition, physical health, and psychological well-being. Food nutrition is all about the eating habits and healthy food provision in the company premises. Physical health ensures regular health checkups, fitness and post checkup follow ups while psychological well-being covers aspects like mindfulness and stress management. Mahindra's initiatives

towards employees include Building Strong Relationships, Encouraging Healthy Habits, Improving Mental and Physical Well-being, Fostering a Culture of Wellness and feasible policies for working parents are Flexible Working Hours, Childcare Facilities or Contributions, Working from Home Arrangements, Paid Paternity Leave in Excess of Legally Required Minimum and Paid Maternity Leave in Excess of Legally Required Minimum.

- *Product Stewardship* - The company's products are used by millions around the world as they offer great economic value, besides providing them with safety and sustainability that has been embedded into them right at the design stage. It feels that as a manufacturer, it is their responsibility to reuse and recycle these products once their useful life ends to maximize resource productivity and reconfigure unsustainable consumption patterns.

The organization believes in doing good for the environment with our electric vehicles, shared mobility services and connected cars, to reduce environmental impacts. They also ensure end-to-end sustainability of the products

and once they are out of the use phase, they are either recycled or disposed of sustainably. Reports claim that none of the major models have any hazardous materials like lead, cadmium, mercury, etc and dismantling manuals have been developed for the first time for Mahindra vehicles.

#### 6.4 HERO MOTOCORP

This automobile manufacturer designs, builds, and sells vehicles that run using a range of traditional and alternative fuels. The company sells these vehicles to dealers for consumer retail sales as well as selling directly to fleet customers which also include rental and leasing companies, commercial fleets, and governments. Due to the global nature of this industry, the company has manufacturing facilities, assembly plants, and service locations in several countries around the world. Due to its complex manufacturing nature, the company has heavy reliance on natural resources and huge impact on the environment. Let us have a look at how Hero Motocorp is diversifying its investments thus making them sustainable.

The Sustainability report of the company majorly highlights its motto “We Care” with a tagline ‘Sustaining Millions of Smiles’. Diving into the section of Risk Management, the report claims that the company’s risk management process is coordinated and is an integrated mechanism. The Board formulates the overall process of risk management and the program is known as Enterprise Risk Management program. The program helps Company’s business units, and corporate functions address opportunities and attend to the risks through an institutionalized approach. Its risk management and assessment efforts are extended to Environment, Social and Economic. The process involves identifying risks, potential impact of the risk, opportunities involved, and Mitigation Measures. The environmental aspects include risks like rising pollution level and depleting air quality, economic aspects include risks like recurrence of CoVID 19 in export markets and economic uncertainty in key global markets, and social risks include shift in spending patterns and human health and safety.

Reportedly, HeroMotocorp is a member of Dow Jones Sustainability Index and is ranked as 1st in auto sector as a low ESG risk organization by Sustainalytics. It is ‘A’ rated organization in ESG rating by Morgan Stanley Capital International and has an ESG score of

3.2 (above auto sector average) graded by Financial Times Stock Exchange. The company’s Haridwar and Vadodara Plants are certified as Zero Waste to Landfill facilities and its Vadodara Plant has achieved Energy Management System, ISO 50001:2018, Certification. Neemrana Plant of Hero is awarded State Safety Award 2021 in Rajasthan for Factory Safety Award Scheme 2021 and both the GPC and Manufacturing plants at Neemrana are declared as "Noteworthy Project Beyond Fence " for an innovative, community led water management program.

In the previous years reports, the company identified pillars of Sustainability, which are Product Stewardship, People, Inclusive Growth, Eco Efficiency and Responsible Value Chain with effective governance and effective communications as enablers. They defined the aspirational targets (HATS) and claimed to have achieved most of the targets in 2020 itself.

Now, they have focused on discovering the strategic areas which will help in target and goal setting. These areas are Ethics and Compliance, Climate Protection which include Energy, Water, Waste & Biodiversity, Business Growth & Profitability which include Product Quality, Emerging Mobility Solutions, Product Innovation & Product Stewardship, Value Chain Sustainability, Human Rights, Diversity & Inclusion and Health, Safety & well-being. The company believes that target setting in these areas with clear linkages to other areas as well as to Sustainable Development Goals will go a long way in assuring them to meet societal expectations.

Then it has indulged in a Materiality exercise where it focussed in linking the Strategic areas identified to UN's Sustainable Development Goals.

- Ethical practices and compliance was linked to Goal 16 - Peace, Justice and Strong Institutions and here the company aims at adopting a more organized approach while dealing with ethical issues and culture amongst employees.
- Climate Protection is mapped to Goal 6 - clean water and sanitation, Goal 7 - affordable and clean energy, Goal 9 - industry, innovation and infrastructure, Goal 12 - responsible consumption and production, and Goal 13 - climate action.
- Business Growth & Profitability - Assuring Quality, Product Innovation, Emerging Mobility Solution & Stewardship is aligned with Goal 9 - Industry, Innovation and Infrastructure, Goal 12 - Responsible Consumption and production and Goal 13- Climate action.
- Health, Safety and Wellbeing is linked to Goal 3 - Good health and wellbeing, Goal 6 - clean water and sanitation and Goal - decent work and economic growth.
- Human rights is mapped with Goal 5 - Gender equality, Goal 10 - reduced inequalities, and Goal 16 - peace, justice and strong institutions.
- Diversity and inclusion in alignment with goal 5 - gender equality, goal 8 - decent work and economic growth, goal 10 - reduced inequalities, and goal 16 - peace, justice and strong institutions.
- Value Chain Sustainability is linked to goal 3 - good health and well-being, goal 8 - decent work and economic growth, goal 7 - affordable and clean energy, goal 9 - innovation, industry and infrastructure, and goal 13 - climate action.

The fig 6.4.1 indicates the results of the materiality matrix and strategic and tactical areas the company wants to focus on. All the sustainability aspects given in the report are discussed and analyzed in detail :

→ *Product Stewardship* - As a part of transforming mobility, Hero promises to continue to enable the nation to

progress through innovative mobility solutions, driving prosperity, nurturing new businesses and supporting communities. The company has taken a leap towards devising and implementing its electric mobility strategies by partnering up with Gogoro thus, working towards accelerating the shift to smart, sustainable electric mobility in India, and around the world.



Fig 6.4.1. Source - Hero MotoCorp Ltd Sustainability Report

Major product line up of Hero include two-wheelers like Splendor, HF Deluxe, Glamor Blaze, Xtreme 200S, and Xtreme 160R where the company claims that Splendor is world's largest sold motorcycle. Technological advancements, being one of the major challenges to market leaders, are expected to positively influence the diffusion of social innovation. Therefore, Hero in order to cope up with these transformations have come up with a digital

ecosystem with online product availability, integrated value chains for efficient demand fulfillment and smart manufacturing setups to improve efficiency.

