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ECGC LIMITED
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FASHIONING THE FUTURE: THE STRATEGIC IMPORTANCE OF SUSTAINABILITY

Abstract: As sustainability and its incorporation into business strategies is becoming increasingly prominent, it is imperative for industry participants to be aware of the topic and its consequences for the professional landscape of the future. This report is a primer on the evolving theme of sustainability and its fundamentals. It covers key subtopics and terminologies of the said domain and highlights the opportunities and risks around integrating sustainability into an organisation. The report attempts to apprise the reader of these implications and the dynamics of sustainable strategies and policies.

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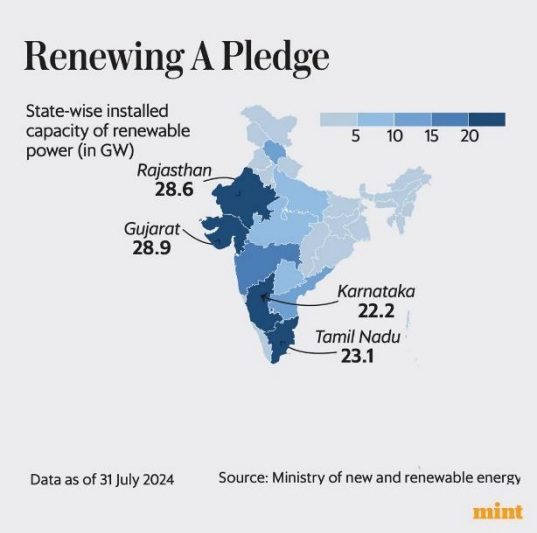
1. Introduction

Hardly anyone in the 21st century is unaware of the challenge of climate change and its negative impacts on the global ecological balance. Whether that ignorance is wilful or genuine, the detrimental effects of global warming, man-made pollution and ecosystem destruction are increasing in both frequency and magnitude. With the rise in global temperatures and sea levels worldwide, more and more countries are encountering unprecedented issues hampering the quality of human life. The alarming consequences call for urgent policy intervention on all levels – personal and institutional. In light of this, comprehensive strategies are being developed to reorganise the global economy to reduce negative environmental spillovers and establish a structure for the economy that is sustainable in the long run.

As of August 2024, over 140 countries have come together and made commitments to achieve net-zero carbon emissions and fulfill the majority of their electricity demand using renewable sources by the next two decades. 33 countries are specifically aiming to reach carbon neutrality by 2050. Among these countries, 15 have enshrined their commitments into climate accountability legislation, ensuring a legal framework to support these goals.



Source: Mint

India is a part of this climate accountability sub-group and has made significant strides in achieving its climate commitments. India has committed to achieving net-zero carbon emissions by 2070. India has also set a goal of producing 500 gigawatts (GW) of electricity from non-fossil fuel sources by 2030. Currently, it has 197 GW of installed capacity of non-fossil fuel sources (Mint, Ministry of New and Renewable Energy)

This article aims to brief the readers on the concept of sustainability and its relevance to the significant role of private and public institutions in promoting the long-term viability of business practices.

2. What is sustainability?

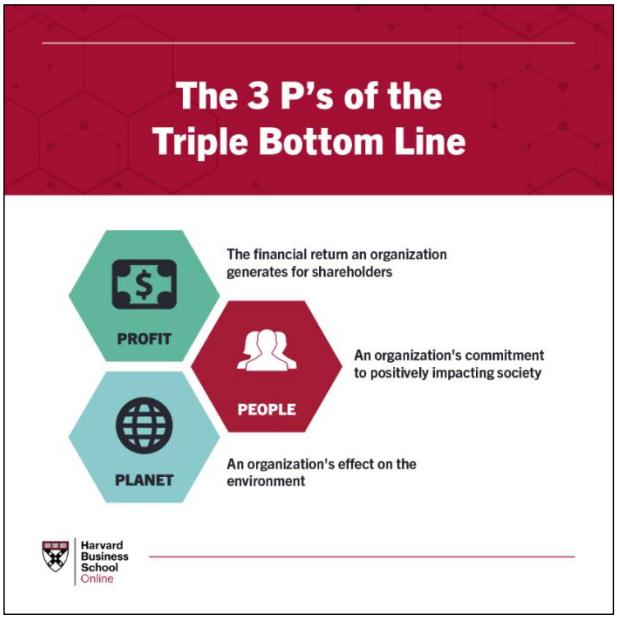
Sustainability, in the business context, entails the running of a commercial business while minimizing the negative impact on the environment, the economy, the community and the society, that the business is a part of. Ideally, sustainable businesses aim to have a positive impact on these spheres.

