

RGICS Background Brief

Introduction to Climate Policy and India's Position

(Prepared by: Garima Sharma)

Introduction:

The relationship between climate change and threat to human survival is increasingly becoming an everyday reality for us. Climate change is not simply a remote reality whose effects will be felt in the distant future, but is impacting our lives on a daily basis. Latest scientific research is tracing everyday disruptions in weather patterns to climate change. The heat-wave in India, this year that claimed over 2500¹ lives –higher than last year –has been traced directly to the impact of climate change.²

Climate change is no longer relegated to the domain of science, but spans our society, politics, policy and ethics in significant ways.

The policy process:

Objective:

The primary objective of the UNFCCC is to stabilize greenhouse gas concentrations "at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system." It states that "such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner."³

The policy process for the governance of climate change is based on the recognition that:

Climate change is a complex problem, which, although environmental in nature, has consequences for all spheres of existence on our planet. It either impacts on-- or is impacted by-- global issues, including poverty, economic development, population growth, sustainable development and resource management. At the very heart of the response to climate change, however, lies the need to reduce emissions. In 2010, governments agreed that emissions need to be reduced so that global temperature increases are limited to below 2 degrees Celsius.⁴

Institutions: Rise of the UNFCCC

The current policy mechanism in place to address climate change is grounded in a global regime complex which has the United Nations Framework Convention on Climate Change (UNFCCC) as its centre of governance. While states are the main centres of the decision-making outcomes, the process is structured by inputs from non-state actors like civil society organizations, indigenous networks and even corporate lobbies.

All these diverse actors had a great presence when the landmark UNFCCC was opened for signature in 1992 at the United Nations Conference on Environment and Development (UNCED) or the Rio Earth Summit. The

¹ Reuters 2015.

² Inani 2015.

³ Ibid.

⁴ UNFCCC n.d.

UNFCCC is a “Rio Convention”, one of three adopted at the Rio Earth Summit. The other two are the UN Convention on Biological Diversity and the Convention to Combat Desertification.⁵

The UNFCCC came into existence as an international treaty to ensure cooperation between 195 countries to limit the average global temperature increases and the resultant climate change. It entered into force in 1994 and by 2007, it had been ratified by 192 countries.⁶

Move towards Kyoto Protocol:

The countries that have ratified the Convention are called Parties to the Convention. They meet annually to take stock on climate change policy. In COP 1 held in 1995 in Germany, it was decided that the emissions reduction targets under the Convention were not stringent enough.

Therefore, they negotiated the Kyoto Protocol in 1997. The Kyoto Protocol legally binds developed countries to emission reduction targets. The Protocol obliges industrialized countries and countries of the former Soviet bloc (known as “Annex I Parties”) to cut their emissions of greenhouse gases by an average of about 5% for the period 2008-2012 compared with 1990 levels.

Although the world’s largest emitter of greenhouse gases, the United States, rejected the Kyoto Treaty in 2001 after the election of President George W. Bush, a majority of other Annex I Parties ratified the treaty. The Protocol finally entered into force as a legally-binding document in 2005. The Protocol’s first commitment period started in 2008 and ended in 2012. The second commitment period began in 2013 and will end in 2020.⁷

The goal of the treaty is to lower the overall emissions from six greenhouse gases – carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).

Commitments under Kyoto Protocol:

Together, the regime complex consisting of the UNFCCC and the Kyoto Protocol support the various institutions through which negotiations and decision-making process takes place.

Countries are divided into three main groups according to their differing commitments⁸:

- **Annex I** Parties include industrialised countries that were members of the Organisation for Economic Cooperation and Development (OECD) in 1992, plus countries with economies in transition (the EIT Parties). There are 41 countries in this group and the European Union.
- **Annex II** Parties are developed countries which are the OECD members of Annex I but not the countries with economies in transition (EIT). The Annex II countries are required to provide financial resources to enable developing countries to undertake activities to reduce emissions and to help them

⁵ Ibid.

⁶ IISD n.d.

⁷ Ibid.

⁸ Mary Robinson Foundation Climate Justice n.d.

adapt to the effects of climate change. They also have to take steps to promote the development and transfer of environmentally friendly technologies to developing countries and countries with economies in transition. There are 23 Parties in this group and the European Union.

- **Non-Annex I:** There are 153 Parties in this group, most of which are developing countries. Certain groups of developing countries are recognised by the Convention as being especially vulnerable to the adverse impacts of climate change. This includes countries with low-lying coastal areas and those prone to desertification and drought, besides the LDCs. Other Parties in this group are countries that claim to be more vulnerable to the potential economic impacts of climate change response measures, such as countries which rely heavily on income from fossil fuel production.