Hero Hatch was launched as an internal incubation center with an aim to foster innovation within the organization and at this center the teams will have an opportunity to experiment with new business models, services and business streams thus, providing autonomy and flexibility, and reporting directly to the leadership team. Another initiative towards product innovation is Hero CoLabs which delivers the ideal platform to enthusiasts, brand fans, students and professionals to showcase their creativity and design skills.

→ *People* - The report indicated that the company has accelerated its efforts to on-board a well diversified team of individuals that will be a reflection of the society in which it coexists. They believe that diversity incorporates both visible and invisible perspectives of individuals and therefore taking concerted efforts to boost diversity at organization level. Hero MotoCorp also delivers significance to inclusion at workplace wherein individuals are



treated fairly and respectfully as this facilitates the organization to provide equal access to opportunity and resources to the individuals who can gear up to adapt change and contribute to their upliftment and organization's success.

The company also believes that women should be given equal opportunities. Here are some statistics given by the company pertaining to gender equality. 9% is the share of women in all management positions, including junior, middle and top management and 11% is the share of women in top management positions.

Some of the notable highlights in the recruitment sphere of Hero Motocorp are : Improving candidate experience with superlative selection process, Hassle-less onboarding, and New joiners engagement activities. Training programs for employees, Employee centric HR policies and procedures, HR Automation and Digitalization and Skill Development are few more highlights under the recruitment sphere.

The company also ensures employees' safety and health. It has taken CoVID 19 specific initiatives which included occupational health checkups and upgraded medical insurance. There are many other activities like safety promotional activities conducted to teach employees how to deal with accidents and disasters.

→ *Eco-Efficiency* - According to the reports, Hero MotoCorp is continuously working to protect the environment and its natural capital. The company's ideology is to minimize the environmental impact and to promote resource efficiency so as to make its investment decisions strategic and aligning towards environment sustainability. Therefore, the firm is maintaining sustainable operations and continually making improvements to products and processes to support in minimizing environmental footprint.

Hero identifies climate change and its associated risks has emerged as a key sustainability challenge and has initiated various energy conservation and emission reduction strategies. The Climate change mitigation strategies include investing in non-fuel based sourcing of energy, meeting beyond compliance, internal carbon pricing (mechanism to deploy energy efficient and carbon reduction projects), sustainable infrastructure development and afforestation strategy.

Some of the key energy initiatives undertaken for the year 2021 are:

1. Gurugram Plant implemented a unique real time system for controlling and monitoring comfort cooling load resulting in saving of 4500 units per day.
2. Non-Fossil Based Power – Solar footprint at HMCL has increased to 10.2MW with the potential generation of 12 Million units annually.
3. Chittoor Plant - Smart Utility Cockpit is a new way of working through digitalization of utilities by creating a central cockpit for effectively managing & controlling plant utilities operation.

4. Neemrana Plant having undertaken process optimization and improvements in compressed generation, variable frequency drive optimization resulting in an annual saving of 2930 units per day.

Hero MotoCorp report's suggest that the company finds depleting groundwater tables and polluting water bodies as a huge environmental concern. Therefore, they took it as a challenge to minimize fresh water consumption in their processes and recycle as much of the wastewater as possible so as to reduce the burden on groundwater. The fig 6.4.2 indicates the usage and recycling of water by Hero MotoCorp in the year 2021.

Reports indicate that all plants of Hero MotoCorp dispose of waste in compliance with operating permits and hazardous waste authorizations. They engage with waste disposal facilities, waste recyclers, and cement companies after due validation. The company has a system in place for collection, storage, treatment, and disposal of all hazardous waste as per the regulation. All the hazardous waste from all our units is sent for co-processing to cement plants. The company is also focussing on hazardous waste like metal turnings and is ensuring that the generation is reduced each year.

The company has shifted its aligned principles from linear economy to circular economy. It believes that its approach to circularity addresses the potential risks associated with shortfalls of raw material supply by minimizing dependence on virgin materials and design for easy recovery is one such initiative which is maturing in the company's ecosystem. Manufacturing of automobiles usually involves use of fossil fuels and release of greenhouse gasses but the firm has facilities equipped with appropriate emission control equipment to arrest emissions during operations.

→ *Inclusive Growth* - This aspect of Sustainability demonstrates the intention of the company in supporting the community and uplifting their standard of living. Hero MotoCorp's CSR interventions are deployed by professionals with diverse skills interacting directly with the community and are partnered with organizations of national and global repute. Initiatives like Ride safe India has a total beneficiaries of 7,68,016, Shiksha has

Indicators	FY21
<b>Water Data</b>	
<b>Total Water Withdrawal (kL)(Ground Water)</b>	<b>6,05,529</b>
<b>Total Water Withdrawal (kL)(Surface Water)</b>	<b>3,10,474</b>
Waste Water Treated (kL)	5,64,593
Water Recycle (kL)	2,97,267
Water Reuse (kL)	2,67,326
Water discharge	0

4,30,702 beneficiaries, Happy Earth lead to 23,84,190 tree plantations, Arogya & Community Development 87,71,970 individual beneficiaries, and Water conservation efforts saved 82.4 Million liter.

*Fig 6.4.2 . Usage and recycling of water. Source - Hero MotoCorp Ltd Sustainability Report*

Hero's vision is "To have a Greener, Safer and Equitable World". The projects complementing the vision to achieve the GREENER world are:

1. Afforestation/large-scale planting – Project Hero Green Drive
2. Eco-friendly and alternative energy – Project Aarush
3. Water Conservation

The project in relation to SAFER world is the Road Safety Awareness Program. This awareness program benefitted more than 7.68 lakh people till date.

Projects complementing EQUITABLE include:

1. Support education system – Project Shiksha
2. Employability & livelihoods – Project Jeevika
3. Special focus for specially-abled – Project Enable
4. Sports – Project Khelo Hero
5. Healthcare – Project Arogya

➔ *Responsible Value Chain* - The company believes that synergy with partners is a key element to their sustainable performance and aids the way to serve other stakeholders. So as to ensure a consistent and comprehensive approach across business units, Hero has articulated the Sustainable Procurement Guidelines, Green Partner Development Programme and many more.

Critical Supplier Identification is a process defined by the organization to identify critical suppliers. Safety Audit and training is a critical procedure followed by the company in order to identify risks and ensure safety in the firm. Green Partner Development Program is a collaborative effort between Hero MotoCorp and its suppliers, dealers to achieve the overall corporate sustainability goal. There are a total of 200+ certified supply chain partners under the GPDP program. All the initiatives undertaken are carried out through Environmental Aspects Reduction Network (EARN) Programs under which there are six Pillars - Energy Management, Water Management, Waste Management, Pollution Prevention, Substitution of Hazardous Chemicals, Environmental Compliances.

The company ensures that Sustainability should be maintained even in the procurement. Its efforts include ensuring fairness, transparency and ethical conduct in business dealings, encouraging partners to reduce hazardous wastes, wasteful packaging, greenhouse gas emissions, and water consumption, and Create a culture of trust between workers and management.