The Brundtland Report, a research publication by the UN's World Commission on Environment and Development, defines sustainable development as "*Development that meets the needs of the present without compromising the ability of future generations to meet their own needs*". Moreover, it also establishes a triple-pronged approach to sustainability consisting of the *people, the planet and profits*.

A sustainable business attempts to optimise the impact of its operations on these 3 pillars by including different types of actions, such as: –

- Measuring and reducing harmful emissions from a production process
- Assessing stakeholders and business partners on environmental criteria and forming partnerships with greener companies
- Participation and contribution to multilateral industry/sectoral initiatives on sustainability
- Making administrative and business procedures less complex and more transparent

In a nutshell, sustainable organisations make positive contributions to society while achieving their commercial goals.



Source: Harvard Business School

3. Sustainability Terminologies

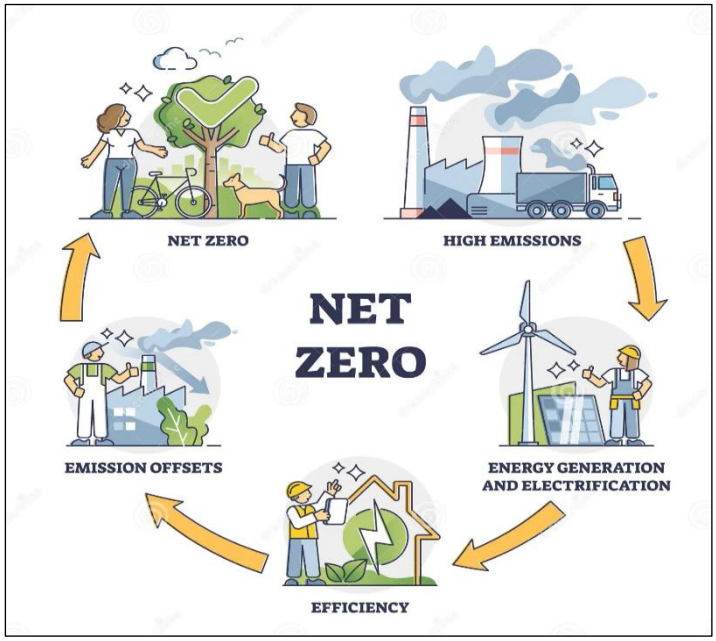
Sustainability is a multidisciplinary phenomenon that encompasses several subjects and fields. Specialists in one field might be unfamiliar with some key terms. To enable a common understanding of such terms, fundamental explanations have been provided below –

1) **Sustainability** – In the business domain, sustainability is the assessment of the impacts of commercial activities on the environment and society in a specific market. It also involves redefining the business strategy to mitigate negative impacts and attain long-term positive effects. The primary goal of sustainable policies and business strategies is to achieve long-term feasibility.

2) **ESG** – ESG is an acronym for Environmental, Social and Governance. ESG is a framework for defining an organisation's performance on sustainability. It helps stakeholders understand the impact of a business's operations on the environment, society, and its internal governance structure. It is also used to assess how the business manages risks and opportunities in these sectors. ESG scores are a commonly used market metric. A company is assigned a score on the 3 components – Environmental, Social, and Governance. A single, combined ESG score is then calculated and assigned to the company. This score is utilised by firm management, external stakeholders, investors, regulatory agencies, etc.

3) **Emissions** - Emissions refer to the release of greenhouse gases into the atmosphere in a specified area over a period of time. Greenhouse gases (GHGs) are gases that trap radiation from the Earth's surface, contributing to global warming. Carbon dioxide is the most abundant GHG, but others are methane, nitrous oxide, chlorofluorocarbons (CFCs), hydrofluorocarbons, etc.