Mechanisms under Kyoto Protocol:

Under the Kyoto Protocol, countries must primarily meet their targets through national measures but it also gives additional means of meeting targets by way of market-based mechanisms, creating what is known as the “carbon market”.⁹

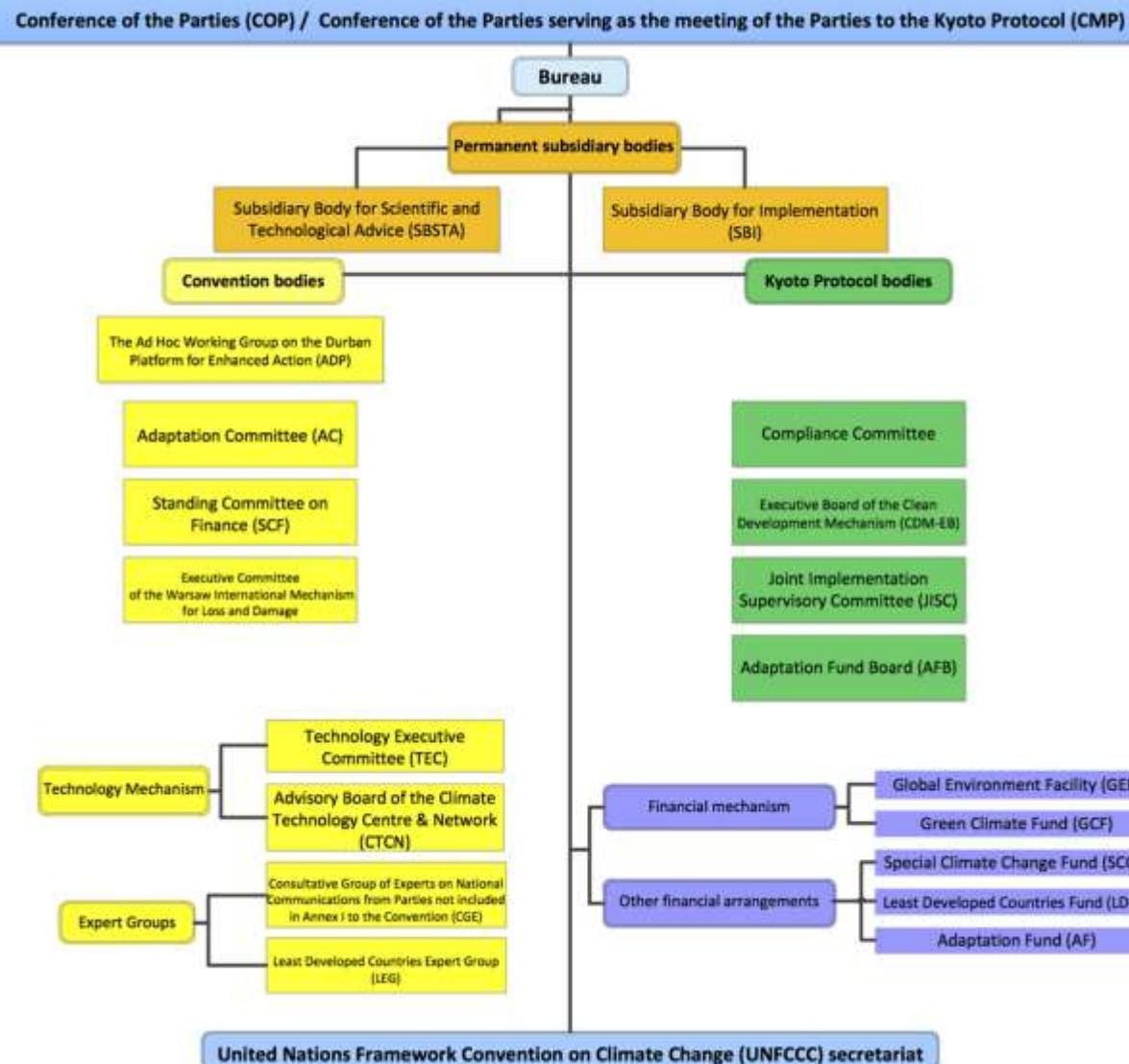
These, also known as the Kyoto Flexibility Mechanisms (KFM), consist of:

- *Emissions Trading:* Emissions trading allows countries with emission units to spare - units that they are permitted but have not used - to sell their excess capacity to countries that are over their emission targets.
- *Clean Development Mechanism:* Under the CDM, Annex 1 Parties can fund clean energy projects in developing countries to earn certified emission reduction credits (CER). Each CER is equivalent to one tonne of CO₂ and can be counted towards meeting the Annex 1 Party's targets under the Kyoto Protocol.
- *Joint Implementation:* Under JI, an Annex 1 Party may implement a project that reduces emissions in the territory of another Annex 1 Party and earn credits called Emission Reduction Units (ERUs), which are counted against the Party's own target.

⁹ Ibid.

Functioning of the global climate policy regime:

The figure below captures the key formal institutions in the climate policy regime:



UNFCCC¹⁰

The evolution of these institutions has followed a complex political process involving various landmark decisions and actors.

Source:

¹⁰ UNFCCC n.d.

Evolution of the climate policy regime:

Given below is a trajectory of the institutional process of global climate negotiations:

Year	Event	Content
1989	Establishment of the Intergovernmental Panel on Climate Change (IPCC)	Established by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), IPCC forms the scientific basis of international negotiations on climate change.
1990	IPCC's first assessment report and the Second World Climate Conference (UNCED)	IPCC reports highlights increase in Greenhouse gas emissions through human activity and the UNCED calls for a global treaty
1992	Adoption of the UNFCCC	
1994	UNFCCC enters into force	
1995	1st Conference of Parties (COP 1)	Takes place in Germany. It was decided that the UNFCCC commitments were inadequate to meet the Convention's objectives. The Berlin Mandate establishes a process to negotiate strengthened commitments for developed countries, thus laying the groundwork for the Kyoto Protocol.
1997	COP 3	Kyoto Protocol is adopted. It is the world's first GHG emissions reduction treaty.
2001	2nd part of COP 6	Governments reach a broad political agreement on the operational rulebook for the 1997 Kyoto Protocol.
2001	COP 7	Marrakesh Accords are signed, setting the stage for ratification of the Kyoto Protocol. This would formalize agreement on operational rules for International Emissions Trading, the Clean Development Mechanism and Joint Implementation along with a compliance regime and accounting procedures.
2005	European Union Emissions Trading Scheme (EU ETS) is launched.	It is a major pillar of the EU climate policy and regulates close to half of EU's carbon dioxide emissions.