After the manufacturing restarted post CoVID, it was difficult for the employees and their families to cope up with anxiety and stress. “BLISSFUL MIND TO PREVENT & MANAGE ANXIETY”, was an initiative by Hero to help its employees. Under this program, initially trained 2300 senior and middle management staff of 28 Supply Chain Partners covering 100 manufacturing locations and further the program was extended to junior management and workforce.

Reports comment that Hero MotoCorp is working consistently with its Supplier partners towards sustainability risks and their mitigation. Examples of few initiatives it has taken up to mitigate the risks are:

- 1.Hero Supplier Total Productive Maintenance (TPM)
- 2.Green Partner Development Program

#### 4.5 HYUNDAI

Hyundai Motor Company has mentioned the updated 2025 strategy in the Sustainability Report of 2021. The Strategy is to reflect a rapidly accelerating digital transformation and energy shift in the automobile industry in compliance with customer needs and wants which have made the issue of ESG governance increasingly important. In addition to its existing smart mobility devices and services, the company is developing medium- to long-term strategies involving the growth of its new “H2 Solutions” fuel cell-based hydrogen enterprise. Therefore, the firm is currently focusing on Hydrogen vehicles and expanding the market of electric vehicles.

Hyundai mainly mentioned ESG management, its direction and governance related aspects in the Sustainability report. ESG management mainly involves two approaches. Approach 1 is ESG Risk Management that is reducing the possibility of financial risks arising from non-financial factors. This involves devising strategies at BOD, Management, and Working-level divisions and an ESG committee formulated to work under Sustainability Management committee thus, dealing with Environment, Social and Governance aspects. Approach 2 involves strategic Focus on ESG that is to capture new market opportunities and enhance the competitive capability. This consists of high-priority tasks like Carbon reduction, climate change risks and opportunities, product analysis and life cycle, conflict minerals, human rights, and supply chain ESG.

*Environmental* - Major highlights for the year 2020 mentioned in the report are: Issued 400 million worth green bonds in February 2021 to increase investments in future mobility including EVs. Developed the second life EV battery-based energy storage system (ESS)

business for circulation process. Hyundai India’s 28% electricity comes from renewable energy. It generates its own electricity using photovoltaic power, and purchases wind power. Hyundai’s annual electrified vehicles sales in 2020 amounted to 258,669. Hyundai announced its annual targets for global electric vehicle market share on its investor day, for each year up to 2030, with a 3% goal for 2020. These targets and achievements indicate the

commitment of Hyundai towards environment protection. The company has identified problems in each segment of the environment and has devised a proactive strategy to solve them. Now let's look at each of these segments:

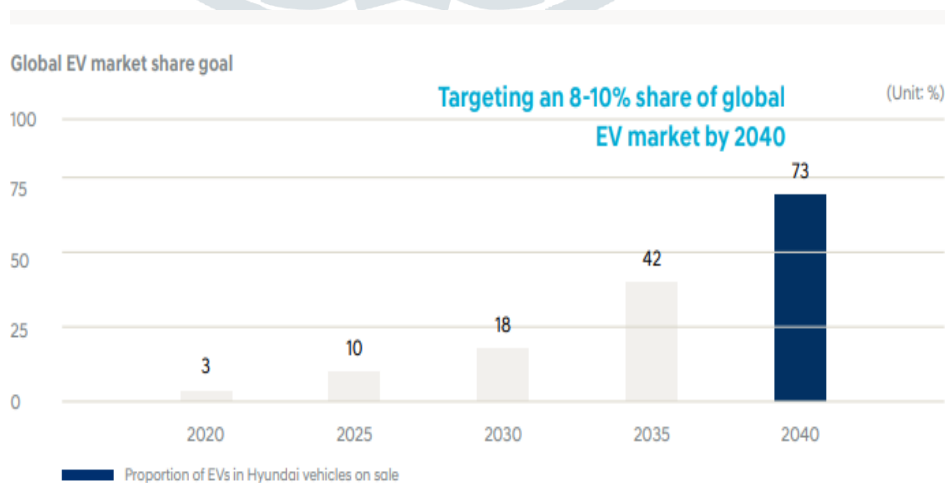
- *Carbon Reduction -*

**Climate change : Risks and Opportunities -** Hyundai Motor Company continuously identifies, assesses, and manages for risks and opportunities in its responses to climate change issues at the company-wide level. Few issues, risks and opportunities associated with climate change are explained in Fig 6.5.1.

**Carbon (GHG) Footprint -** Hyundai recognizes that there are corporate roles and responsibilities for achieving globally-mandated GHG (Greenhouse Gas) emissions reductions. It discloses information regarding emissions resulting from its own business activities (Scope 1 and Scope 2), in order to measure its GHG emissions throughout its entire value chain.

Scope 1 refers to direct emissions within the organizational and industrial boundaries. LNG is used by the company majorly for plant heating and heat production in its painting and this in turn contributes to Scope 1 emissions. It is continuously reducing its GHG emissions by reducing its level of usage of LNG consumption in all its operations, and is continuously reviewing ways to convert its LNG usage to hydrogen in the long term. Scope 2 cites indirect emissions caused by using energy purchased from outside the company's organizational boundaries. Hyundai is reviewing various alternatives like self-generation, power purchase agreements, and supply certificate purchases in order to convert the electricity used in its operations into renewable energy. Scope 3 includes total indirect emissions along the value chain except for Scope 1 and Scope 2, and emissions generated by the use of sold vehicles, which accounts for over 80% of the entire Scope 3 in total. To reduce the Scope 3 emissions, the company is formulating a strategy to reduce emissions when a vehicle is actually being driven, and to continuously improve the fuel efficiency of its internal combustion engine vehicles. Going forward, it is planning to gradually increase its proportion of EVs and FCEVs in the global market.

**Carbon Reduction In Product Usage -** Reports indicate that Hyundai is continuously making its effort to reduce the average fleet carbon emissions to reduce emissions which contribute to global emissions by road traffic and



transport sector. It is shifting product and business structures to vehicles equipped with internal combustion engines to focus on electric vehicles to realize zero carbon emission in product usage and this transition is scheduled to be fully achieved in its key markets by 2040. The fig 6.5.1 shows Hyundai's roadmap to Reduce Carbon Emissions in Product Usage. Fig 6.5.2 Hyundai Motor Group's Cumulative Electrified Vehicle Sales.

Fig 6.5.1. Global EV Market share. Source - Hyundai Sustainability Report 2021.

Conducting Life-cycle assessments - Hyundai conducts life cycle assessments, and the purpose of these assessments is to analyze the environmental impacts of its vehicles during their entire life cycle that is from the acquisition of raw materials to manufacturing, use, end-of-life treatment and recycling. Environmental impacts covered by LCA's are (1) ecological consequences including global warming - Global Warming, Acidification, Eutrophication, Photochemical Ozone Formation, and Ozone Depletion (2) resources and water use - Abiotic depletion and Water depletion and (3) human health - Human Toxicity.

