India's Role in Global Climate Change Management

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Abstract

Global Climate change refers to the long-term shifts that take place in temperature and weather conditions. These changes can occur on their own, due to variations in the solar cycle but the changes that are being referred to here are not natural they have been caused by anthropogenic activities. Green House Gases (GHGs) emissions have accumulated in the atmosphere, and they keep rising each year. It is important to limit the global temperature, otherwise, disruptions in the climatic system would create difficulties for human societies. The only way to limit rapid climate change is to decrease our collective emissions that demands global management, governance, and participation of all countries. Thus, the allocation of responsibilities for the mitigation of GHGs lies at the heart of climate change management. The main objective of this paper is to examine India's contribution at the global level to the management of global climate change. This study used an analytical and normative approach with the qualitative research methods and secondary sources to address the research objectives. The study revealed that India has been instrumental in shaping the climate regime from the very beginning, it has played a key role in developing the normative framework of the climate regime, its principles, rules, and norms.

Keywords: Global, Climate Change Management, India

1. Introduction

The present geological phase has been termed the period of the 'Anthropocene' because of the domination and activities of humans on the planet earth which have altered the planet beyond recognition in terms of its biological, chemical, and geological functions (Crutzen & Schwagerl, 2011). Climate change is the biggest threat humanity is facing today. It refers to the long-term shifts that take place in temperature and weather conditions. Variations in the solar cycle can cause these changes but the changes that are being referred to here are not natural as they have been brought by anthropogenic activities. GHG emissions, particularly Carbon dioxide (CO_2) and methane are the primary drivers of climate change (Ritchie et al., 2020). Since the industrial revolution, human beings have added 1.5 trillion of CO_2

into the earth's atmosphere (Ritchie et al., 2020). Leaving aside methane and nitrous oxide, thirty-seven billion tons of CO_2 emissions were added in 2019. Combined together, each year 51 billion tons of CO_2 equivalents are added to the atmosphere (Ritchie et al., 2020).

These emissions have accumulated in the atmosphere, and they keep rising each year and will continue to rise until some action is taken. "Scientists say that they need to be brought down to net zero (meaning that present GHGs that are being added each year be removed from the atmosphere through global sinks like oceans) only then will the severe effects of climate change be arrested, otherwise, human beings will not be safe. The world has already started witnessing the effects of climate change: there are more and intense heat waves, wildfires, melting of most glaciers, rising sea levels" (IPCC, 2021). According to NASA (2021) the year 2020 was the hottest year in the past 22 years, the only way to limit rapid climate change is to decrease our collective emissions (IPCC - Sixth Assessment Report, 2021).

International law has responded to climatic changes and has evolved in leaps and bounds since the late 1980s, beginning with the adoption of the United Nations Framework Convention on Climate Change (UNFCCC, 2016), the Kyoto Protocol (1997, as cited in UNFCCC, 1998), and the Paris agreement (2015, as cited in UNFCCC, 2016). Domestic legislatures and courts have also responded to the challenges posed by climate change. About 150 states out of 190 have incorporated environmental rights in their constitution (UN, 2017). However, despite these changes both at the international level and domestic front, GHGs and consequently global temperature continues to rise in the atmosphere. Thus, the management of climate change has become imperative at this juncture.

The objective of the study is to examine India's contribution at the global level to the management of global climate change. This study is significant because climate change is the biggest threat that the world is facing today, its management is crucial not only from the own point of view of human beings and human societies but also from the standpoint of the earth as an ecosystem.

2. Literature Review

2.1. Climate Change

Agarwal and Narain (1991) refer to North-South politics and present a case of environmental colonialism and lay down the foundation against which the debate on climate change, and the politics of the North and South can be understood. The authors pronounce on what India's approach to climate change should be in the international climate negotiations.

The notion of 'differential treatment' and 'equity' have been used for the allocation of responsibilities in the climate regime. Cullet (2021) examines the idea of differentiation, in an unequal world, and its significance in International Environmental Law. Scholtz (2021) emphasizes upon the importance of equity as a principle in International Environmental Law and draws a comparison between the principle of formal equality of nations which is embedded in the Preamble of the UN with equity and maintains that when countries are unequal in socio-economic terms and have a long history of colonialism, the principle of formal equality will only legitimize inequalities. Scholtz (2021), Cullet (2021), Aggarwal and Narain (1991) theoretical work helps in understanding the climate.

Metz et al. (2011) examine India's climate position from a regional perspective and deal with international perspectives on India's climate position, which is a view from abroad. Jaffrelot & Sidhu (2013) examine the changing geopolitical terrain at the global level while examining the emerging powers within the G77, and the issue of whether India is a rule-taker, rule-maker, or rule-shaper. They hold that India has played the role of a rule shaper in the international climate negotiations.

