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A NEWSLETTER OF THE FINANCE LAB

December 2020, Volume 6, Issue 3



# Sustainable Development: Changing Winds & Way forward

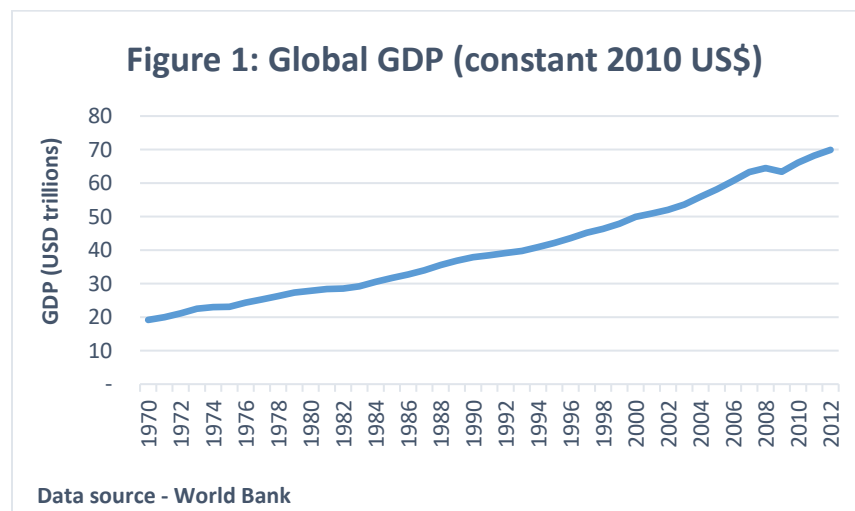
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This article explores the current investment in sustainable development in general and on the environmental part of Environmental, Social, and Governance (ESG) in particular, along with the opportunities and challenges from COVID-19.

Since the start of the first industrial revolution, humankind has seen tremendous growth in its standard of living. The last few centuries have given us various energy sources, coal, electricity, oil & gas, steam and nuclear. The concept of assembly lines and digitization of the same has catapulted the levels of production exponentially. As compared to the start of the third industrial revolution (around 1970-1975), the world GDP levels have almost quadrupled today (at 2010 prices).<sup>20</sup>



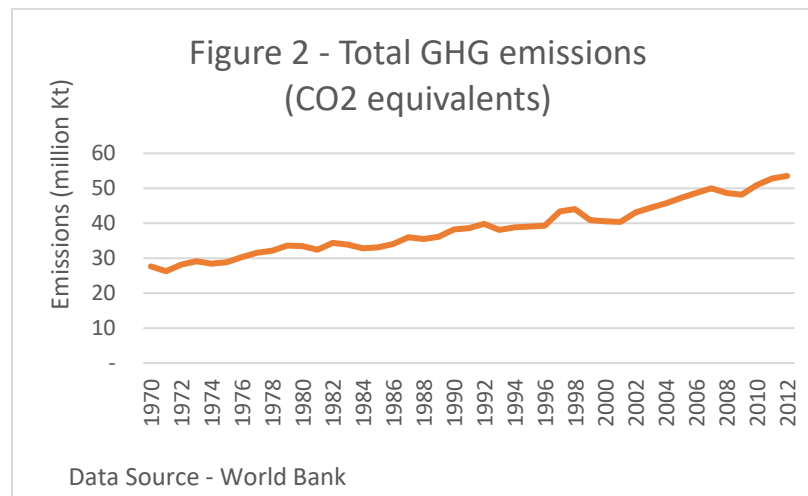
Advancements in communication & transportation have made the world smaller and today we have processes in place that can convert inputs into outputs with minimal or no human intervention. This growth and advancement

<sup>20</sup> <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?end=2019&locations=IN-1W&start=1960&view=chart>

have come with a tremendous strain on our natural resources and climate. The Environmental malpractices of corporates make headlines even today. But there are changes, happening for the better.