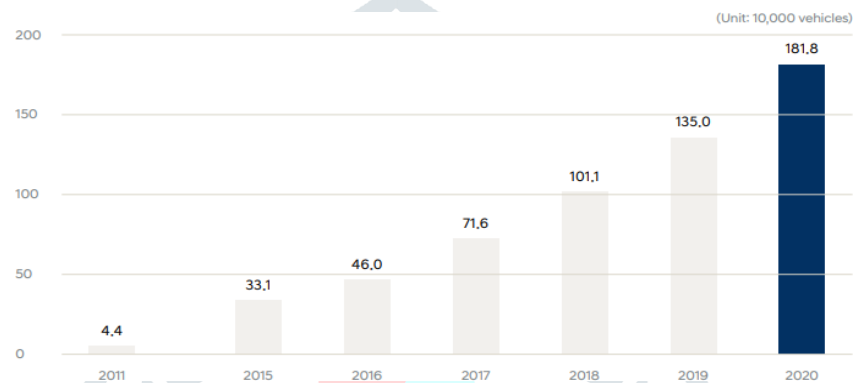


Fig 6.5.2. Source - Hyundai Sustainability Report 2021

Carbon Reduction in Sites - The company is carrying out a number of activities to reduce the amount of GHG emissions produced by its manufacturing processes. The company's actions include continuing with its energy reduction activities such as the introduction of high-efficiency facilities and manufacturing process improvements at all its plants thus, building eco-friendly plants by converting them to renewable energy sources like photovoltaic power. For example, at Hyundai Motors India about 84% of the electricity used in its plant comes from environment-friendly energy sources - 20% of wind power, 8% of solar power, waste incineration and cogeneration 56%. It also operates a 0.69 MW solar power plant, and is planning to install a 10MW photovoltaic power generator on its roof by 2021.

Building a Hydrogen Ecosystem - To achieve carbon neutrality, there is a need for transition from fossil fuels to renewable energy. Hyundai is boasting advanced technologies in the field of fuel cell and fuel cell electric vehicles, this also includes the development of fuel cell systems. It culminated in the production of the world's first FCEVs

in 2013. The company is working from its experience and expertise in these technologies and it will continue leading the way in building a hydrogen-related industrial ecosystem, ranging from eco-friendly hydrogen fuel production such as green hydrogen production to stable storage and distribution. It is expanding hydrogen mobility, encouraging collaboration to develop a green hydrogen economy, promoting the growth of the global hydrogen ecosystem, and jointly developing an LPG reformer with Saudi Aramco.

• *Circular Economy -*

The issue of disposable plastics has been increasing at an alarming rate following a rise in non-contact consumption due to COVID-19. Therefore, this phenomenon is leading to increases in the amount of plastic waste and so the environmental damage caused by the GHG emissions that are produced during the waste treatment process. Reports show that Hyundai is making attempts to move away from the current linear business structure of production, consumption and disposal by building a circulation-type business model involving production, consumption and regeneration.

Table 1. Source - Hyundai Sustainability Report 2021

\*EV = Electric Vehicle \*FCEV = fuel cell electric vehicle

Issues	Risks	Opportunities
<ul style="list-style-type: none"> <li>Emissions Trading System</li> <li>Vehicle CO<sub>2</sub> emissions regulations</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating costs due to purchasing allowances/credits to achieve regulatory or legal compliance</li> </ul>	<ul style="list-style-type: none"> <li>Revenue generation through sale of spare allowances/credits</li> </ul>
<ul style="list-style-type: none"> <li>Prohibiting sale of internal combustion engine vehicles</li> <li>Carbon tax</li> </ul>	<ul style="list-style-type: none"> <li>Decline in sales due to ban on sales of internal combustion engine vehicles in developed markets like the EU and the U.S.</li> <li>Rise in costs and shifts to customers due to tax increases</li> </ul>	<ul style="list-style-type: none"> <li>Sales increases due to enhanced EV performance and price competitiveness</li> <li>Cost savings in responses to regulations through energy conversions and reductions in CO<sub>2</sub> emissions</li> </ul>
<ul style="list-style-type: none"> <li>Acceleration in competition for technology development for eco-friendly vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Decrease in market share if not achieving superior performances (EV mileage, FCEV fuel cell efficiency, etc.) compared to competitors</li> </ul>	<ul style="list-style-type: none"> <li>Preemptive response to FCEV market based on hydrogen fuel cell technology competitiveness</li> </ul>
<ul style="list-style-type: none"> <li>Increase in demand from investors and other stakeholders to respond to</li> </ul>	<ul style="list-style-type: none"> <li>Falls in stock prices, withdrawal of investors, and customer churn at</li> </ul>	<ul style="list-style-type: none"> <li>Rising stock prices, increasing investments, and enhancing brand image</li> </ul>

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	Received lack of will to respond to climate change	due to climate change response activities and reduction performances
<ul style="list-style-type: none"> <li>Increase in abnormal weather conditions, such as typhoons/ floods/heavy snowfalls</li> </ul>	<ul style="list-style-type: none"> <li>Factory downtimes due to damage to facilities</li> <li>Production disruptions due to discontinuance of raw materials/ parts supplies</li> </ul>	<ul style="list-style-type: none"> <li>Increased market share due to stable product supply when compared to competitors</li> </ul>
<ul style="list-style-type: none"> <li>Changes in average temperatures and precipitation</li> </ul>	<ul style="list-style-type: none"> <li>Disruption of drinking water in areas with high water resource risks</li> </ul>	<ul style="list-style-type: none"> <li>Reduced operating costs due to improved resources efficiency</li> </ul>

Product Recycling - Reports indicate that the automaker is designing its new vehicles by taking into account the carbon and pollutant emissions reduction as well as the circular use of materials during their development stage. Hyundai is selling the vehicles which are 85% recyclable and reusable. From a Post Industrial Recycling (PIR) perspective, Hyundai is also developing a technology that will enable scrap pieces of the fabrics used in making its airbags and tire cords to be recycled and used in other parts. It is already utilizing recycled plastic materials to make wheel guards, undercover parts, battery trays, and parts for fan shrouds by using waste resources recovered from waste parts.

In addition to the development and transformation of recycled materials and their increased application as car parts, the firm is also investing in recycling technologies to realize environment-friendly manufacturing processes. This process is currently in the expansion phase to include the development of original technologies for using recycled materials. It also entails moving away from the existing method of removing coatings using chemicals when recycling painted parts to the development of a new method of physically peeling off their coatings in an eco-friendly way.

Total number of second life EV batteries is expected to increase in conjunction with a rise in EV sales thus, there is a dire need to establish a recovery and recycling system for them. These recovery systems will help to reduce environmental problems caused by an overflow of the second life EV batteries. Hyundai is helping to deal with this problem by planning to build a large-scale second life EV battery recovery network in Korea.

Resource Usage - The problem of natural resources depletion is becoming more and more serious due to people's consumption. Particularly, the water scarcity problem is one of the most serious risks faced by the world, because water cannot be replaceable as an essential resource for all living things. It is important to conserve water. Hyundai



is constantly striving to use resources more efficiently and responsibly.

