

Climate Change Pressure on the Legal Domain

By Upendra Parakhi



Introduction

It seems, the Ministry of Environment, Forests and Climate Change, Government of India is on a fast track with respect to changing or amending almost all legislations related to environment during the year 2022. Analysis of the situation indicates that one of the major reasons is climate change. The biggest conference on the global level for climate change, COP27 was held in November 2022. In the subsequent para, let us understand the outcome of COP27; the impacts of climate change and the pressure created resulting in changes in Environmental related regulations.

COP27

The 27th United Nations Climate Change Conference of the Parties, COP27, produced a mixed bag of frustration and progress and a few signals suggesting reasons for cautious optimism. The Sharm el-Sheikh Implementation Plan's final output has implications for business, government and civic society. Five main takeaways from the plan are:



- **Loss and Damage:** COP27 reached a breakthrough agreement to establish "loss and damage" funding for vulnerable countries affected by climate-related disasters. Most developed countries were opposed to a Loss and Damage agreement for fears of liability for historical climate-related damages. Thus,

semantics have played a role in the final agreement, which establishes a "loss and damage" fund rather than a commitment to provide compensation. While many details of the fund are still to be negotiated, the expectation is that developing countries vulnerable to the adverse effects of climate change weather-related events will be supported for losses.

- **COP27 = 2.7°C?:** According to calculations by Climate Action Tracker prior to COP27, "current policies presently in place around the world are projected to result in about 2.7°C warming above pre-industrial levels (2.7°C is the median of the combined low and high ends of current policy projections)."

In the same scenarios, India announced its long-term strategy to transition to "low emission" pathway to become carbon neutral by 2070.

India's road to 'net zero'

At COP-27, India announced its long-term strategy to transition to a 'low emissions' pathway to become carbon neutral by 2070

KEY MILESTONES

- The National Hydrogen Mission, launched in 2021, aims to make India a green hydrogen hub
- At least a three-fold increase in nuclear capacity by 2032
- Achieving an ethanol blending target of 20% by 2025
- Maximising the use of electric vehicles, increase public transport
- Increased climate finance to be provided by developed nations
- The long-term strategy aims at keeping global temperatures well below 2 degrees Celsius and, ambitiously, 1.5 degrees Celsius by the century-end

Environment Minister Bhupender Yadav at the COP-27 summit in Egypt on Monday. REUTERS

It may be recalled that the Glasgow Climate Pact reached at COP26 was upholding the stronger goal of the Paris Agreement and thus keeping hopes of the 1.5°C trajectory alive. To ensure this trajectory, the Glasgow Climate Pact urged most of the countries involved to ramp up their current Nationally Determined Contributions (NDCs) for 2030 emissions reductions by COP27. Very few did. There was a clear lack of ambition (even pushback) at COP27 for upholding the 1.5°C pathway. This has put a significant dent in the chances of limiting the severe effects of climate change through mitigation efforts.

- **The fossil fuel empires strike back:** The Glasgow Climate Pact agreed at COP26 represented the first time that fossil fuels had been mentioned in a UNFCCC cover text. Given this fact, combined with the current political and economic backdrop, there were hopes that the COP27 climate talks could be seized upon to accelerate the transition of energy systems away from fossil fuels. To this end, the Indian government, supported by 80 member states, led a proposal for the text "unabated coal" to be expanded to include all fossil fuels. However, this proposal did not get off the ground due to significant pushback from oil and gas-producing countries. Short-term interests (read oil and gas producing countries, supported by 636 industry lobbyists) may have won this COP. However, it has taken 26 years for the UNFCCC to acknowledge fossil fuels, and, just like the 30-year fight for Loss and Damage, it is now a matter of not 'if' but 'when' text includes the phasing out of fossil fuels. Given that fossil fuel assets have a 15–20-year investment horizon, and the venture capital pouring into climate tech and innovation, we can assume non-fossil fuel interests will prevail in the long-term.
- **Transformation of the financial system:** An understated victory for the Sharm el-Sheikh Implementation Plan is the recognition of the need to transform the global financial system. The text specifically calls out multilateral development banks (MDBs) and international financial institutions to reform their practices so they become aligned with requirements for addressing the global climate emergency. The issue of climate finance has presented a significant barrier in climate talks for decades. Increasing awareness and scrutiny

of the role of international financial institutions in providing climate finance to developing countries is a promising sign for future COPs.