2005	Kyoto Protocol enforced	
2005	COP 11 and the first Conference of Parties serving as the Meeting of the Parties (CMP 1)	
2006	Clean Development Mechanism (CDM) of the Kyoto Protocol opens for business	
2006	COP 12	Held in Nairobi. The Subsidiary Body for Scientific and Technological Advice (SBSTA) is mandated to undertake a programme to address impacts, vulnerability and adaptation to climate change.
2007	COP 13	Held in Bali. Adopts the Bali Road Map, including the Bali Action Plan, charting the course for a new negotiating process to address climate change. The Plan has five main categories: shared vision, mitigation, adaptation, technology and financing.
2008	Launch of the Joint Implementation Mechanism (JI) of the Kyoto Protocol	This allows a country with an emission reduction or limitation commitment under the Protocol to earn emission reduction units (ERUs) from an emission-reduction or emission removal project in another country with similar commitments.
2008	COP 14	Held at Poznan, Poland. It delivers important steps towards assisting developing countries, including the launch of the Adaptation Fund under the Kyoto Protocol and the Poznan Strategic Programme on Technology Transfer.
2009	COP 15	Held in Copenhagen. Developed countries pledge up to USD 30 billion in fast-start finance for the period 2010-2012.
2010	COP 16	This results in the Cancun Agreements, a comprehensive package by governments to assist developing nations in dealing with climate change. The Green Climate Fund, the Technology Mechanism and the Cancun Adaptation Framework are established. The year 2010 also saw the landmark conference on Rights of Mother Earth in Bolivia, which emphasized tenets of climate justice, human rights and rights of nature.
2011	COP 17	In Durban, governments commit to a new universal climate change agreement by 2015 for the period beyond 2020, leading to the launch of

		the Ad Hoc Working Group on the Durban Platform for Enhanced Action or ADP.
2012	COP 18	In Doha, governments agree to speedily work toward a universal climate change agreement by 2015 and to find ways to scale up efforts before 2020 beyond existing pledges to curb emissions. They also adopt the Doha Amendment, launching a second commitment period of the Kyoto Protocol.
2013	COP 19	In Warsaw, the Conference of the Parties produces the Warsaw Outcomes, including a rulebook for reducing emissions from deforestation and forest degradation and a mechanism to address loss and damage caused by long-term climate change impacts.
2014	UN Secretary-General's Climate Summit	In New York in September, the summit invited Heads of State and Government, business, finance, civil society and local leaders to mobilize action and ambition on climate change in advance of COP 21 in Paris in 2015.
2014	COP 20	In Lima, it laid the groundwork for the upcoming COP 21 in Paris in December 2015

Critique of existing institutional mechanisms:

Drawbacks of existing institutional framework of Kyoto Protocol (seen during performance between 1990-2012):

- Annex 1 (A1) countries met their initial emission reduction commitments as emissions reductions from the plummeting economies of East Europe was the main driver of emissions reductions for A1 countries.
- It had no system of penalties.
- Its flexibility mechanisms encouraging market-based options to reduce emissions made a mockery of stringent mitigation commitments to limit the level of warming to not more than 2 degrees Celsius.
- Europe had become net importer or consumer of emissions, since the KP did not differentiate between where the emissions are produced and where they are consumed. So they would import goods and services at low cost and maintain their high consumption levels, while emissions were credited to the developing countries.
- As has been argued, “Carbon space allocation cannot solve the global warming problem as it is rooted in anthropocentrism and ownership rights over nature. The KP began privatizing the atmosphere by granting preferential GHG dumping rights to A1 [Annex 1] countries. As emissions increase with growth, so does the need for more carbon space. Preferential ownership or dumping rights over nature sanctifies and perpetuates an unequal class society, and invariably generates conflict.”¹¹

¹¹ Dhara 2015.

- There is a limit to the technical fixes that are proffered at COP meetings, such as energy efficiency, carbon capture and alternate energy sources. Energy efficiency increases consumption, alternate energy sources have been incremental in challenging the utility of fossil fuels and carbon capture is unproven.

Why should we worry about climate change?

According to the United States Environmental Protection Agency, “The global average temperature has increased by more than 1.5°F since the late 1800s.”¹² The impacts of this spans changing temperature and precipitation patterns, rise in ocean temperatures, rising sea levels and acidity, melting of glaciers and sea ice, changes in frequency and intensity of extreme weather events, changes in ecosystem balance, and rising threats to human health.¹³

Global warming, which leads to rise in the average temperature near the earth’s surface, is one of the foremost drivers of climate change. However, global warming is not coincidental with climate change. Dangerously, for us, climate change spans a number of other factors, as seen above, besides the rise in average temperatures due to Greenhouse Gas emissions.

It is predicted to have a significant impact on current modes of living and well-being, with Small Island Developing States and the developing countries predicted to face the major brunt of the impact of climate change.