Hyundai endeavors to reduce its energy consumption for reducing expenditure as well as for environmental reasons, such as reductions in GHGs and air pollutants. Consequently, it is continuously implementing energy-saving campaigns to prevent unnecessary energy use at its sites. Although water shortages are rising rapidly, they vary widely by region around the world and they are expected to worsen if climate change deteriorates. Hyundai is making efforts to conserve water and placing India and Turkey as center of its efforts as these two locations have severe water shortages. HMI is located in Chennai, which is running out of water. It carried out the construction of additional reservoirs within its plant in 2019 to extend its water storage capacity, giving it enough to store 335,000 tons of water in six reservoirs as of the first half of 2021. The maximum amount of rainwater that it can collect has risen from about 500 tons per 1mm to 1,000 tons to 1,500 tons per 1mm.

Hyundai's production and manufacturing processes generate considerable amounts of waste paint, waste thinner, waste packaging materials for parts, and sludge and the company is indulged in recycling 92% of its wastes at its sites of 2020, while the remainder was being treated in an environmentally responsible manner. Hyundai manages air and water pollutants which are generated at its plant sites by setting stricter management standards than those mandated in each country in which they are located.

- *Management and Reduction of Harmful Substances* - Reports display that Hyundai manages the harmful substances used in its plants and contained in its finished products very strictly. The firm complies with international regulatory standards and initiatives governing harmful substances in order to manage and reduce them based on such legislation. It is currently developing alternative substances or materials to replace ones that have been or are about to be banned both at home and abroad.

This organization manages harmful substances in three stages: Prohibition of Use, Limited Use, and Strengthened Management. 'Prohibition of Use' denotes a high-risk and regulated substance that must not be used, so an alternative must be found to replace it. 'Limited Use' allows a harmful substance to be used, but only in very limited circumstances and only in accordance with the regulations governing it. 'Strengthened Management' means that a substance can be used but its use must be continually monitored. It has gradually banned the usage of four heavy metals which are lead, cadmium, hexavalent chromium, and mercury in its vehicles produced both at home location and abroad.

*Social* - Hyundai Motor Company considers the human rights of all its employees and other stakeholders a top priority. It is putting efforts in strengthening its human rights protection system and creating a safe and healthy organizational culture for its employees. The company strives to enhance the sustainability activities of its

suppliers and adjoin the quality of its products and services through its Supply chain ESG management.

- *Human Rights* - In an effort to actively execute the human rights management, Hyundai meets all globally-mandated human rights and labor standards, including the Universal Declaration of Human Rights, the UN's Principles for Business and Human Rights, the Core Conventions of the International Labor Organization, and the OECD's due diligence guidelines. As a responsive organization, Hyundai pays particular attention to addressing problem areas identified as potential risks by its human rights assessments as constituting potential trouble spots and taking corrective action.
- *Employees* - According to the reports, Hyundai takes all kinds of measures needed to reduce the incidence of workplace accidents and fatalities. This is being done through a variety of proactive and preemptive health and safety activities and by creating a safety-first management environment and culture. These activities and initiatives include operating situation rooms at each workplace to guard against outbreaks of infectious diseases like COVID-19. The company has also increased its health and safety budget by 83% in 2021. The firm carries out semi-annual emergency drills at each of its manufacturing facilities where attendance by all of its employees is mandatory. Hyundai enhanced its Hyundai-Safety Assessment Tool (H-SAT) system in 2020. The system now includes about 20 situations that are considered to be highly likely to cause serious accidents.

Hyundai is making many changes to its organizational environment based on the principles of its Culture Change Program. They are geared towards helping the company create a more employee-oriented, creative, and flexible organizational culture. The firm is also promoting a variety of change activities in order to become an employer where creativity, changes and challenges become both normal and routine. It is also trying to build a culture based on meaningful communication, and developing an autonomous and proactive work atmosphere through employee participation-centered changes and through its Remove Inefficiencies Campaign.

The company welcomes employee involvement in its operations through its Quality Mindset Campaign. The campaign emphasizes the importance of high-quality workmanship and encourages all the company's employees to demonstrate a quality-first mindset in all their work. Hyundai also stresses the need for near-perfect quality in its finished products through its New Vehicle Quality Assurance Program. The firm has conducted a "Next Big Idea" contest to solicit creative and challenging ideas and designs from its employees around the globe.

Hyundai, as a sensible employee friendly recruitment process. Few of its creative processes include year-round recruitment system, introduction of virtual job recruitment processes during CoVID pandemic, employee recommendation program, and internship programs.

- *Suppliers* - Hyundai believes that there is a direct relationship between the technical quality and the excellence of the parts made for it by its suppliers that are directly linked to its success with customers. As a result, the

company takes an intense interest in fostering the competitiveness and competencies of its suppliers in such areas as developing new technologies and improving their productivity. It indulges in enhancing quality competitiveness, enhancing R&D skills and enhancing productivity. It does this by offering the suppliers a wide range of individualized training programs, including quality and technical schools and customized training. Hyundai also encourages sustainable growth among its suppliers by offering them funding, training and education, and information on ways to add to their global sales channels.

Hyundai expects its suppliers to improve their ESG management policies and practices by utilizing guidelines provided by the company within its Code of Conduct for Suppliers. The firm has a number of programs in place to improve the ESG performance of the companies supplying its parts. These programs include providing them with guidelines for their ESG management activities, carrying out ESG tests and evaluations, and assisting them in making improvements. It has also established a system for evaluating the ESG performance levels of its suppliers and suggesting improvements when necessary.

- *Product Quality* - Reports suggest that Hyundai is committed to the highest possible level of quality management in everything it makes and sells. This includes strengthening organizational units tasked with dealing with safety and service quality issues at all its customer contact points, strengthening its after-sales systems, and insisting on early detection and making immediate improvements in order to stop minor safety and service issues from becoming more serious.
- *Customers* - In order to study the experience of the customers, Hyundai has conducted a variety of programs and campaigns like 'The Hyundai Motor Group Driving Experience Program'. It is mentioned that Hyundai is committed to providing the best services possible to its many customers by utilizing its nationwide customer service infrastructures thereby including provision of in-depth information about how to use their cars more safely, conveniently, and cost-efficiently. The firm also takes care to ensure that its marketing activities do not infringe upon its stakeholders' privacy and do not attempt to influence vulnerable groups, including children.
- *Communities* - Hyundai's management activities are based on its CSV strategy system, which assists the company in creating social values and making a positive impact on society. The company strives in building a sustainable business ecosystem, with a particular focus on five areas: eco-friendly, mobility innovation, traffic safety, future generation, and community. The eco-friendly program includes programs like the IONIQ Forest, environmental preservation near business sites, and Hyundai Green Zone Project. Mobility innovation consists of Happy dream car, Happy dream bus, and Wheel share. Traffic safety has programs such as Hyundai's Kid's Auto Park(Korea), and Traffic Accident Zero for Children Campaign.