## Global Warming

A reason at the heart of many environmental issues/climate change is global warming due to human-made pollution. As signaled in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, “The greenhouse gas (GHG) emissions have increased since pre-industrial era and the resultant concentration of Carbon dioxide, methane and nitrous oxide are at levels not seen in past 8,00,000 years. This has affected the climate and are extremely likely the cause of the warming since the 1950s.”<sup>21</sup> Figure 2 shows that GHG emissions have nearly doubled between 1970 and 2012.<sup>22</sup> Industries, agriculture, electricity generation, and automobiles are some of the significant drivers of GHGs. Corporate scandals by the likes of Volkswagen and ExxonMobil have also added to the woes.



But as mentioned before, the trends are changing. Let us now delve into how the current investments and policies address sustainable development and climate change.

## Changing Winds

Traditionally, it has been a view amongst corporate leaders and investment executives that investment in sustainability runs counter to shareholder value creation. If an organization wants to be environmentally responsible, it must incur additional costs that would lower its earnings. This perception, however, is now changing.

A 2020 KPMG survey of hedge fund managers & institutional investors with total assets under management (AUM) of \$1.65 trillion found that 85% of institutional investors are the biggest drivers of demand for ESG

<sup>21</sup> Climate Change 2014 Synthesis report Summary for Policymakers

<sup>22</sup> <https://data.worldbank.org/indicator/EN.ATM.GHGT.KT.CE>

oriented hedge funds.<sup>23</sup> For their part, hedge fund managers are well placed to respond to this demand due to their deep talent pool, technological capabilities, and nimble investment strategies. Furthermore, a 2019 article titled “The Investor Revolution” in Harvard Business Review by Eccles and Klimenko found that ESG issues were top of the mind of almost all of the 70 senior executives (at 43 global institutional investing firms) interviewed.<sup>24</sup>

Investors have translated their sustainability concerns into an enquiry of meaningful actions that investment firms and their investee companies are taking. “ESG issues have become much more important for us as long-term investors” noted Cyrus Taraporevala, president & CEO of State Street Global Advisors.<sup>25</sup> The numbers support this view. In 2006, upon the launch of UN-backed Principles of Responsible Investing, 63 investment companies (with \$6.5 trillion in AUM) signed a commitment to incorporate ESG issues in their investment decisions. By April 2018, this number has grown to 1715 with an AUM of \$81.7 trillion.

So, what are the drivers behind these changing winds?

- **Size of the investment firms:** The top 10 global asset managers hold 34% of externally managed assets amounting to trillions of dollars in AUM. These firms cannot mitigate their risk by investing in certain contrarian assets or doom stocks. Thus, each of their investments must be driven by a certain degree of sustainability, environmental, and social perspective for generating long-term returns. In short, they have become too big to let the planet fail.
- **Brand perception & returns:** End consumers, especially in developed countries, have become more concerned about the planet and future generations and want to do their part for a healthier world. As a result, they prefer buying from companies that go the extra mile to contribute to the environment and society. Such consumer preference provides companies an opportunity to deliver customer satisfaction, enhance brand image, increase demands, and higher stock returns.
- **Changing employee perspective:** The proportion of millennials in the workforce is continuously increasing. Millennials generally want the ESG principles to be a part of their work culture. When more employees are ESG aligned, there is a greater synergy between top tier management strategies and ground-level execution.

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<sup>23</sup> Sustainable Investing – fast forwarding its evolution: A joint effort between KPMG international, CREATE research, AIMA & CAIA.

<sup>24</sup> <https://hbr.org/amp/2019/05/the-investor-revolution>

<sup>25</sup> State Street Global Advisors (SSGA) is the asset management division of State Street Corporation and the world’s third largest asset manager with nearly \$3.05 trillion (USD) in AUM as of 30 June 2020

- Investor attention: The change of perspective is not limited to Customers or employees. Investors also increasingly want ESG responsible investments. There are over 3300 ESG funds globally, and the number has tripled over the last decade.<sup>26</sup> In India, there are a handful of schemes focusing on ESG criteria as shown in Figure 3.