4) **Carbon Neutral/Net Zero** – Carbon neutrality is a state where any GHG emissions are cancelled out by an equivalent amount of them being removed from the atmosphere. Thus, emissions are neutral and the net addition of greenhouse gases is zero. The second factor gives this state its other name i.e., net zero carbon emissions. According to the United Nations, more than 130 countries, 9000 multinational corporations and 600 financial institutions have committed to achieve



Source: Internet

net zero emissions by 2050. These organisations constitute 88% of the total global emissions.

5) **UN Sustainable Development Goals (SDGs)** – In 2015, all 193 members of the United Nations adopted the '2030 Agenda for Sustainable Development'. The agenda is a commitment to address global challenges while building a cleaner and sustainable world for future generations. The 17 Sustainable Development Goals are an important part of this agenda. The 17 goals are targets in various sectors to be achieved by 2030. These include ending poverty and hunger, achieving good health, education, and gender equality among others. Of these 17 goals, 4 goals are connected to the environmental sector.

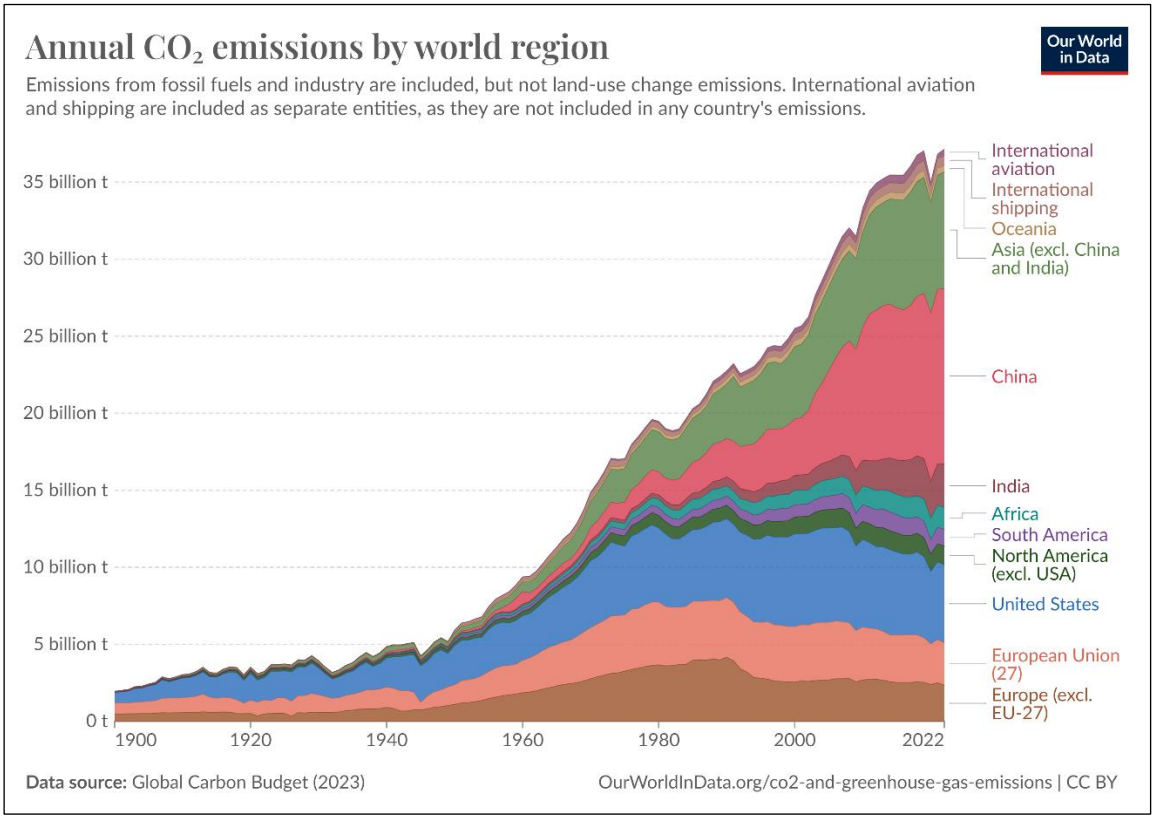
6) **Climate Finance** – Climate finance refers to the financial investments made by public or private entities into climate projects. Climate projects are of 2 main types – projects that act to directly reduce greenhouse gas emissions and projects that increase the resilience of communities towards the negative effects of climate change. Climate finance can take several forms such as equity investments, funding through debt instruments, direct lending, grants, bilateral aid among countries, etc.