*Governance* - Hyundai Motor Company has constructed a management method that responds to risks both

proactively and preemptively by establishing advanced-level governance as a cornerstone towards its sustainable growth. The firm is committed to ethics and compliance management, and attempts to protect the rights and interests of its shareholders under the leadership of its highly qualified and very experienced BOD.

- *Board of Directors* - The company's Board of Directors are said to be tasked with providing the firm with a system of checks and balances to ensure its healthy and sustainable growth and guard the interests of its shareholders and other interested parties. Hyundai's BOD is made up of eleven directors: five internal, and a majority of six non-executive ones. The BOD's subcommittees include the Audit Committee, the Recommendation Committee on Candidates for Non-executive Directors, the Sustainability Management Committee, and the Compensation Committee. The BOD of Hyundai and its subcommittee meet on a quarterly basis. The board may also be convened as and when needed if a BOD resolution or a resolution from one of its committees requires it.
- *Ethical and Compliance Management* - Hyundai introduced its Ethics Charter, Employee Code of Conduct, and Guidelines for Ethical Business Conduct in 2001 thus, establishing standards that would allow its employees to make ethical decisions in their workplaces more quickly and easily. The company has published a number of guidelines regarding key provisions of various rules and regulations in the area of compliance. They also include the requisite response measures that all its employees are encouraged to be aware of and these steps were taken in a bid to reduce any possible legal risk to the company.
- *Risk Management* - Hyundai has established a company-wide risk management system led by its Business Strategy Planning Division to deal with the challenges and changes in the automotive industry. Apart from the company-wide risk management system, other departments like R&D, procurement, production and sales divisions comprising Hyundai's value chains also manage their business and operational risks. The company is also committed to comply with all of its duties as a faithful business enterprise in response to fair and just taxation principles in a cooperative and collaborative manner.

## 7. Findings

Let us summarize all the sustainable investments and ESG initiatives by all the five automotive companies.

- Firstly, Tata Motors Sustainability report was brief and discussed about how the company was acting towards sustainability in all of its aspects. The aspects discussed in regards to sustainability and green investments were Operations, Mobility and also briefed about the activities and their progress in Environment, Social and Governance aspects. The 'Environment' segment of the report was mainly focused on reduction in energy consumption, resource efficiency, carbon neutrality by 2030 and few initiatives like SHE and Go Green. 'Social' discussed sustainable value chain, sustainability guidelines to stakeholders, diversification in employees, and enhancement of skills of

employees whereas 'Governance' consisted about various committees, supportive policies, and gender diversity in the board. The two special elements - Sustainable Mobility talked about Tata Motors developments in electric vehicle segments and Operations discussed about the company's progress in achieving each of its Environment and Social goals.

The report only mentioned the goals of the company in regards to ESG and Sustainability. There was no information about what are the investments made by the company in achieving these goals and what is return on investment. There is a mention of a few initiatives by the organization because there was no detailing on each of the initiatives and how it worked in reducing various aspects like emissions, etc. It is also observed that Tata Motors sustainable initiatives are in accordance with its conglomerate parent Tata Group and has only few company specific programs. Sustainable investments made by the company are not clear uptill now and from the analysis of the report it is suggested that the company adopts many more policies and develop programs to run in a sustainable manner. The figure 7.1 represents the ESG ratings and risks of Tata Motors by a firm namely Morning Star.

- The second company which we have analyzed is Maruti Suzuki. The company's 'Environment' aspect covered things like Green Manufacturing, introduction of BSVI engines, reduction in energy consumption and reduction in emissions. In addition to all these aspects, it has also mentioned about water conservation and optimization in use of raw materials. The 'Social' highlighted the point of view of the company in terms of its people and its initiatives towards a healthy working environment. There was no information regarding the 'Governance' aspect in the report. The report then talked about the Sustainability Highlights and Business Responsibility report highlights which we discussed in detail in the analysis part of our report. Although, Maruti Suzuki belonged to a foreign conglomerate Suzuki the report has no mention about its foreign operations and all of the information was in regards to initiatives and activities in India. Maruti has highlighted its Environment goals and initiatives in a keen manner. It has mentioned about the programs which it introduced in various plants in the country and the results and developments of the programs were also discussed clearly. The organization also talked about different technologies which helped in reducing emissions.

Coming to the drawbacks of the report, there was no information about Governance aspect and very little information about Social aspect whereas the focus was only on Environment and initiatives in its regard. The company has mentioned clearly about the activities and their implications but failed to report the monetary investment and return obtained from the program. The fig 7.2 indicates the ESG rating of Maruti Suzuki by Morning star.

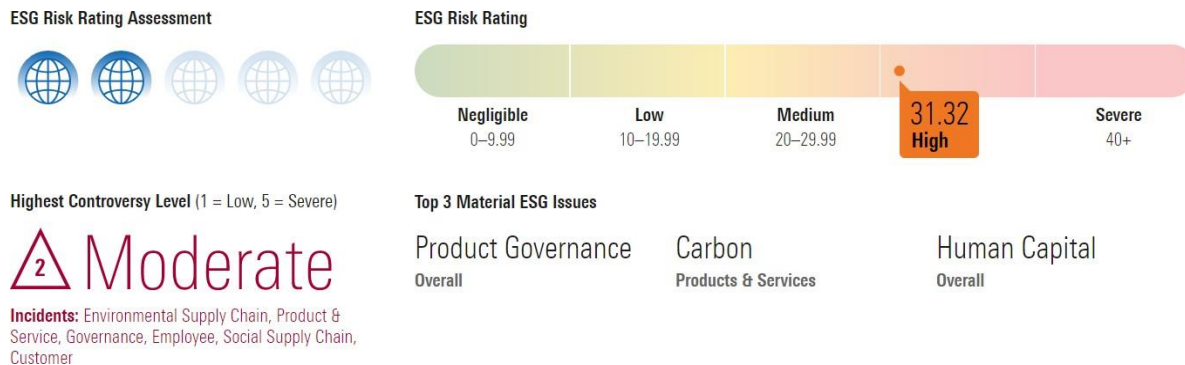


Fig 7.1 - ESG Rating of Tata Motors. Source - Morning Star

After the analysis of Mahindra & Mahindra, we have observed that the company’s Sustainability report discussed various ‘Environment’ aspects and programs which Mahindra is planning to reach its targets. These aspects include Carbon emissions, Water security, Waste to wealth, and Supply chain management. The ‘Social’ segment discussed Health and Safety of its employees and Product Stewardship in consideration with Stakeholders.

Mahindra as an automobile manufacturer ensured that it has all kinds of necessary programs on board to make up for the environmental damage caused due to its manufacturing operations. It has clearly listed about the activities conducted in each plant to reach the target in each aspect and also discussed the progress and developments in each of the activities. The unique point which helped Mahindra gaining competitive edge in terms of Sustainability report is revelation of the amount invested in particular initiative and the return on investment. The downsides of the company’s sustainability report is the low focus on ‘Social’ and ‘Governance’ segments of ESG. There needs to be an equal emphasis on the other two aspects of sustainability along with the Environment. The fig 7.3 shows the ESG ratings of the company given by Morning star.