**Figure 3 - Indian ESG focused funds**

Name of the Fund	Launch date	AUM (in Cr)
SBI Magnum Equity ESG	01 Jan, 1991	2773
Axis ESG equity fund	12 Feb, 2020	1680
Quantum India ESG equity	12 July, 2019	20
ICICI prudential ESG fund	09 Oct, 2020	1415
Quant ESG equity fund *	15-30 Oct, 2020	N/A
Mirae Asset ESG Sector Leaders ETF *	27 Oct-10 Nov, 2020	N/A

\* Date range mentioned is the NFO period

Furthermore, alternative energy sources constituted roughly 11% of the world's primary energy (electricity, transportation & heating) source in 2019.<sup>27</sup> The reasons for the low share are the infrastructural costs involved and easier access to traditional energy sources. Hence, innovations in technologies that make alternative energy sources more accessible and economical would naturally garner investor attention.

### Impact of COVID-19

As the world looks forward to a vaccine for COVID-19 and economies try to bounce back from the pandemic, there is an opportunity for nations to increase their reliance on renewable energy sources and strive to attain several Self Development Goals (SDG) such as SDG 7, 11, 13-15.

The COVID-19 pandemic-driven lockdown has reduced pollution levels and improved overall air quality, putting additional pressure on governments to continue this trend. As S&P global reports, the carbon emissions have dropped by 17% in April 2020 vis-a-vis a year earlier.<sup>28</sup> On the other hand, governments across the world have written official policies or enacted laws aimed at raising the amount of renewable power capacity installed by 2030.

<sup>26</sup> <https://indianexpress.com/article/explained/explained-what-are-esg-funds-and-why-are-they-becoming-popular-6619234/>

<sup>27</sup> <https://ourworldindata.org/renewable-energy>

<sup>28</sup> S&P global report - COVID-19 Daily update: May 20, 2020.

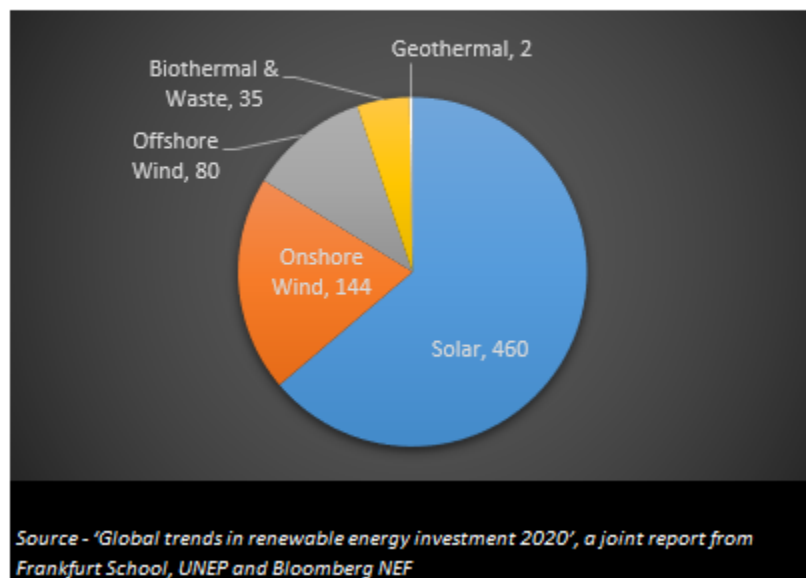
Additionally, governments are likely to introduce stimulus packages aimed at power infrastructure (like Rs 90,000 crore liquidity injection in power distribution companies announced in India on May 13, 2020).<sup>29</sup> Such a stimulus can be directed to renewable energy sources, thereby contributing to development and better climate conditions.

### Renewable energy targets: Governmental & Corporate

We can broadly classify the causes of CO<sub>2</sub> & GHG emission into three parts: (1) Electricity generation, (2) transportation, and (3) industrial & residential heating.