4. Sustainable strategies: Risks and Opportunities

4.1 Risks

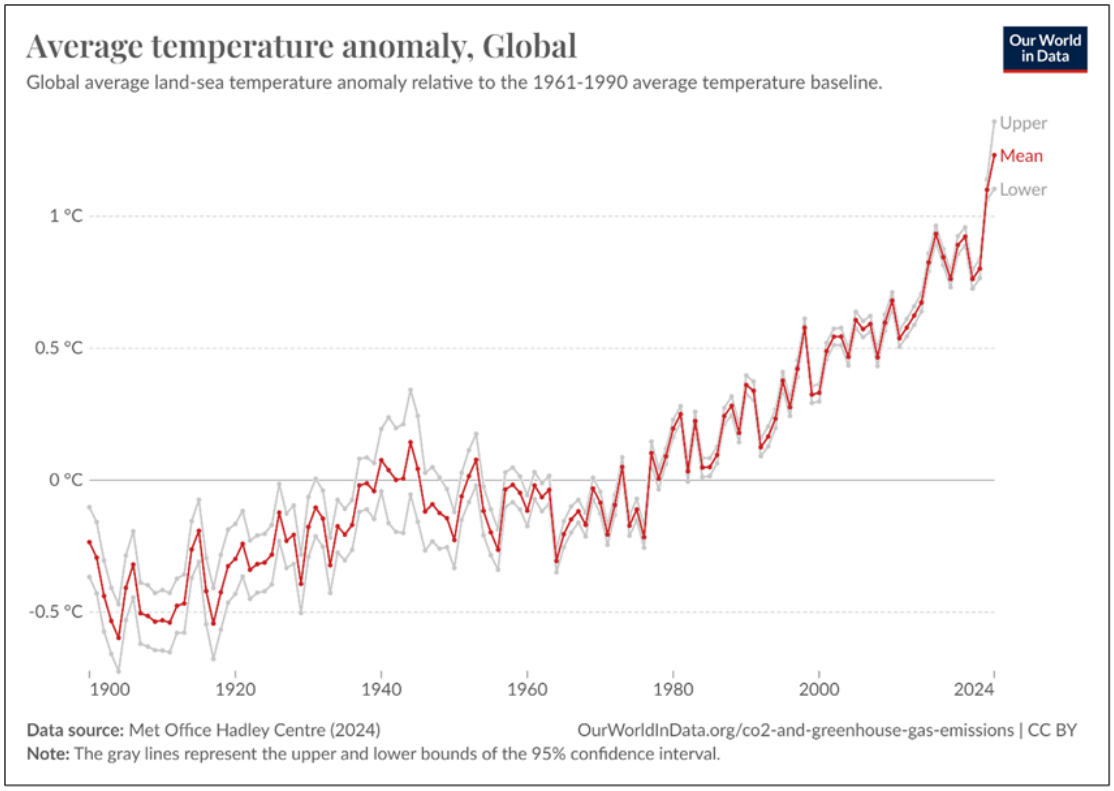
The causes and consequences of environmental degradation have been extensively studied and documented by experts and have even been experienced by large parts of the global population. Increased GHG (Greenhouse Gases) and carbon emissions have led to worldwide climate change, significant shifts in weather patterns and a rise in extreme weather events such as heatwaves, cyclones, droughts, etc. Governments, businesses, and communities must modify their day-to-day operations to incorporate a greater focus on sustainability. Unless these changes are brought about, the world will have to grapple with more frequent and more intense challenges. The fallout of these challenges will span across multiple domains such as environmental, infrastructural, economic, financial, social, etc. The risks associated with climate change have been explained in this section.