- **Zero tolerance for net zero greenwashing:** The fifth takeaway, announced by the UN outside of the formal negotiating rooms at COP27, has the potential to create a significant impact in the 'real economy' by putting a stop to net-zero greenwashing. By drawing a line between what constitutes credible action and what amounts to greenwashing, the UN is changing the game and setting the bar high for companies claiming to be net zero.

Present political scenario including Ukraine War continuing, it is time to watch the progress being made by the countries addressing climate change, till COP28 2023.

2023 will be a historic year for the UAE. The country is going to host the 28th session of the Conference of Parties (COP 28) to the UNFCCC (United Nations Framework Convention on Climate Change) from November 30, 2023 to December 12, 2023.



Climate change:

Climate change is already impacting every corner of the world, and much more severe impacts are in store if we fail to halve greenhouse gas emissions this decade and immediately scale up adaptation. The IPCC 2022 report is based on 34,000 studies and involves 270 authors from 67 countries; provides one of the most comprehensive examinations of the intensifying impacts of climate change and future risks, particularly for resource-poor countries and marginalized communities. Here are six takeaways from the report:

GLACIER MELT RECORDS BROKEN IN 2022

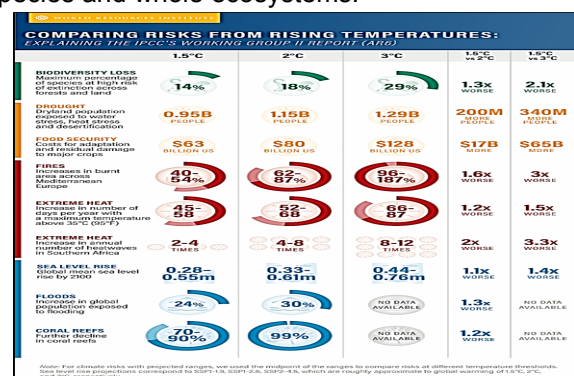
Emission
 > Concentrations of the main GHG, carbon dioxide, methane, and nitrous oxide, reached record levels in 2021
 > Data from key monitoring stations show atmospheric levels of the three gases continue to increase in 2022

Temperature
 > The global average temperature in 2022 is estimated to be about 1.15 (1.02 to 1.28) degree C above the 1850-1900 average
 > 2015 to 2022 are likely to be the eight warmest years on record

Glaciers and ice
 > In the European Alps, glacier melt records were shattered in 2022
 > Average thickness losses of between 3 and over 4 metres were measured throughout the Alps
 > In Switzerland, 6% of the glacier ice volume was lost between 2021 and 2022
 > Arctic sea-ice extent was below the long-term (1981-2010) average for most of the year

Sea level rise
 > Global mean sea level has risen by an estimated 3.4 ± 0.3 mm per year over the 30 years (1993-2022)
 > The rate has doubled between 1993-2002 and 2013-2022
 > Sea level increased by about 5 mm between January 2021 and August 2022
 > The acceleration is due to increasing ice melt

1. **Climate impacts are already more widespread and severe than expected:** Climate change is already causing widespread disruption in every region in the world with just 1.1 degrees C (2 degrees F) of warming. Withering droughts, extreme heat and record floods already threaten food security and livelihoods for millions of people. Since 2008, devastating floods and storms have forced more than 20 million people from their homes each year. Since 1961, crop productivity growth in Africa shrunk by a third due to climate change. Climate change is also harming species and whole ecosystems.
2. **We are locked into even worse impacts from climate change in the near-term:** The IPCC estimates that in the next decade alone, climate change will drive 32-132 million more people into extreme poverty. Global



warming will jeopardize food security, as well as increase the incidence of heat-related mortality, heart disease and mental health challenges.

- 3. Risks will escalate quickly with higher temperatures, often causing irreversible impacts of climate change:** The report finds that every tenth of a degree of additional warming will escalate threats to people, species and ecosystems. Even limiting global warming to 1.5 degrees C — a global target in the Paris Climate Agreement — is not safe for all. For instance, with just 1.5 degrees C of global warming, many glaciers around the world will either disappear completely or lose most of their mass; an additional 350 million people will experience water scarcity by 2030; and as much as 14% of terrestrial species will face high risks of extinction. The IPCC projects that these risks will compound one another as multiple hazards occur at the same time and in the same regions.