For the electricity part, let us run some calculations. Renewable energy targets for 2030 written by governments of 87 countries in their official policies would entail additional 721 gigawatts of renewable power infrastructure (other than renewable hydro energy).<sup>30</sup>

**Fig 4 - Renewable Power additions required to meet government targets with deadlines between 2020 & 2030. Capacity in GW**



<sup>29</sup> <https://energy.economicstimes.indiatimes.com/news/power/pfc-rec-to-infuse-rs-90000-crore-liquidity-injection-to-ailing-discoms-nirmala-sitharaman/75719574>

<sup>30</sup> These include not only high income countries that were early movers in green energy but also developing countries. This analysis is not based on NDCs prepared by countries in context of the Paris Climate Agreement of December 2015 but on what is written into official policy so far and hence has clearest momentum behind. Details from 'Global trends in renewable energy investment 2020', a joint report from Frankfurt School, UNEP and Bloomberg NEF.

Additionally, several companies have joined the RE100 group. Led by The Climate Group in partnership with CDP, RE100 is a global corporate leadership initiative bringing together influential businesses committed to 100% renewable electricity. As of the writing of this article, the group includes 263 companies with target years ranging from 2020 to 2050.<sup>31</sup> The group includes 22 of the world's 100 largest companies by revenues (in the Forbes Fortune 500 list for 2020) including Walmart, Apple & Google. From India, five companies have signed up to this initiative: Dalmia Cement, Hatsun Argo Products, Infosys, Mahindra Holidays & Resorts, and Tata Motors. Of these, Infosys has already achieved a neutral carbon footprint as per its commitment.

The RE100 companies may prompt the construction of additional 105 gigawatts worth of generation capacity.<sup>32</sup> Moreover, many companies have set up targets to meet their total energy consumption from renewable sources, which brings the tally to 826 gigawatts costing about \$1 trillion (excluding hydro energy) over a span of the next ten years. The actual costs will vary with the mix of energy sources and technological advances which will make future capacity installation cheaper.

This is a modest target even if compared to what has already been achieved. During 2010-2019, the world added 1213 gigawatts of renewable energy spending \$2.7 trillion (excluding large hydro-electric dams). If we look towards the future, countries, through the Paris Agreement, agreed to a common goal of keeping the global temperature increase in this century to “well below” 2 degrees Celsius. This would require an investment of \$3.1 trillion by 2030 for an addition of 2,836 GW of new non-hydro renewable energy capacity (1,646 GW of solar, 1,156 GW wind, and 34 GW other non-hydro renewables).<sup>33</sup>

India has set an ambitious target of 175GW renewable energy sourcing by 2022 in line with its undertaking under the Paris agreement. Of this, 100GW and 60GW will be contributed by solar and wind energy respectively. As of 31 Dec 2019, Renewable energy constituted just over 23% (85.9GW) of total installed energy generation capacity in India as per the Annual report 2019-20, Ministry of New & Renewable Energy.

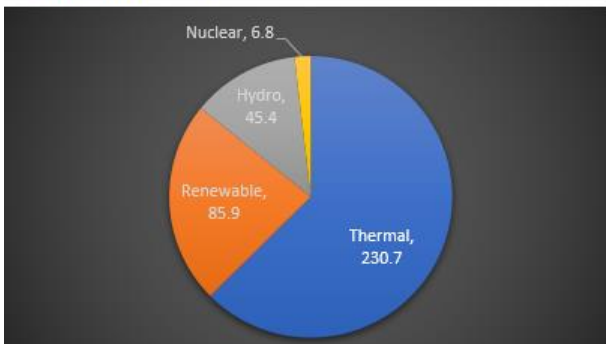
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<sup>31</sup> <https://www.there100.org/re100-members>

<sup>32</sup> This assumes that the energy requirements will keep on increasing in line with their current levels for these companies and the same will be fulfilled by Power Purchase Agreements for renewable energy.