1) **Environmental Risks and Extreme Weather Events** – These risks revolve around the imbalance in the environmental composition of the earth and the radical changes in weather patterns. Total global CO2 emissions have increased by 20 times between the 19th century and the 21st century – from 1.95 billion tons of CO2 in 1900 to 37.15 billion tons in 2022. Over the same time period, carbon emissions per capita have also increased from 1.2 tons to 4.7 tons.

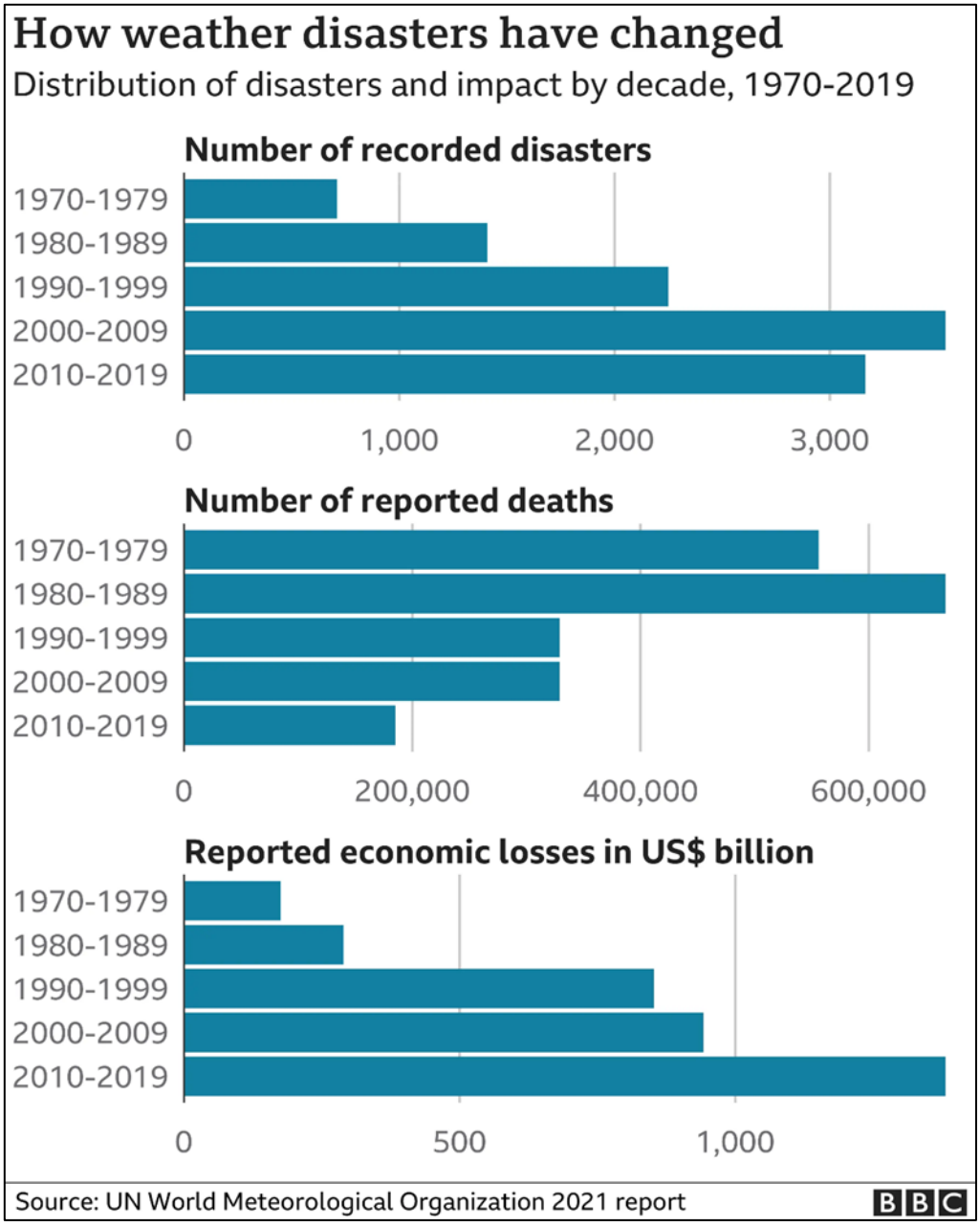


Source: Our World in Data

This has resulted in significant shifts in climate events. Average global temperatures have increased in recent years. The highest average surface temperature of the globe increased from 15.6 degree Celsius in the 1950s to 16.67 degree Celsius.