The major regional impacts of climate change have been estimated by the IPCC:

Africa	<p>By 2020, between 75 and 250 million of people are projected to be exposed to increased water stress due to climate change.</p> <p>By 2020, in some countries, yields from rain-fed agriculture could be reduced by up to 50%. Errata Agricultural production, including access to food, in many African countries is projected to be severely compromised. This would further adversely affect food security and exacerbate malnutrition.</p> <p>Towards the end of the 21st century, projected sea level rise will affect low-lying coastal areas with large populations. The cost of adaptation could amount to at least 5 to 10% of Gross Domestic Product (GDP).scenarios (TS).</p> <p>By 2080, an increase of 5 to 8% of arid and semi-arid land in Africa is projected under a range of climate</p>
Asia	<p>By the 2050s, freshwater availability in Central, South,East and South-East Asia, particularly in large river basins, is projected to decrease.</p> <p>Coastal areas, especially heavily populated megadelta regions in South, East and South-East Asia, will be at greatest risk due to increased flooding from the sea and, in some megadeltas, flooding from the rivers.</p> <p>Climate change is projected to compound the pressures on natural resources and the</p>

¹² US EPA n.d.

¹³ Ibid.

	<p>environment associated with rapid urbanisation, industrialisation and economic development. Endemic morbidity and mortality due to diarrhoeal disease primarily associated with floods and droughts are expected to rise in East, South and South-East Asia due to projected changes in the hydrological cycle.</p>
Australia and New Zealand	<p>By 2020, significant loss of biodiversity is projected to occur in some ecologically rich sites, including the Great Barrier Reef and Queensland Wet Tropics.</p> <p>By 2030, water security problems are projected to intensify in southern and eastern Australia and, in New Zealand, in Northland and some eastern regions.</p> <p>By 2030, production from agriculture and forestry is projected to decline over much of southern and eastern Australia, and over parts of eastern New Zealand, due to increased drought and fire. However, in New Zealand, initial benefits are projected in some other regions.</p> <p>By 2050, ongoing coastal development and population growth in some areas of Australia and New Zealand are projected to exacerbate risks from sea level rise and increases in the severity and frequency of storms and coastal flooding.</p>
Europe	<p>Climate change is expected to magnify regional differences in Europe's natural resources and assets. Negative impacts will include increased risk of inland flash floods and more frequent coastal flooding and increased erosion (due to storminess and sea level rise).</p> <p>Mountainous areas will face glacier retreat, reduced snow cover and winter tourism, and extensive species losses (in some areas up to 60% under high emissions scenarios by 2080).</p> <p>In southern Europe, climate change is projected to worsen conditions (high temperatures and drought) in a region already vulnerable to climate variability, and to reduce water availability, hydropower potential, summer tourism and, in general, crop productivity.</p> <p>Climate change is also projected to increase the health risks due to heat waves and the frequency of wildfires.</p>
Latin America	<p>By mid-century, increases in temperature and associated decreases in soil water are projected to lead to gradual replacement of tropical forest by savanna in eastern Amazonia. Semi-arid vegetation will tend to be replaced by arid-land vegetation.</p> <p>There is a risk of significant biodiversity loss through species extinction in many areas of tropical Latin America.</p> <p>Productivity of some important crops is projected to decrease and livestock productivity to decline, with adverse consequences for food security. In temperate zones, soybean yields are projected to increase. Overall, the number of people at risk of hunger is projected to increase (TS; medium confidence).</p> <p>Changes in precipitation patterns and the disappearance of glaciers are projected to significantly affect water availability for human consumption, agriculture and energy generation.</p>

North America	<p>Warming in western mountains is projected to cause decreased snowpack, more winter flooding and reduced summer flows, exacerbating competition for over-allocated water resources.</p> <p>In the early decades of the century, moderate climate change is projected to increase aggregate yields of rain-fed agriculture by 5 to 20%, but with important variability among regions. Major challenges are projected for crops that are near the warm end of their suitable range or which depend on highly utilised water resources.</p> <p>Cities that currently experience heat waves are expected to be further challenged by an increased number, intensity and duration of heat waves during the course of the century, with potential for adverse health impacts.</p> <p>Coastal communities and habitats will be increasingly stressed by climate change impacts interacting with development and pollution.</p>
Polar Regions	<p>The main projected biophysical effects are reductions in thickness and extent of glaciers, ice sheets and sea ice, and changes in natural ecosystems with detrimental effects on many organisms including migratory birds, mammals and higher predators.</p> <p>For human communities in the Arctic, impacts, particularly those resulting from changing snow and ice conditions, are projected to be mixed.</p> <p>Detrimental impacts would include those on infrastructure and traditional indigenous ways of life.</p> <p>In both polar regions, specific ecosystems and habitats are projected to be vulnerable, as climatic barriers to species invasions are lowered.</p>
Small Islands	<p>Sea level rise is expected to exacerbate inundation, storm surge, erosion and other coastal hazards, thus threatening vital infrastructure, settlements and facilities that support the livelihood of island communities.</p> <p>Deterioration in coastal conditions, for example through erosion of beaches and coral bleaching, is expected to affect local resources.</p> <p>By mid-century, climate change is expected to reduce water resources in many small islands, e.g. in the Caribbean and Pacific, to the point where they become insufficient to meet demand during low-rainfall periods.</p> <p>With higher temperatures, increased invasion by non-native species is expected to occur, particularly on mid- and high-latitude islands.</p>