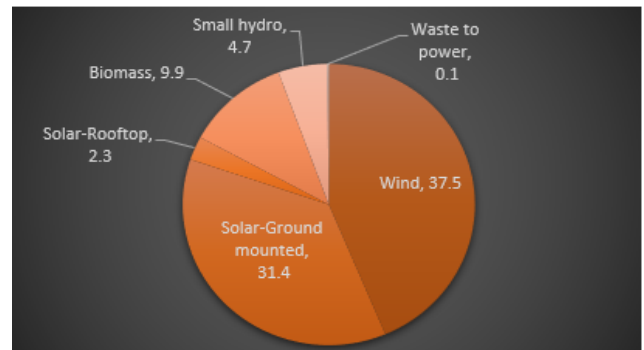
<sup>33</sup> ‘Global trends in renewable energy investment 2020’, a joint report from Frankfurt School, UNEP and Bloomberg NEF

Fig 5.1 - India - Source wise installed power generation capacity (GW) as on 31 Dec 2019



Source – Annual report 2019-20, Ministry of New & Renewable Energy (MNRE)

Fig 5.2 - India - Source wise installed renewable power generation capacity (GW) as on 31 Dec 2019



Source – Annual report 2019-20, Ministry of New & Renewable Energy (MNRE)

With respect to transportation and corresponding emissions, world governments are following three approaches to reign the same under control: (A) Reduction in the overall number of automobiles running on Internal combustion engine, (B) Regulation of the emission levels and fuel economy of existing fossil fuel-powered vehicles, and (C) Increasing the share of Electric vehicles in total automobile population. India is following options B & C to tackle automobile pollution. Introduction of BS-VI norms directly from BS-IV rather than gradually moving from BS-IV to BS-V and then to BS-VI is a substantial effort to move towards better emission norms.<sup>34</sup> Moreover, the holistic approach by the Indian government for increasing EV adoption by the introduction of the FAME scheme is another significant step in this direction. It has provisions for incentivizing EV manufacture, charging infrastructure, EV component manufacture, and subsidizing EV purchases. All these measures show that on a policy level also, tackling vehicular pollution is getting greater attention in India.

And lastly, industrial & residential heating, which caused about 32% of global energy-related emissions in 2016, is by far the most notorious one to handle.<sup>35</sup> A large part of the reason is the non-availability of efficient alternatives to traditional gas-fueled heating solutions. A district-level centralized heating system powered by biomass or waste-to-energy plants can be one solution, but that depends on availability and infrastructure. Another option is biomass stoves which can be a bit costly without subsidies. Same biomass options can be implemented as alternatives in industrial processes also.

### Looking ahead

<sup>34</sup> BS-VI is a vehicle pollution emission standard issued by Bharat Stage Emission Standards (BSES). It prescribes the maximum permissible limits of various GHGs for different type of vehicles.

<sup>35</sup> 'Global trends in renewable energy investment 2020', a joint report from Frankfurt School, UNEP and Bloomberg NEF



So far, we have seen general trends & data that underline the need for investment and policy intervention for climate change. A lot needs to be done still. Some key focus areas for impacting the rate of sustainability adoption are discussed below:

- A. Availability of corporate funding: On the one hand, many startups engaged in relevant technological research and solutions do not have access to required financing, despite government subsidies and banking schemes.<sup>36</sup> On the other hand, companies are required to spend specific amounts of their profit on CSR activities.<sup>37</sup> Such CSR activities include a contribution to incubators set up by various institutions & government departments. Thus, accelerating the flow of corporate earnings to incubators is one option.

Another option is to include under the CSR umbrella any direct contribution to startups fulfilling specific criteria. This will also help the larger corporations imbibe the resultant successful technologies within their organization, which can further help them reduce their own carbon footprint and the others by making the same commercially available.

- B. Waste management: The waste generated by industries as well as agricultural activities contributes to GHGs in two ways: either by rotting or by burning. Better waste management systems, where the waste of one industry is used as raw material for another, can be a significant step towards tackling this problem. For example, Agricultural and biological wastes can be used in the fertilizer and biofuel industries. Red mud from bauxite mining can be used in the cement industry.

With proper infrastructure and logistical support, waste management curbs not only emissions from waste but also the ones caused due to extraction of fresh raw materials where waste can instead be used. Cost savings on the waste management front can also be achieved.

- C. Stakeholder alignment: Many companies, including those signed up to RE100, are striving towards 100% renewable energy or lower milestones within specific timelines. Large corporates enjoy a unique strategic place in the supply chain. Companies aiming to increase renewable energy in their overall consumption mix can impact their suppliers to be more environmentally responsible too.