The world has also recorded a rise in extreme weather events. A 2021 report by the World Meteorological Organisation found that recorded natural disasters have increased five times between 1970s and 2010s. The losses caused by these natural disasters also increased from USD 175.4 billion in the 1970s to USD 1.38 trillion in the 2010s. Another report by the UN Office for Disaster Risk Reduction found that natural disasters caused average annual losses of USD 330 billion between 2015-2019.



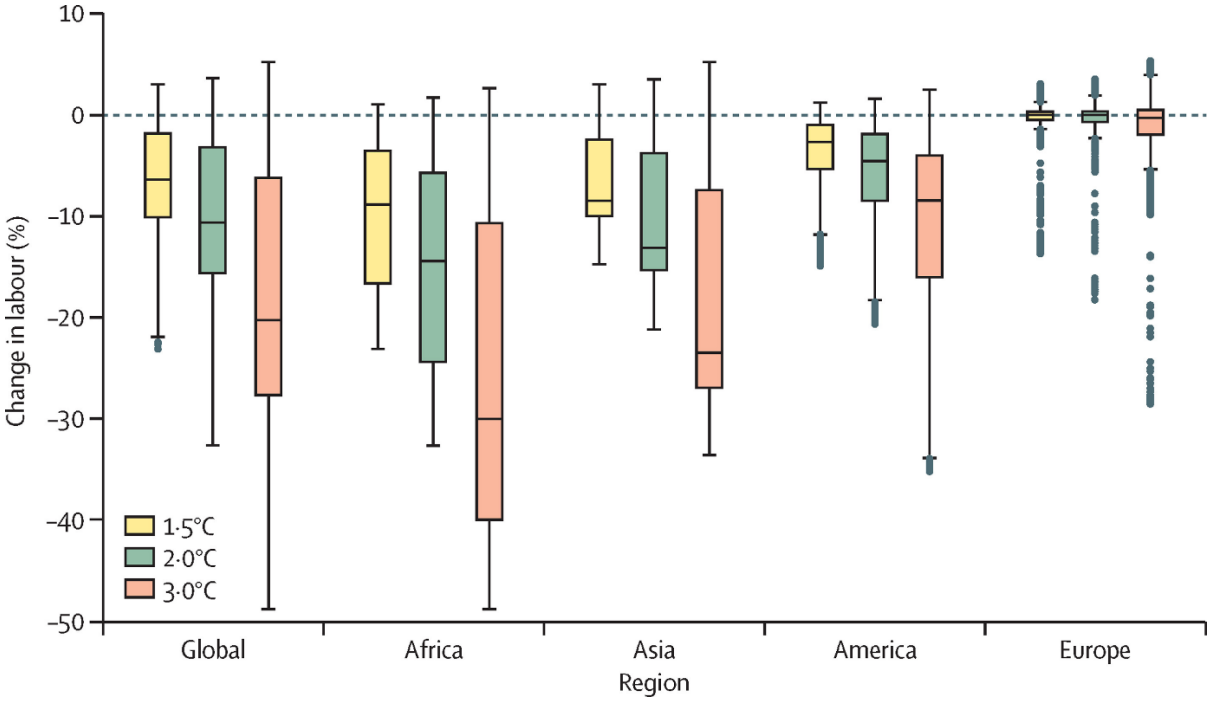
Source: BBC

2) **GDP Impacts** - According to projections made by the OECD, a warming of between 1.6 °C and 3.6 °C above pre-industrial levels by 2060 could cause global annual GDP

losses of between 1 and 3.3 per cent relative to a hypothetical scenario where climate change does not take place. However, this impact is not homogeneous all across the world. The probability and the effect of GDP losses are much higher in regions like Middle-East, North Africa, South and South-East Asia and sub-Saharan Africa and island countries.