For example, in tropical regions, the combined effects of heat and drought may trigger sudden and significant losses in agricultural yields. At the same time, heat-related mortality will increase while labor productivity decreases, so people will not be able to work harder to overcome drought-related losses. Together, these impacts will lower families' incomes while raising food prices — a devastating combination that jeopardizes food security and exacerbates health risks like malnutrition.

- 4. Inequity, conflict and development challenges heighten vulnerability to climate risks:** Exposure to climate impacts rose dramatically in cities since the publication of the IPCC's Fifth Assessment Report in 2014. The fastest increases in urban vulnerability occurred across informal settlements, where precarious housing, inadequate access to basic services, and limited resources impede resilience efforts. This challenge is especially acute in sub-Saharan Africa, where 60% of the urban population lives in informal settlements, and in Asia, where 529 million people reside in these vulnerable areas. The IPCC projects that by 2030, extreme droughts across the Amazon will spur rural migration to cities, where Indigenous Peoples and traditional communities will likely be forced to live on the margins. Inequity, conflict and development challenges such as poverty, weak governance, and limited access to basic services like healthcare not only heighten sensitivity to hazards, but also constrain communities' ability to adapt to climatic changes.
- 5. Adaptation is crucial. Feasible solutions already exist, but more support must reach to vulnerable communities:** At least 170 countries' climate policies now include adaptation, but many have yet to move beyond planning into implementation. The IPCC finds that efforts today are still largely incremental, reactive and small-scale, with most focusing only on current impacts or near-term risks. A gap between current adaptation levels and those needed persists, driven in large part by limited financial support. The IPCC estimates that adaptation needs will reach \$127 billion and \$295 billion per year for developing countries alone by 2030 and 2050, respectively. At the moment, adaptation accounts for just 4-8% of tracked climate finance, which totaled \$579 billion in 2017-18. The good news is that existing adaptation options can reduce climate risks if they're sufficiently funded and implemented more quickly. The 2022 IPCC report breaks new ground by analyzing various climate adaptation measures' feasibility, effectiveness and potential to deliver co-benefits like improved health outcomes or poverty reduction.
- 6. But some impacts of climate change are already too severe to adapt to. The world needs urgent action now to address losses and damages:** Whether facing soft or hard limits of climate adaptation,

the result for communities is devastating and oftentimes irreversible. These losses and damages will only increase as global temperatures rise. Climate change endangers the well-being of people and the planet. Delayed action risks triggering impacts of climate change so catastrophic our world will become unrecognizable.

The next few years offer a narrow window to realize a sustainable & livable future for all. Changing course will require immediate, ambitious and concerted efforts to slash emissions, build resilience, conserve ecosystems, and dramatically increase finance for adaptation and addressing loss and damage.

Pressure created due to Climate Change:

Stakeholders	Reason	Legislative Changes
International Governments	Pressure to Reduce GHG Emission	<ul style="list-style-type: none"> • New Rules • Changes in Disclosures Requirements
Indian Governments	NDC Commitments	<ul style="list-style-type: none"> • Change in Rules of rules • Disclosure & rating requirements • Circular Economy
Industry Sectors	Pressure to reduce GHG emission Development of new industry sectors	<ul style="list-style-type: none"> • Compliance requirements for changed rules • New Disclosure & Rating requirements
Financial Institutes	Green Investment Pressure	<ul style="list-style-type: none"> • Revised evaluation process
Individuals (Employees)	Impact of extreme weather	<ul style="list-style-type: none"> • Health issues • Difficulty in commuting

The above discussion related to the increased Green House Gas emissions, Global Warming, Changed Weather Patterns, etc. results in pressure to reduce GHG emissions and contain global warming by mitigation and or adaption efforts. If governments don't act now, global temperatures will rise to 3.2 degrees above pre-industrial levels by the end of the century, bringing with it irreversible and cascading effects of climate change, states the latest report of the United Nation's Intergovernmental Panel on Climate Change (IPCC). It adds, however, that there is possibility for the world to avoid the worst of climate change, by acting within this decade — through sustainable development, employing carbon dioxide removal (CDR) technologies and methods, and making deep cuts in emissions. The adjacent table indicates various stakeholders' urgency to address the climate change issues and their efforts in the legislative domain. by the various stakeholders. For example, at the international level, various governments are bringing sustainability or ESG (Environment, Social & Governance) practices into the regulatory framework, instead of voluntary ones. New rules are being introduced in the area of renewable energy, sourcing of raw materials as well as Circular Economy (for utilization of waste). Even the legal requirements related to the Supply chain and its assessment and Green financing are also coming up in a big way.