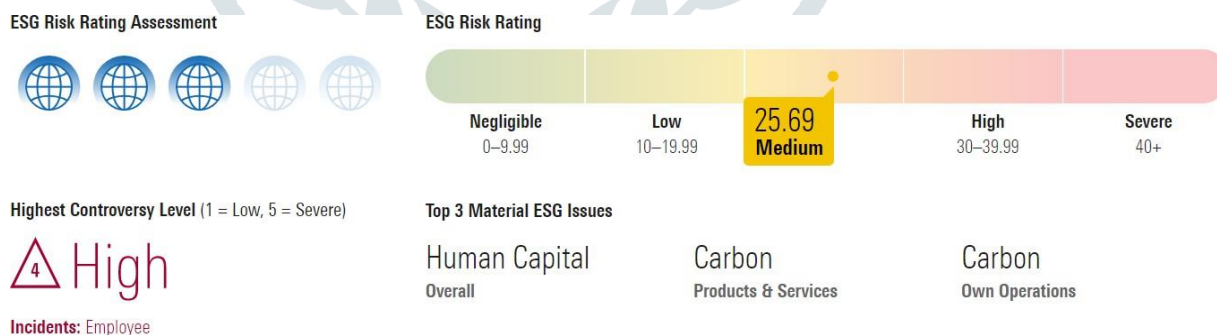


Fig 7.2 - ESG Rating of Maruti Suzuki. Source - Morning Star

Coming to Hero Motocorp, the analysis showed that the company tried linking its goals and objectives with that of the UN's Sustainable Development Goals. The report suggests that the company is planning to devise strategies in the areas of Ethics and Compliance, Climate Protection which include Energy, Water, Waste & Biodiversity, Business Growth & Profitability which include Product Quality, Emerging Mobility Solutions, Product Innovation & Product Stewardship, Value Chain Sustainability, Human Rights, Diversity & Inclusion and Health, Safety & well-being thus, covering the three Sustainability aspects (ESG) in its initiatives. Thereport indicated the initiatives and the progress of aspects like Product Stewardship, Eco-efficiency, People, Inclusive Growth, and Responsible Value chain.

The company has keenly mentioned about the activities and programs initiated in each of its manufacturing plants, policies under development and the progress involved in these two respectively. The information was plant specific and covered all the three ESG aspects completely which indicates the company giving equal importance to all segments of Sustainability. Although the programs and developments were enlisted the company didn't reveal the monetary investment made and the return on investment due to these activities. Hence, not giving the stakeholders a clear picture of the applicability. Hero provided a report in consideration of all the countries which it operates whereas Maruti Suzuki functioning similar to Hero published a company specific report to help its Indian investors. The report was not properly structured and organized in comparison with the reports of other top 4 companies. The fig 7.4 indicates the ESG ratings of the company.

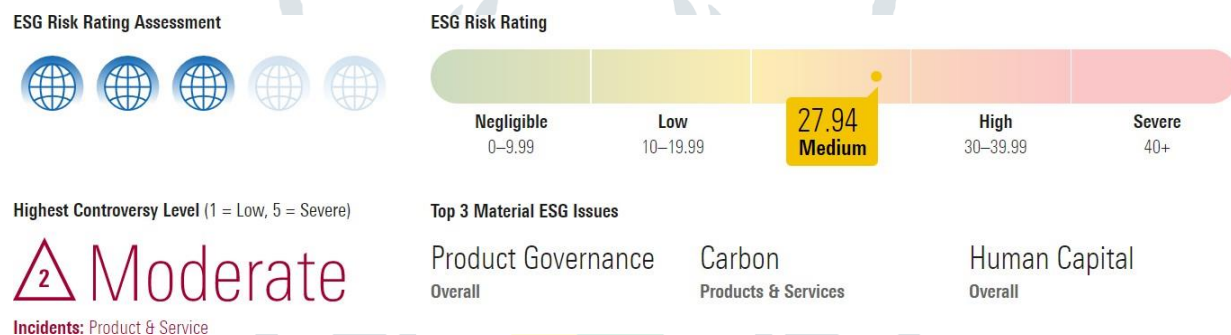


Fig 7.3 - ESG Rating of Mahindra & Mahindra. Source - Morningstar

Hyundai's Sustainability report discussed deeply about each segment of ESG with inclusion of related aspects. The 'Environment' segment consists of aspects like Carbon reduction, Circular Economy, and Management and Reduction of Harmful substances. The 'Social' segment includes discussion about human rights, employees, customers, product quality, and suppliers whereas 'Governance' highlighted aspects like BOD, Ethical and Compliance Management, and Risk management.

The organization's Sustainability report highlighted the initiatives taken by the company in order to reach its target in each of the aspects so as to ensure Sustainability but the report doesn't reveal any information regarding the

amount invested by the company in each of the segments and the return on investment. Hyundai’ report was also not addressing the Indian stakeholders but was mentioning and discussing all of the initiatives in whichever country it operates. One more finding is that most of Hyundai’s programs in order to be a sustainable business are carried out in the home country and headquarters like China and Korea. Fig 7.5 shows the ESG rating of Hyundai.



Fig 7.4 - ESG Rating of Hero MotoCorp Ltd. Source - Morning Star.

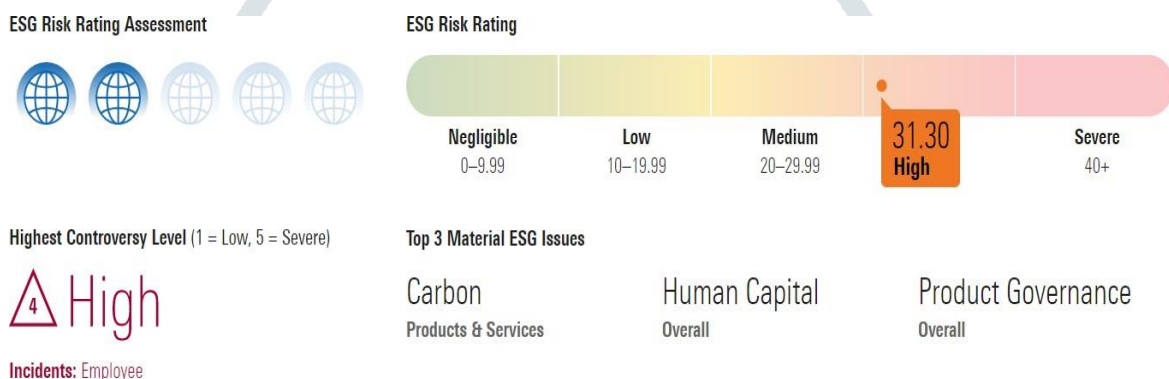


Fig 5.5 - ESG ratings of Hyundai. Source - Morning star.