3) **Labour Productivity** - The exposure to increased temperatures reduces labour supply and productivity by reducing capacity for physical work and by increasing the risks of accidents due to heat exhaustion or stroke. The chart below shows the effect of temperature increases on labour supply (in percentage points) in different regions of the world. Note that the median change is shown by the line inside the boxes.

Empirical studies show that for every rise in temperature by 1 °C above 25 °C, labour productivity falls by 2 per cent. Higher temperatures may also cause a reduction in capital productivity – for instance, overheating and longer maintenance periods. All of these reasons could trigger a shortage of labour supply in developing countries thus affecting global trade supplies.



Change in labour supply due to rise in temperature. Source: Dasgupta et. al., 2019

4) **Reduction in Exports** - According to a study by Dellink, Hwang, et al., 2017, the impact of climate change is expected to be significant on countries situated in lower latitudes, most of which are developing countries whose comparative advantage

depends on their climatic and geophysical factors. As per projections, an increase in global temperatures of 2.5 °C by 2060 could decrease export volumes by as much as 5 to 6 per cent for countries in South Asia and Sub-Sharan Africa, 3 to 4 per cent for the Middle East, North Africa, and South-East Asia and 2 per cent in Latin America compared with less than 1 per cent in Europe and North America.

The exports in the food and agriculture sector are specifically exposed to heatwaves and droughts as these can affect crop yield and push countries to restrict exports. For example, in May 2022, India, a major wheat producer, banned exports on the grounds of national food security amidst a heatwave.

5) **Disruption in Supply Chains** - The occurrence of extreme weather events is expected to negatively affect all modes of transport. Among these, maritime transport which accounts for 80 percent of world trade by volume, is specifically vulnerable to climate change.

   An unchecked rise in GHG emissions and an increase in global temperatures by 4 °C by 2100 can increase the number of ports at extremely high, very high, or high from multiple climate hazards from 385 to 691 key ports globally out of the 2013 ports examined (Izaguirre et al., 2021). The Panama Canal, which services 50 per cent of trades from Asia to the US East Coast and has an annual merchandise value of $500 billion, has been facing unusual droughts. This has resulted in lower water levels which has prompted the authorities to restrict the number of vessels that can pass through each day by 50%. Longer alternative shipping routes are available but increase the cost of dry bulk shipping by approximately 14 per cent.

6) **Transition Risks** - Apart from the physical disruptions that threaten global trade, there are transition risks that are intrinsic in the changing strategies, policies, and investment outlook needed in a climate-friendly transition. The unequal pace of climate action across countries has led some governments to include carbon adjustment measures involving charges on imports and/or export rebates to make the playing field among firms subject to different climate-related regulations and

taxes even. Though such measures address carbon leakage, they can also untangle trade patterns by incentivizing re-shoring or short-circuiting supply chains.

4.2 Opportunities

Considering the prevailing situation, it is clear that organisations should take the initiative on sustainability. Human activities are one of the largest sources of GHG and carbon emissions. Thus, any co-ordinated global action towards building a cleaner and better economy will require major institutional actions. For an organisation, this involves the following broad measures –

- Undertaking a review of the organisation's environmental and social impact
- Engaging in strategic conversations with all stakeholders about the effects on them and their expectations from the organisation
- Analysing and modifying the operations to reduce negative effects and ideally, increase positive outcomes for stakeholders, the environment, and society

This concerted drive towards sustainability will involve radical changes for some, if not most industries. However, rather than approaching them as expensive changes, institutions should view them as long-term investments for future operations and growth. Sustainable strategies are important for long-term operational viability and success in the new global order. Thus, the sooner an organisation prioritizes and implements these changes, the likelier it is to prosper in the future.