It seems, during the calendar year 2022, the Indian Government was on a fast track and working overtime, considering the numbers of environmental legislation introduced or modified or proposed for changes, as given in the table below. Some of the key changes are the introduction of an EPR (Expended Producers

Responsibility) Concept and decriminalization of environmental acts. EPR concepts ultimately encourage the circular economy. However, there is a criticism that a number of substantial changes in the statutory provisions are being introduced through OMs as they are meant to be internal documents of the government used for inter and intra departmental communication of decisions.

Since they are not mandatorily required to be in the public domain, they should not be used as instruments for issuing important environmental decisions. Instead, any such decision should be widely published as a notification in the official Gazette of India, as per Vidhi Report Analysis.

Table 1: New or Modified Environmental Rules during 2022

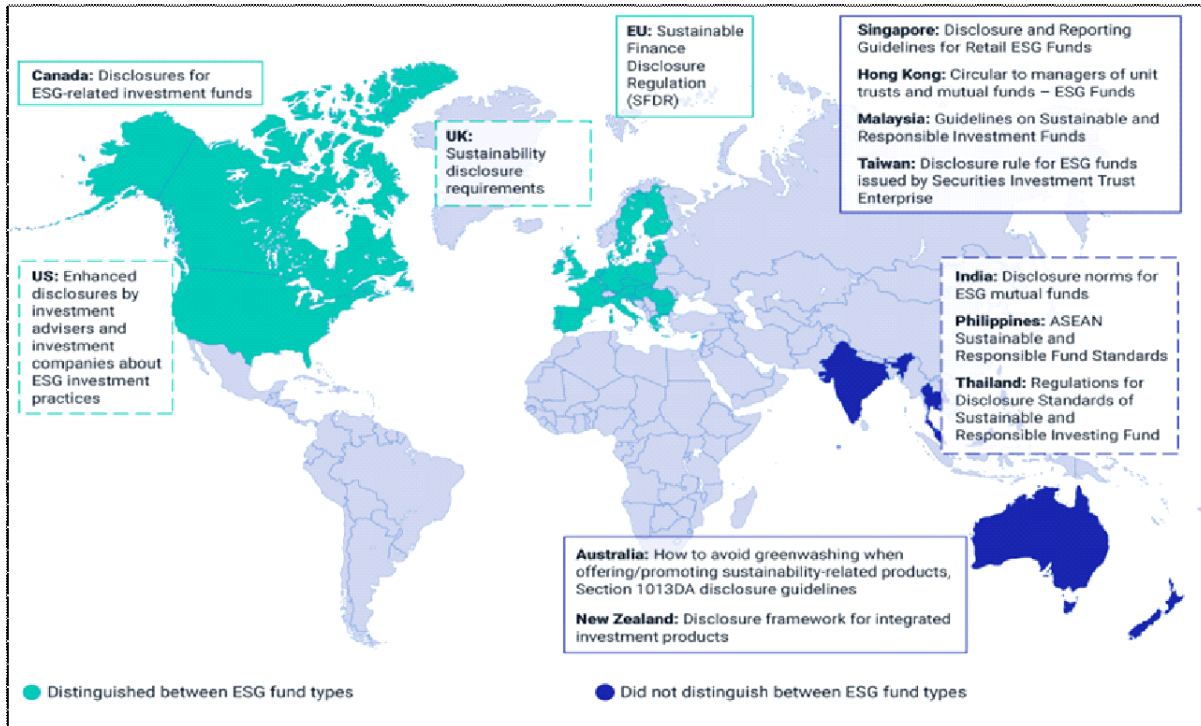
No	Order Title	Uploaded on Web Site of MoEF
1	G.S.R. 811(E) dated 10th November, 2022 – Environment (Protection) (Amendment) Rules, 2022 – Environmental Standard for Common Effluent treatment Plant (CETP)	16-11-2022
2	G.S.R. 801(E) dated 2nd November, 2022 - E-Waste (Management) Rules, 2022	15-11-2022
3	G.S.R. 805(E) Date [08-11-2022]-Draft Notification for Environment (Protection) Amendment Rules, 2022 on Environment Standards for Hot Mix Plant.	11-11-2022
4	G.S.R. 804(E) Date [03-11-2022]-Draft Notification for Environment (Protection) Third Amendment Rules, 2022 for Revised Emission Standards for New Generator Set (Genset).	11-11-2022
5	Amendment Notification on Environmental Standards for Thermal Power Plants	06-09-2022
6	G.S.R 593(E) Date 21st July, 2022- Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2022	02-09-2022
7	Battery Waste Management Rules Notification, 2022	26-08-2022
8	Plastic Waste Management Second Amendment Rules 2022	12-07-2022
9	Notice for Public Consultation for Amendment in the Indian Forest Act, 1927 for decriminalization of certain section of IFA, 1927	09-07-2022
10	Proposal for revision of emission standards for particulate matter for industrial boilers	04-07-2022
11	Seeking Comments on the Proposed Amendment of Environment (Protection) Act, 1986.	01-07-2022
12	Notice for Public Consultation for Amendment in the Water (Prevention & Control of Pollution) Act, 1974	30-06-2022
13	Notice for Public Consultation for Amendment in the Air (Prevention & Control of Pollution) Act, 1981	30-06-2022
14	Notice For Public Consultation on Proposal for amendment in the Public Liability Insurance (PLI) Act, 1991	30-06-2022