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<sup>36</sup> Kite power, Constructis, Nostromo energy and SEaB internationally as well as Carbonlites by Carbon Masters, Paterson Energy and Polycycl in India are a few startups working on such solutions.

<sup>37</sup> Section 135 and of Schedule VII of the Companies Act 2013 and the Companies (Corporate Social Responsibility Policy) Rules 2014 govern Corporate Social Responsibility (CSR) in India. Indian companies that meet net worth, turnover & net profit thresholds must form a CSR committee and spend 2% of their average net profits of last three financial years on CSR activities.

For example, as mentioned before, if a cement manufacturing company wants to change its raw material source, it must align its previous step in the supply chain, the supplier. Hence, the decision by the cement company will impact their suppliers also. And if enough companies do this, the supplier would have to opt into this trend even if earlier the loss of one client was not enough incentive from a business standpoint.


Secondly, organizations will have to spread awareness and impart training to their employees. Investors & CEOs create the space, but it is middle management that will create the products and thereby value for shareholders, customers and society at large. Hence, the middle management's involvement helps translate vision into actions.

D. Improved reporting & audit: There is an increased interest by investors towards ESG responsible organizations. But the issue they face is a lack of relevant information in this regard for decision making. Many organizations publish a report of the steps taken, but these reports are primarily for environmental agencies and NGOs.

A company can take various steps to help investors gauge its environmental activities and make informed decisions. These steps include: identifying environmental risk factors, identifying affected organizations, forming internal policies to address these, taking actions, building internal systems to monitor ESG performance, and issuing periodic reports measuring financial impacts of the same.

There is no set format for reporting in this regard. But there are headwinds in this direction also. The Sustainability Accounting Standards Board has issued 77 industry-specific reporting standards, which include the industry-specific key metrics, to assist companies in disclosing financially material, decision-useful sustainability information to investors.<sup>38</sup> Stock exchanges have also provided voluntary key reporting metrics in this regard.

Fig 6 - Key ESG reporting metrics

 <b>Environmental (E)</b>	 <b>Social (S)</b>	 <b>Corporate Governance (G)</b>
E1. GHG Emissions E2. Emissions Intensity E3. Energy Usage E4. Energy Intensity E5. Energy Mix E6. Water Usage E7. Environmental Operations E8. Climate Oversight / Board E9. Climate Oversight / Management E10. Climate Risk Mitigation	S1. CEO Pay Ratio S2. Gender Pay Ratio S3. Employee Turnover S4. Gender Diversity S5. Temporary Worker Ratio S6. Non-Discrimination S7. Injury Rate S8. Global Health & Safety S9. Child & Forced Labor S10. Human Rights	G1. Board Diversity G2. Board Independence G3. Incentivized Pay G4. Collective Bargaining G5. Supplier Code of Conduct G6. Ethics & Anti-Corruption G7. Data Privacy G8. ESG Reporting G9. Disclosure Practices G10. External Assurance

Source - ESG Reporting guide 2.0 released in May 2019 by NASDAQ

<sup>38</sup> <https://www.sasb.org/standards-overview/download-current-standards/>

Another issue is the reliability of the data presented. There is no regulatory push to get the ESG data audited. In India for example, ESG details form a part of other information in the annual report and the only responsibility of the auditor is to ensure that the information is not materially inconsistent with the audited financial results. Hence the question of accuracy and reliability of data is to be answered by investor due diligence for now.

### **Conclusion**

Every benefit comes at a cost which, in the case of the development of the human race, has been the environment. Electricity, vehicles, industries, and heating have exacerbated GHG emissions and global warming. Earlier, buying products of an environmentally responsible organization or contributing to an environmental cause was associated with psychological satisfaction (from doing the right thing despite higher costs). However, this has now become necessary as climate change has started to affect us economically & financially.

Environmentally and socially responsible organizations are resonating well with customers and investors. Some companies may exceed their sustainability targets, while others may fall short. The same goes for government policies as well. A lot has to be done in all aspects be it renewable energy, EVs, financing or reporting. Changes are underway, and the outlook is positive for all that is being done collectively as a society.

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