Additionally, this new paradigm also holds opportunities for the first-movers, especially private firms and businesses. A large body of research has found that financial advantages accrue to companies which actively work to create environmental and social benefits. One should note that there is a difference between designing social and environmental activities separate from the business' operations and making inherent changes to the business model and procedures themselves. Research also concludes that organisations that choose the latter option and make sustainability-oriented modifications to their core operations record better financial performance. Some highlights from these findings are –

- Companies that have high sustainability – or ESG - ratings have been found to have lower costs of debt and equity. In terms of revenue, sales of sustainable products grew at a pace that was 5 times faster than those of non-sustainable products between 2013-19 according to research by Harvard Business Review.
- Investment guided by sustainability criteria has been linked to competitive financial returns. The correlation between sustainability performance and corporate financial performance is found to be around 0.15 and statistically significant across multiple control variables such as region, asset class and individual pillars such as environment, social and governance. (Friede et al., 2015)
- An analysis conducted on the European food industry found that a unit increase in the ESG rating of a firm improved its return on assets by 1.2% and return on equity by 12.7%. The authors conclude that companies that incorporate an environmental focus in their business strategies obtain competitive advantages and have improved financial performance. (Sandberg et al., 2023).
- A paper studying the relationship between ESG scores and financial performance of Indian firms found a statistically robust positive relationship. The study analysed 65 Indian companies using ESG data and financial metrics. The results point to better sustainability scores contributing to better financial performance in terms of return on assets and market valuation. (Dalal and Thaker, 2019)
- Firms with greener and more sustainable supply chains record better operational performance than their peers. Better operational performance is observed across a range of characteristics such as better supplier relationships, lower financial penalties, higher resource efficiency and higher profit margins on products differentiated by their sustainable production. Furthermore, the positive relationship between sustainable supply chains and firm performance is found to be stronger in developing countries. (Govindan et al., 2020)

The implications for companies, managers and investors are clear – sustainable operations result in superior performance. Hence, firms should incorporate a focus on sustainability in their business strategies, not only for performance improvement but

also for long-term viability. There are numerous such instances of businesses – Indian and international - integrating a sustainability focus into their operations.

- **Tata Power** is one of India's largest power companies. It has taken significant steps in line with the broader green transition. It generates 4.7 GW from renewable energy sources such as solar, hydro, wind and waste heat recovery. This number consists of 34% of its broader portfolio. Furthermore, it has outlined its vision to water use neutrality by 2030 and achieve net zero carbon emissions by 2045.
- **Hindustan Unilever Limited** incorporates sustainability directly into its business strategy. This has enabled key achievements such as a 98% decrease in scope 1 and 2 carbon emissions, a 45% reduction of energy consumption per tonne of production and 100% of its electricity usage being fulfilled by renewable sources.
- **Lego** – a Danish toy manufacturer – implemented a unique plan in 2014 to reduce the size of its packages by 14%, which resulted in annual savings of nearly 7000 tons of cardboard. It followed this up with a strategy in 2018 to use environmentally friendly materials derived from sugarcane by-products in the production of its toys and sets. These replaced the petroleum-based raw materials used before. It also has plans to eliminate its use of single-use plastics by 2025.
- **Bank of America** has developed a sustainable initiative specific to its industry. In 2014, it set up the 'Catalytic Finance Institute'. This institute has lent USD 10 billion to projects with a positive environmental impact but deemed too risky by traditional financiers. Not only did this allow the projects to get off the ground, but it also had a crowding-in effect where greater private investment flowed in to support similar sustainable projects.

5. Conclusion

In the near future, as the world engages in a concerted effort to develop cleaner, more inclusive and more resilient societies, sustainability will be an important guiding principle. It is vital for firms, governments and organisations to be aware of the subject and its influence on their sectors. Not only will this reduce the risk of sudden, unanticipated transitions, but it will also lead to the attainment of benefits and competitive advantages in the new business environment.

This article is meant as an introductory primer to sustainability and its role in public and private institutions. It contains an explanation of the concept itself and places it in the broader business context. It also covers key subtopics and terminologies which one will come across often in this field. Furthermore, the reader has also been apprised of the risks and opportunities associated with sustainable strategies.

This article is the first part of a series of articles on sustainability. Subsequent articles will focus on specific topics within this field including a deep dive into climate finance and an overview of the environmental and climate related regulations in India.

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