15	Draft - Environment (Protection) Amendment Rules, 2022 (Environmental Standards for New Calcined Petroleum Coke (CPU) units).	02-06-2022
16	S.O.360(E) Date[19-05-2022]-Draft E Waste Management Rules Notification for seeking public comments	23-05-2022
17	G.S.R. 143(E)-Date[22-02-2022] - Amendment Notification of Environment Standards for Brick kiln.	22-02-2022
18	G.S.R.138_(E)_ Date[18-02-2022]-Draft Notification for Revised Emission Standards for New Generator Set (Genset).	18-02-2022
19	Plastic Waste Management (Amendment) Rules, 2022.	16-02-2022
20	G.S.R. 22(E)-Date[18-01-2022] - Plastic Waste Management Rules, 2022	18-01-2022
21	S.O. 5497(E) Date[31-12-2021]-Draft Notification for seeking public comments on Regulation on Extended Producer Responsibility for Waste Tyres.	31-12-2021
22	S.O.4929(E) [02.12.2021] Final Notification declaring Eco Sensitive Zone around Askot Wildlife Sanctuary, Uttarakhand.	12-06-2021
15	Draft - Environment (Protection) Amendment Rules, 2022 (Environmental Standards for New Calcined Petroleum Coke (CPU) units).	02-06-2022
16	S.O.360(E) Date[19-05-2022]-Draft E Waste Management Rules Notification for seeking public comments	23-05-2022
17	G.S.R. 143(E)-Date [22-02-2022] - Amendment Notification of Environment Standards for Brick kiln.	22-02-2022
18	G.S.R.138_(E)_ Date [18-02-2022]-Draft Notification for Revised Emission Standards for New Generator Set (Genset).	18-02-2022
19	Plastic Waste Management (Amendment) Rules, 2022.	16-02-2022
20	G.S.R. 22(E)-Date [18-01-2022] - Plastic Waste Management Rules, 2022	18-01-2022
21	S.O. 5497(E) Date [31-12-2021]-Draft Notification for seeking public comments on Regulation on Extended Producer Responsibility for Waste Tyres.	31-12-2021
22	S.O.4929(E) [02.12.2021] Final Notification declaring Eco Sensitive Zone around Askot Wildlife Sanctuary, Uttarakhand.	12-06-2021

Besides environmental laws, there are number of other regulatory changes are being undertaken in India as per National Action Plan on Climate Change (NAPCC) outlining eight National Missions on climate change. These include: National Solar Mission; National Mission for Enhanced Energy Efficiency' National Mission on Sustainable Habitat; National Water Mission; National Mission for Sustaining the Himalayan Eco-system; National Mission for a Green India; National Mission for Sustainable Agriculture; National Mission on Strategic Knowledge for Climate Change.