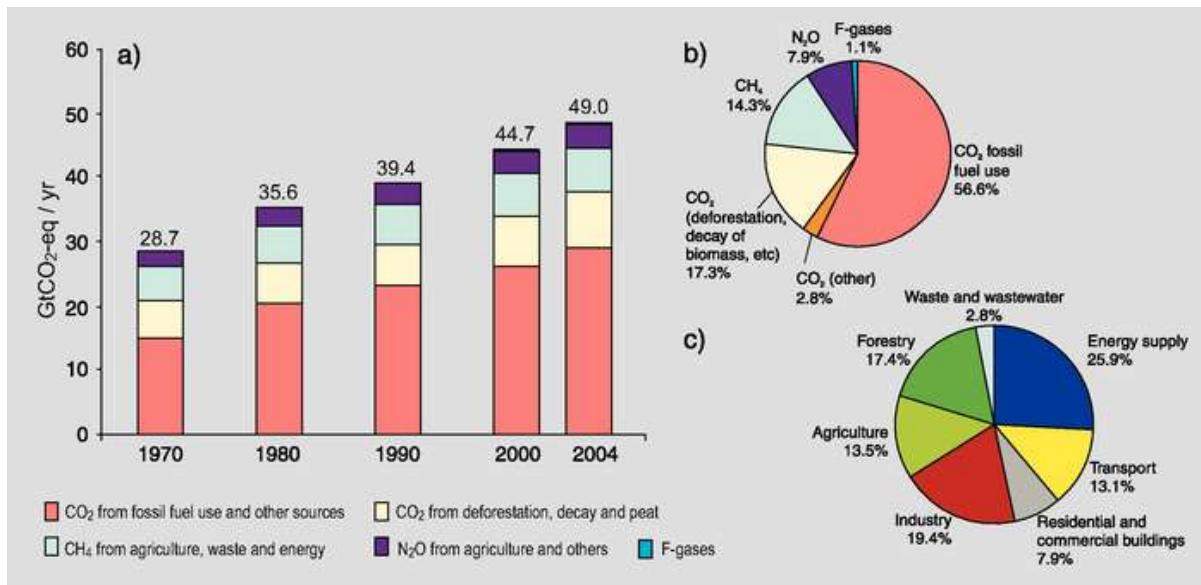
Source: IPCC.¹⁴

Our ethical responsibility:

Climate change cannot be attributed only to natural factors. Human interventions have increased the burden on our planet and have become the major drivers of global warming in recent times. The human emissions of greenhouse gases have been the main drivers of global warming during the past half century.¹⁵

¹⁴ IPCC 2007.

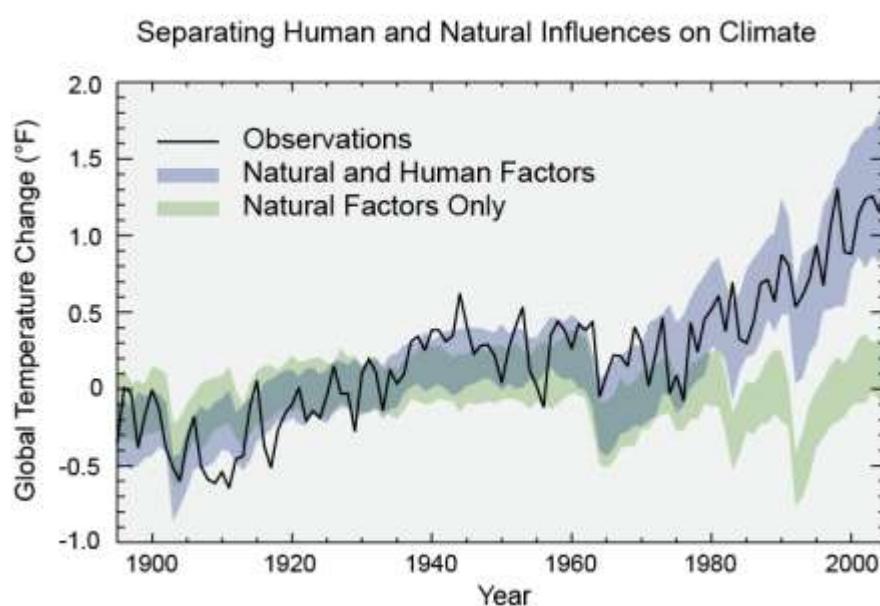
¹⁵ US EPA n.d.



Source: IPCC Fourth Assessment Report.¹⁶

According to a report by the U.S. National Climate Assessment, “Models that account only for the effects of natural processes are not able to explain the warming observed over the past century. Models that also account for the greenhouse gases emitted by humans are able to explain this warming.”¹⁷

This is disaggregated in the figure below:



Source: US EPA.¹⁸

¹⁶ IPCC 2007.

¹⁷ Ibid.