Table 2 - Source - Author's compilation of Information from the report

	Tata Motors	Maruti Suzuki	Mahindra & Mahindra	Hero Motocorp	Hyundai Motors
Aspects Covered under the 'E' in the report	1. Resource efficiency 2. Circular economy 3.zero-emissions 4.carbon neutrality	1.Green Manufacturing 2.Optimum use of raw materials 3. Energy efficiency 4.Water conservation 5.Waste treatment	1. Carbon emissions 2. Water Security 3. Waste to wealth	1. Energy 2. Water Waste & Biodiversity 3. Climate Protection 4. Product Innovation & Product Stewardship 5. Value Chain Sustainability	1. Carbon-Reduction 2. Circular Economy 3. Management And Reduction of Harmful Substances
Aspects covered under the 'S' in the report	1. Health 2. Education 3. Skill and community development 4. Talent acquisition and development	1. Supplier relation 2. Healthy working environment 3. Latest technology 4. Community development (CSR) 5. Stakeholder engagement	1. Supply-chain management 2. Health and Safety 3. Product Stewardship	1. Human Rights, Diversity & Inclusion and Health 2. Safety & well-being	1. Human Rights 2. Employees 3. Suppliers 4. Product Quality 5. Customers 6. Communities
Aspects covered under the 'G' in the report	1. Wide Diversity 2. Male-female balance in BOD 3. Different committees	1. Committees 2. Board of Directors 3. Ethics and Compliance	<i>Not mentioned</i>	1. Ethics and Compliance	1. BOD 2. Ethics Compliance Management 3. Risk Management
Products in accordance with Sustainability	1. Nexon EV and other Electric cars 2. 4/12m electric bus 3. Ultra T.7 ILCV truck	1. LCV Super Carry 2. Smart hybrid car Ciaz	Electric vehicles and Farm produces	HF Deluxe, Glamor Blaze, Xtreme 200S, and Xtreme 160R	Second-life battery-based energy storage
Investments made on ESG	200 million on CSR	<i>Not mentioned</i>	energy - Rs 5.50 CR and Rs 5.6 CR.	<i>Not mentioned</i>	<i>Not mentioned</i>
Return on investments	<i>Not Mentioned</i>	<i>Not mentioned</i>	energy-Rs 3.43 CR and 2.5 CR per yr, waste-Rs 3.65 Cr in 3 yrs	<i>Not mentioned</i>	<i>Not mentioned</i>

## 8. Conclusion

This report was a complete analysis of how the top automobile companies are transforming into sustainable businesses. We have tried to understand the importance given to Sustainability by each of the companies and the progress of Sustainable investments and green finance in the Indian Automobile industry. In this process of analyzing we have studied the Sustainability and ESG reports of all the 5 companies. Let us conclude the report by finding similarities and differences between the initiatives of these companies and by recommending what can be done in the Indian Automotive industry to make it sustainable.

All the five companies identified the need to take initiatives towards betterment of the Environment, its stakeholders and its Governance. The Environmental initiatives by all of them are mainly focussed on climate change, emission reduction, energy efficiency, water conservation, and waste management. Except Tata Motors, all the other companies tried to project the progress of their initiatives, process of implementation, and in plants which these activities are taken up. All of the companies had 'Social' goals to look after the welfare of their employees, customers and other stakeholders.

Coming to the differences between the initiatives of these companies, Mahindra & Mahindra has not mentioned any information regarding the 'Governance' segment whereas Tata Motors talked about diversity in top management, Maruti Suzuki, Hero Motocorp and Hyundai mentioned about Committees and Ethics and Compliance and Hyundai additionally talked about Risk Management. Mahindra has clearly mentioned about the investments made by the company in various aspects and the return on investment, it has also discussed about the progress of various activities which are ongoing. Maruti Suzuki, Hero and Hyundai mentioned about the developments in various programs whereas Tata Motors only mentioned its targets in the report.

Mahindra & Mahindra, Tata Motors, and Maruti Suzuki were designed and published in consideration with the Indian stakeholders but Hero MotoCorp's and Hyundai's Sustainability reports discussed the initiatives, investments, programs, and projections in other countries where they operate. Hyundai Motors is currently working on the development of a second-life EV battery based energy storage system along with EVs, Hero is working on Hydrogen fuel run vehicles, and the other 3 companies are focusing on EVs development.

The ESG ratings of each company given by Morning Star indicate that top ESG issues are Carbon emission in products and services, Product governance, Business ethics, and Human capital. Therefore, the 5 companies should be working on betterment in these fields by initiating more programs and activities to resolve these problems.

The Sustainability reports of these companies indicate that automobile companies in India are including

sustainability and ESG aspects only as activities improve the environment and look after their welfare. Sustainable business is a practice to be adapted into a company's way of doing business. All the companies irrespective of their sectors need to undergo a transition to turn out to be sustainable. The process of this transformation may slowly begin with devising programs and initiatives to uplift the segments of ESG. The Indian Automobile industry is currently undergoing phase 1 of the transformation according to the analysis made in the report. These sustainability reports are published to intimate its stakeholders and investors regarding the objectives of the company to protect the environment and upbringing the communities.

Automobile industry involves a huge number of activities which may affect the environment, and the society in numerous possible ways. Therefore, it is necessary for the top companies to not only initiate programs promoting sustainability but also adopt a sustainable way of business. The companies should be transparent regarding their sustainable investments. Each and every aspect of business like operations, manufacturing, finance etc should be transformed in accordance with Sustainability. Our country is also slowly adapting to the notion of sustainability hence, our industries and its top players functioning as the backbone of the Indian economy should revolutionize into sustainable ones.

#### 8.1. *Recommendations*

Here are some recommendations to Indian Automotive industry in specific to Sustainable (based on analysis done in the reports) :

1. Government Interventions - Though the automobile companies are working with a driving force towards sustainability, Government plays an influential role in growth in momentum towards sustainable practices. The Indian Government should give targets to all the industries regarding reduction in carbon emissions which would give a push to Automobile companies to work more efficiently. For example, The European Commission proposed a 55% cut in Carbon dioxide emissions from vehicles by 2030. This in turn resulted in collaboration between the auto industry and oil & gas industry to develop fuel alternatives and build a sustainable future.
2. Consumer perceptions - It is important to have a shift in the perceptions of the customers. They should believe that alternatives like CNG and EVs would ensure a better future for mankind. This would eventually result in growth in sales of the existing EVs thus, increasing the demand for such products. Resulting in a motivation to automobile manufacturers to work more efficiently in developing sustainable solutions.
3. Technological advancements - The Automobile companies should be working on Researching and Developing innovative technologies which will avail them alternative methods to reduce usage of raw materials, reuse them, recycle them, shift to renewable resources, and avoid pollution of land and water. Therefore, companies should have a strong R&D department constantly working on developing advancements in existing technologies thus,

creating a shift towards sustainability.

4. Sustainability along Value chain - Scarcity of the natural resources is causing a necessity for sustainable value chains in the automobile industry. Creating and maintaining transparency along the supply chain is important. This will help in tracing the origin of the parts and will aid manufacturers to come up with solutions like circular economy, biodegradable components, and sustainable processes in research, development and manufacturing. Consequently, a sustainable value chain contributes to the transformation into a sustainable business.

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