Dubash (2012) discusses climate politics in India, various positions that have been adopted by academicians in the context of domestic politics on climate change. According to the author, some of these positions, are that India is a 'major emitter', a 'disadvantaged latecomer', it has arrived late on the global scene in terms of emissions of GHGs; then there are others who hold that the principle of equity be applied within the country. The latter view holds that if the notion of equity is recognized in international environmental law and climate negotiations then it should be adopted within the domestic arena. It implies that within the country those who are responsible for GHG emissions should take up the major responsibility in mitigation also. (Dubash, 2012).

Cooper et al. (2014) examine the HIV/ AIDS issue in Africa and the health challenges created by climate change and how international institutions have failed to link climate and health in the governance response. Wreford et al. (2010) examine the economic and policy issues related to the impact of climate change on agriculture, adaptation responses, and to the mitigation of GHGs. Salih (2009) examines the implications of climate change on two major global agendas: sustainable development and poverty reduction (the Millennium Development Goals or MDGs).

a. The Climate Regime

The Climate Regime comprises the UNFCCC in 2016, the Kyoto Protocol, and the Paris Agreement. Science and Politics provide the frame of reference for understanding the climate regime**.** Scientific concerns have brought nearly all the nations of the world under the umbrella of the United Nations Framework Convention

on Climate Change (UNFCCC, 2016). Nations have come under one umbrella but there is no agreement regarding the management of the mitigation of the GHGs. Hence, politics (that underpins the Climate Regime), is the frame of reference (Rajamani & Werksman, 2021).

b. The frame of reference: Science & Politics

The issue of Global Climate Change was first brought to the attention of the World by Scientists who were working on it. First World Climate Conference took place in 1979, it highlighted the long-term dangers caused by the excessive accumulation of GHGs in the Earth's atmosphere by human activities like the burning of fossil fuels, industrialization, and deforestation. However, it was only in 1988, that the UN General Assembly passed a resolution that the issue of climate change is an issue of 'common concern of mankind' and should be treated as a 'priority issue' (UNGA, 1988, as cited in UN, 2017). The resolution also expressed the need for setting up an Inter-Governmental Panel on Climate Change (IPCC), to have an inter-governmental assessment of the 'science, impacts, response, and options' of climate change. The Assembly passed another resolution urging member states to prepare a 'framework convention' to address the issue of climate change. The IPCC released its First Assessment Report in 1990. The report confirmed that anthropogenic GHGs are on the rise and that it is important to stabilize their concentration in the atmosphere and for that immediate actions should be taken. This led the United Nations General Assembly (UNGA) to establish Intergovernmental Negotiating Committee (INC) and directed it to launch formal negotiations for an 'effective framework convention on climate change containing appropriate commitments' (IPCC, 2021). The UN Framework Convention (UNFCCC, 2016) was adopted and signed at the Earth Summit at Rio Janerio in 1992, after intense negotiations at the INC.

Through successive reports over the past three decades, the IPCC has made public in unequivocal terms that climate change is a reality caused by anthropogenic activities. The sixth annual report of the IPCC released on 7th August 2021, states that human activities have increased the global temperature by 1.0 degree centigrade and it is likely to reach 1.5 degrees centigrade between 2030 and 2052 (IPCC - 6th Annual Report 2021.) The report says that global temperature has increased faster since 1970s and if rapid and deep changes are not made in terms of reductions in CO_2 and other greenhouse gas emissions it will be difficult to keep the temperature below 1.5 degrees centigrade (1. 5 degrees C is considered to be safe for human beings and ecological system). The report also makes it clear that some of the changes that are taking place are so 'widespread, rapid and intensifying' that it is difficult to reverse some of the trends (IPCC - 6th Annual Report 2021). Many of the changes are unprecedented, some of the shifts are in motion now, while some (sea level rise) are

already irreversible for centuries to millennial (IPCC - 6th Annual Report 2021). The report says that future emissions will cause further warming, every ton of CO2 emissions will add to global warming. The decade 2011-2020 was the warmest decade according to the report (IPCC - 6th Annual Report 2021).

The data from the United States National Aeronautics and Space Administration (NASA, 2021), and National Oceanic and Atmospheric Administration (NOAA), also shows that there is a consistent and incontrovertible warming trend (NASA, 2021). The IPCC Annual Assessment Reports and scientific data of other bodies have laid the foundation for international discussions and negotiations on the issue of stabilizing climate change (NASA, 2021).