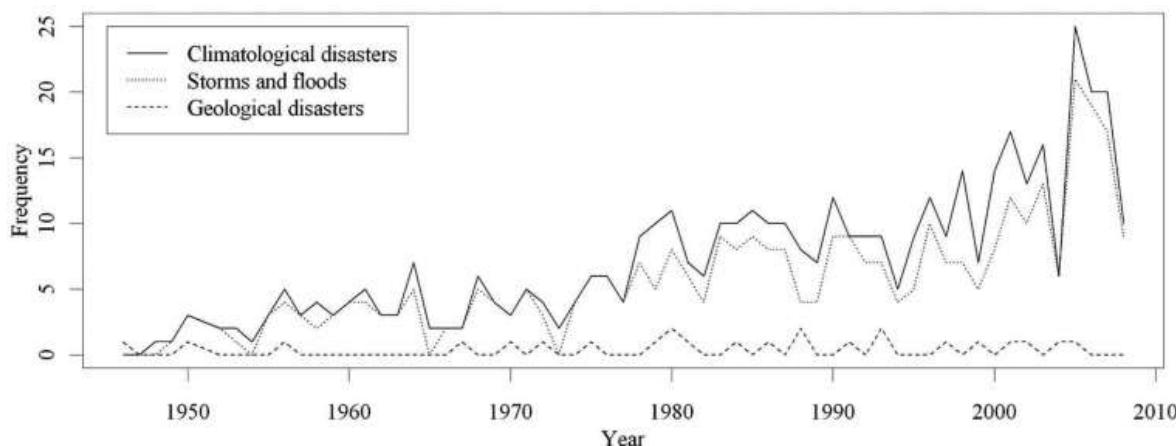
¹⁸ US EPA n.d.

As such, it is our global ethical responsibility to accept the onus of anthropogenic or human-made climate change collectively.

Why India should become active?

There is a need to focus on the immense human costs of climate change in vulnerable regions due to environmental degradation. In this context, the public mobilization should focus on politicization of coal-mining projects in vulnerable areas, which endanger biodiversity, depleting forests, making land unproductive, causing air and water pollution, and, causing large-scale displacement of communities.

Figure 1: Climate-related and geological natural disasters in India:



Source: Slettebak 2013.

India's communities will suffer a huge negative impact from climate change and is already suffering as a result of wrong policy choices.

Projected impacts of climate change in India:

According to a World Bank¹⁹ study, India will suffer the following impacts of climate change:

- **Disruption of natural balance:** Under 4 degrees Celsius warming, the west coast and southern India are projected to shift to new, high-temperature climatic regimes with significant impacts on agriculture.
- **Erratic monsoon:** At 2 degree Celsius temperature rise, India's monsoon will become highly unpredictable. At 4 degree Celsius temperature rise, an extremely wet monsoon that currently has a chance of occurring only once in 100 years is projected to occur every 10 years by the end of the century.

¹⁹ The World Bank 2013.

- **Droughts:** Droughts are expected to be more frequent in areas such as Jharkhand, Orissa, and Chhattisgarh and crop yields will fall significantly because of extreme heat by the 2040s.
- **Threat to Himalayas and related externalities:** At 2.5°C warming, melting glaciers and the loss of snow cover over the Himalayas are likely to threaten the stability of the Indus and the Brahmaputra. Alterations in the flows of the Indus, Ganges, and Brahmaputra rivers could significantly impact irrigation, affecting the amount of food that can be produced in their basins as well as the livelihoods of millions of people (209 million in the Indus basin, 478 million in the Ganges basin, and 62 million in the Brahmaputra basin in the year 2005).
- **Rising sea levels:** Sea-level rise and storm surges would lead to saltwater intrusion in the coastal areas, impacting agriculture, degrading groundwater quality, contaminating drinking water, and possibly causing a rise in diarrhoea cases and cholera outbreaks, as the cholera bacterium survives longer in saline water. Kolkata and Mumbai, both densely populated cities, are particularly vulnerable to the impacts of sea-level rise, tropical cyclones, and riverine flooding.
- **Food security:** Food security will become a significant issue. Under 2°C warming by the 2050s, the country may need to import more than twice the amount of food-grain than would be required without climate change.
- **Water scarcity:** Water scarcity will also become an important issue. The threat to water security is very high over central India, along the mountain ranges of the Western Ghats, and in India's north-eastern states.

India's current position:

India's global climate policy position is framed by one of the central principles of the United Nations Framework Convention on Climate Change (UNFCCC) viz. Common But Differentiated Responsibilities (CBDRs). Herein, India holds that developed countries, due to their historical responsibilities in contributing to Greenhouse Gas emissions and the difference in relative capabilities, should bear the burden of enforcing climate agreements. This will ensure 'justice' in burden-sharing.

Shift in position

While differentiated responsibilities and equity continue to shape the broad contours of the Indian climate policy, there has also been a development of a 'co-benefits' approach which believes that climate change and sustainable development go together in the national policy.²⁰ This has altered India's global position as well. Post-2007, India accepted the international focus on voluntary national commitments to reduce emissions by all countries rather than the previous top-down approach of imposing targets. It opposed the proposal for ex-ante review of mitigation commitments so as to not have the principle of equity and past emissions diluted. By still continuing to oppose ex-ante review till recently in the Lima COP 20, however, India is passing up the

²⁰ Dubash, Raghunandan, Sant, & Sreenivas, 2013.

opportunity to hold the developed nations accountable in their proposed Intended Nationally Determined Contributions for the upcoming COP 21.²¹