When it comes to Corporate or Industry, the year 2022, was for focusing on ESG Practices, mainly due to disclosure requirements that are due from 2023. Latest report of MSCI on "ESG and Climate Trends to Watch for 2023" indicates that ESG itself is being put under the spotlight. Regulators around the world are upping the ante on everything from greenwashed fund names to stricter climate target disclosures, while the very idea of

ESG investing is increasingly politicized. Regulatory interest in fund names and funds' classification and disclosure obligations are ramping up globally. Spearheaded by the EU's Sustainable Finance Disclosure Regulation, which imposes requirements on more transparent reporting for ESG funds, other major market regulators are following suit.



The large-scale trends shaping the ESG-investing world are well-known at this point: climate change risk and the road to net-zero, the growing existential threat of biodiversity loss, social inequalities, regulation and, lately, debate and controversy over what exactly ESG should be. Regulation is now top of mind not just in the EU, but increasingly in the U.S. and APAC markets: from requirements for financial institutions to conduct climate stress tests, to deforestation-free market-access rules, to investors getting ahead of potentially mandatory requirements to report on the SFDR's Principle Adverse Impact indicators. Also on supply chain issues, including the prospects for lab-grown commodities, tracking goods through block chain technology and the mining of e-waste to reshape the dynamics of controversial raw material sourcing.

However, there is positivity that also needs to be reviewed. MSCI reports indicate that the company performs better when U.K.-listed companies with better governance practices tended to achieve higher carbon-emissions reduction compared to historic levels and to industry peers. Also on an average, companies with at least one female director had higher human-capital management performance than those without any female directors. The difference was even greater at companies that had at least three female directors or 30% women on the board, a potential “tipping point.”

This is why, every responsible entity or person needs to take related actions at the earliest to see the positive results. Let us conclude shloka by Shri Samartha Ramdas Swami in Marathi, “*Kelyane hot ahe re | Adhi kelechi pahije || Yatna to dev janava | Antari dharita bare |*”. Which means the action will give the results we

want, but first we need to perform that act. Unless that action is taken, we cannot see the results. Efforts to make these actions are key and need to be continuously undertaken.

References-

1. ESG and Climate Trends to Watch for 2023, MSCI Report, Available at <https://www.msci.com/documents/1296102/35124068/ESG+and+Climate+Trends+to+Watch+for+2023.pdf>
2. Climate Change Program, Department of Science & Technology, Available at <https://dst.gov.in/climate-change-programme>
3. Extended Producer Responsibility, OECD, Available at [https://www.oecd.org/env/tools-evaluation/extendedproducerresponsibility.htm#:~:text=Extended%20Producer%20Responsibility%20\(EPR\)%20is,disposal%20of%20post%2Dconsumer%20products](https://www.oecd.org/env/tools-evaluation/extendedproducerresponsibility.htm#:~:text=Extended%20Producer%20Responsibility%20(EPR)%20is,disposal%20of%20post%2Dconsumer%20products)
4. Kelly Levin, Sophie Boehm and Rebecca Carter , 6 Big Findings from the IPCC 2022 Report on Climate Impacts, Adaptation and Vulnerability, World Resources Institute, available at <https://www.wri.org/insights/ipcc-report-2022-climate-impacts-adaptation-vulnerability#:~:text=Higher%20temperatures%20are%20also%20enabling,harms%20species%20and%20whole%20ecosystems>
5. Decisions taken at the Sharm El-Sheikh Climate Change Conference, United Nations Climate Change, available at <https://unfccc.int/cop27>

About The Author:



Upendra Parkhi

Upendra Parkhi is an Environmental Engineer and experienced professional in Environment Management, Climate Change, Safety, Occupational Health, Sustainability and ESG.

He worked in the industrial sectors such as Iron & Steel, Mining, Infrastructure, and Power for 34 years. During his long tenure in Tata Steel; he worked on developing & implementing Climate Change initiatives, adopting the best technologies for EHS protection to go beyond compliance, establishing EHS Management Systems, Green belt developments and Waste Management.

Presently he is associated with Legasis Private Limited for developing and offering ESG solutions including BRSR Module, to the customer's needs and expectations.