Figure 1: Country's share of historical emissions:²²

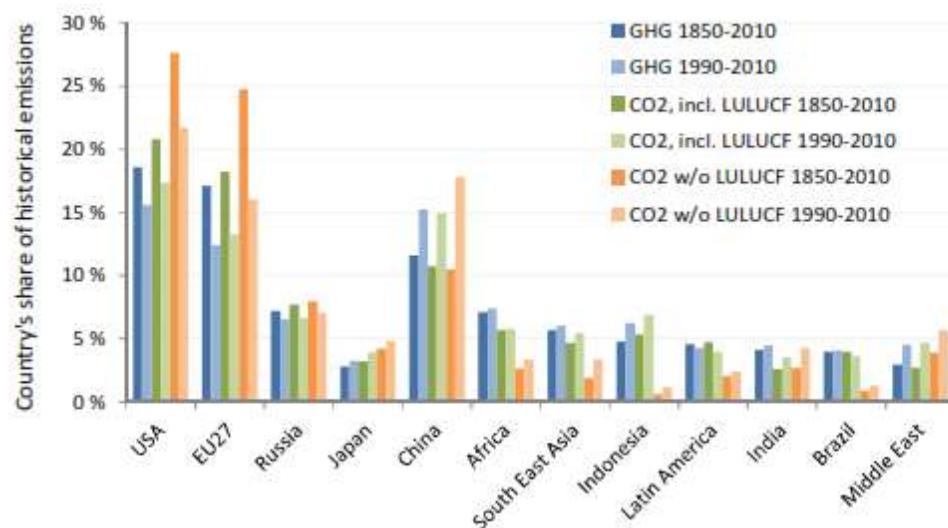
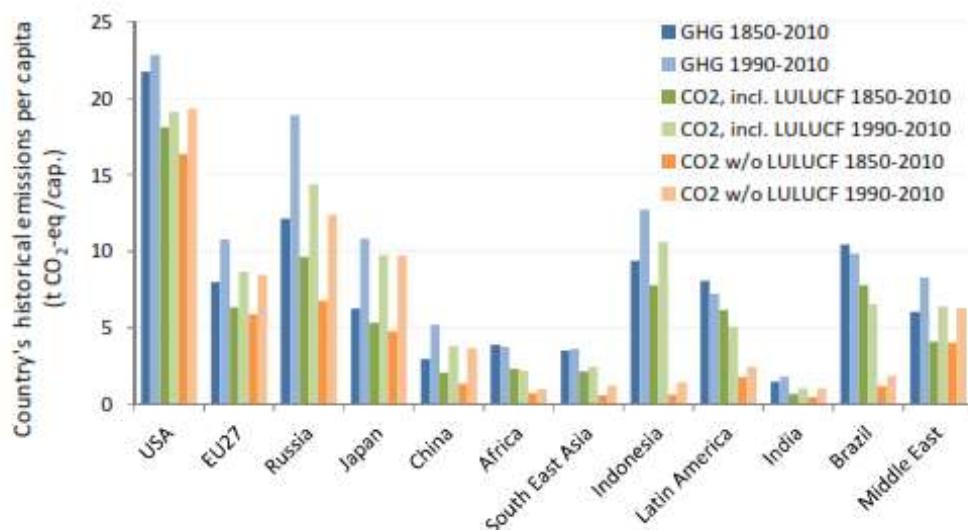


Figure 2: Country's share of per capita emissions:²³



²¹ Narain, 2015.

²² Ekhholm and Lindroos 2015.

²³ Ibid.

Thus, India's position is often justified both on the basis of the country's relative historical emissions as well as per capita emissions. However, while this may be valid in the context of ensuring equity and justice in intergovernmental negotiations, this global framework misses out on the larger context of ensuring justice for the people.

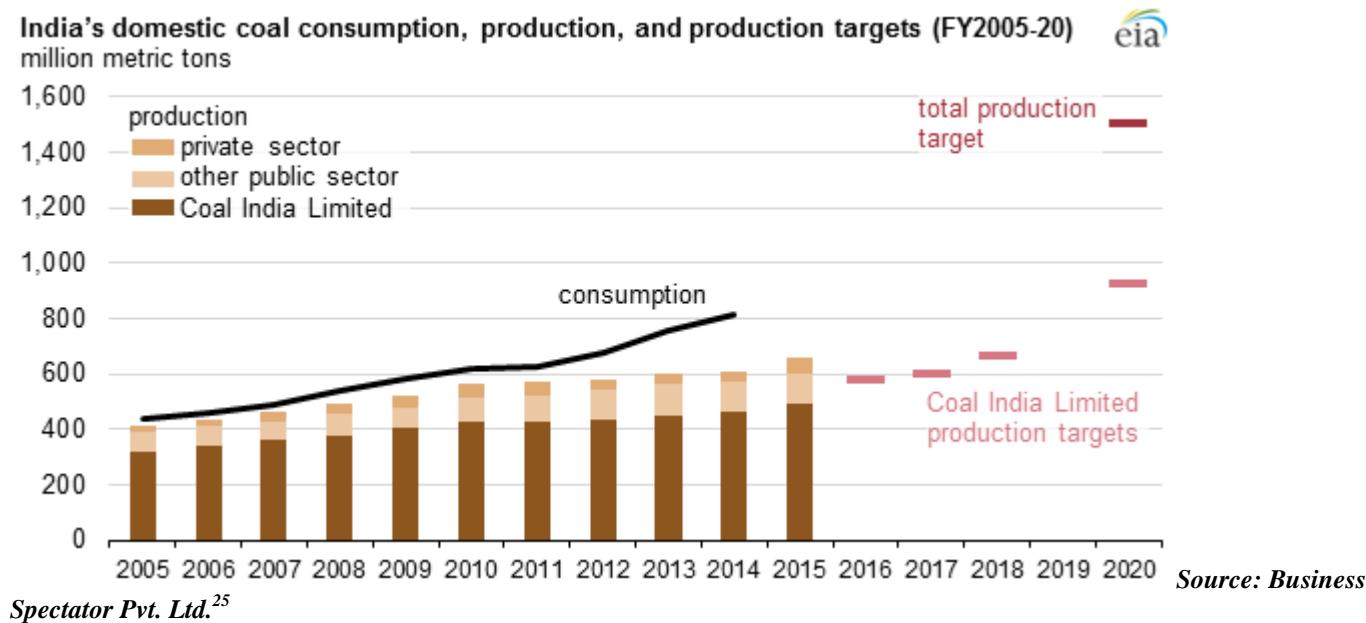
Critiquing current policy:

In the current climate policy, two main aspects need to be highlighted:

First, the superfluous nature of the current policy mechanisms needs to be highlighted. As Roy (2015) argues, India's climate policy has led to "the pursuit of the "neo-liberal model of economic growth [which] has resulted in an alarming increase in...fossil fuel burning and deforestation" and yet the Indian government continues "to talk of substantial emission reductions", mainly through the Clean Development Mechanism (CDM) and Renewable Energy Trading (RET) projects.

These market mechanisms do not help to reduce the impacts of climate change because they only help developed nations to purchase the carbon credits."²⁴

Second, India's overreliance on coal is causing huge harm to the communities by leading to mining which induces displacement, harms health and degrades environment.



²⁴ Roy 2015.

²⁵ Kearney 2015.

Table 1: Estimated mining-induced displacement numbers in India²⁶

State	Years	Tribals	Dalits	Others	NA ²⁷	Total
Andhra	1980-95	NA	NA	NA	100541	100541
Assam	80-2000	NA	NA	NA	41200	41200
Goa	1980s	NA	NA	NA	4740	4740
Gujarat	1980-2000	NA	NA	NA	4128	4128
Jharkhand	1980-95	83543	63352	220076	00	402882
Orissa	1960-95	150000	45000	105000	00	300000
Kerala	1990s	NA	NA	NA	78	78
W. Bengal	60-2000	2459	99244	4373	311579	418061
Total		236002	207596	329449	462266	1571630

Thus, India's global policy position prioritizes developmental needs of its people in the climate change debate while really following policies that lead to negative pay-offs both in terms of combating climate change and welfare of the people. This needs to be contested through substantive people's action.

Conclusion:

Thus, while we do not contest that climate change mitigation burdens should be equitably distributed among countries, mindful of historical responsibilities, we should aim to go a step further to ensure that there is 'climate justice' for the vast population of India's rural, poor and marginalized communities as well. "India's per capita emissions are three times lower than the world average, but what reduces India's average is the very low energy use of the bottom seven deciles of the population."²⁸

For this, it is absolutely essential that there should be a call for a change in the global climate policy discourse. For, this whole current global debate on burden sharing misses the heart of the issue in combating climate change viz. the issue of climate change mitigation, at the global level, is framed primarily in terms of emissions reduction commitments by individual countries rather than addressing the issue of fossil fuel extraction to address the root causes of climate change and environmental degradation.²⁹

²⁶ Fernandes 2007.

²⁷ Original data does not elaborate on what is included under 'NA'.

²⁸ Roy 2015.

²⁹ LINGO 2015.

Bibliography

Baehr, Leslie, and Chelsea Harvey. *Business Insider India*. October 11, 2014. <http://www.businessinsider.in/25-Devastating-Effects-Of-Climate-Change/articleshow/44785097.cms> (accessed September 29, 2015).

Environmental Defense Fund. *Environmental Defense Fund*. <https://www.edf.org/climate/climate-change-impacts> (accessed September 28, 2015).

IISD . *IISD Reporting Services*. http://www.iisd.ca/process/climate_atm-fcccintr.htm (accessed September 30, 2015).

Inani, Rohit. *Time*. May 29, 2015. <http://time.com/3901185/india-heatwave-death-toll-climate-change-heat-monsoon/> (accessed September 28, 2015).

IPCC. *Intergovernmental Panel on Climate Change*. 2007.
http://www.ipcc.ch/publications_and_data/ar4/syr/en/figure-spm-3.html (accessed September 30, 2015).

Mary Robinson Foundation Climate Justice. *Mary Robinson Foundation Climate Justice*.
<http://www.mrfcj.org/our-work/unfccc/background-documents.html> (accessed September 30, 2015).

Nandi, Jayashree. *Times of India*. September 26, 2015. <http://timesofindia.indiatimes.com/city/delhi/Climate-change-to-intensify-dengue-outbreaks-Experts/articleshow/49109616.cms> (accessed September 29, 2015).

Reuters. *The Telegraph*. June 2, 2015. 28 (accessed 2015 September, 2015).

Roy, Dunu. "A subaltern view of climate change." *Economic & Political Weekly*, Vol. L, No. 31, 2015: 31-39.

The World Bank. *The World Bank*. June 19, 2013.
<http://www.worldbank.org/en/news/feature/2013/06/19/india-climate-change-impacts> (accessed September 29, 2015).

UNFCCC. *United Nations Framework Convention on Climate Change*.
http://unfccc.int/essential_background/items/6031.php (accessed September 30, 2015).
—. *United Nations Framework Convention on Climate Change*.
http://unfccc.int/files/inc/graphics/image/png/unfccc_bodies_large.png (accessed September 30, 2015).

US EPA. *United States Environmental Protection Agency*.
<http://www3.epa.gov/climatechange/science/overview.html> (accessed September 29, 2015).