The successive annual assessment reports of the IPCC and the increasing exactness of climate science have provided the frame of reference and the impetus for discussions and negotiations in the international arena for the climate regime, comprising three treaties: the UNFCCC, (2016), the Kyoto Protocol, and the Paris Agreement. Although scientific concerns have brought the nations together under the umbrella of the UN Framework Convention, these concerns have not been able to determine the 'content and ambition' of these treatises (UNFCCC, 2016; IPCC, 2021).

Contentions lie deep down in these treatises, because of the contentious nature of the issue. At the heart of these contentions is the issue of who shares the responsibility for the mitigation of GHGs. How should responsibilities be shared between countries? What criteria should be adopted to allocate responsibilities to nations? Should responsibilities be allocated on the basis of current emissions, historical emissions, or on a per-capita (per-person in a year) basis? There are different ways of calculating and comparing emissions, these metrics bring out a different story and cull out different responsibilities for countries and individuals (UNFCCC, 2016; IPCC, 2021).

All these issues are political in nature. Beneath these questions are the issues with regard to formal equality of countries or equity; a universal obligation or differential treatment. At the center of these issues is the subject of disparity between nations. The discussions and negotiations on the issue of climate change are impaired by these issues. The debate between the North and the South reflects these differences (UNFCCC, 2016; IPCC, 2021).

All these issues have been at the center of the climate debate since the issue of climate change emerged at the international level. The changing nature of the climate regime from the Kyoto Protocol (1997) to the Paris Agreement (2017) reflects the fact that the debate is still not settled and that still there are strong differences of opinion between the countries (UNFCCC, 2016).

c. UNFCCC (1992)

The UN Framework Convention was adopted in the year 1992 at the Earth Summit, in Rio Janerio but it entered into force in 1994. It has near-universal membership 197 countries have ratified the convention and are called Parties to the Convention. Despite little scientific evidence (in comparison to the present when the scientific evidence is becoming more and more clear and exact), the UNFCCC in 2016 recognized that there is a problem, hence, it bound member states to act in the interest of human safety (UNFCCC, 2016).

The UNFCCC lays down the normative framework, objective, principles, and commitments to address climate change. Article 2 of UNFCCC (1992) spells out the objective of the UNFCCC. It holds that 'the ultimate objective of the Convention is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system' (Article 2, UNFCCC, 1992). What is dangerous anthropogenic interference is determined by the annual assessment reports of the IPCC.

Article 3 lays down the 'principle' to be followed by the Parties- that of equity with common but differentiated responsibilities and respective capabilities (CBDRRC) (Article 3, UNFCCC, 1992) Article 3 also states that 'specific needs and circumstances of the nations be kept in mind while pursuing the objective of the Convention. It specifically refers to the nations that are 'particularly vulnerable to the adverse impact of climate change and developing countries that have to bear a 'disproportionate burden' (Article 3, UNFCCC, 1992).

The Article 4 of the Convention deals with the 'commitments' of the Parties of the Convention. The Convention requires that all parties: develop national inventories of GHG emissions including data for their base year 1990 and all the years since then (Art 4.1a, UNFCCC, 1992) formulate policies and measures to limit GHG emissions (Art 4.1b, UNFCCC, 1992); communicate information about their national inventories steps, and measures taken to implement the objective of the Convention (Art. 12, UNFCCC, 1992).

The Framework Convention also refers to adaptation to the impacts of climate change technology: development, application, transfer, conservation, and enhancement of sinks of GHGs (Art 4.1e, UNFCCC, 1992). The focus of the Convention is more on mitigation, than adaptation. The idea of adaptation acquired importance when IPCC reports with time confirmed that certain impacts of climate change are irreversible.

The framework convention puts the onus on the developed countries for historical and current emissions (Article 4.2, UNFCCC, 1992) and calls upon them (Annex I countries of UNFCCC, 1992) to lead the way (Article 4.2) and adopt policy measures to address the challenge, (Preamble & Article 3.1, UNFCCC, 1992), and asks them to return to the 1990 level by the year 2000.

The framework convention absolves developing countries from taking similar mitigation commitments. It holds that developing countries' per capita emissions are very low and their share of global emissions needs to grow in the future to meet their 'social and development needs' (Preamble, UNFCCC, 1992).

d. Kyoto Protocol (1997)

The Kyoto Protocol was adopted in 1997 but came into force in 2005, eight years after its adoption. The Protocol operationalizes, sets in motion, the objective, and the key principle of the framework convention 'Common but Differentiated Responsibilities and Respective Capabilities' (CBDRRC). It clearly differentiates between Annex I and Non-Annex I countries, it applies emission targets only to the Annex I countries (Art.3, Kyoto Protocol, UNFCCC, 1998). The provisions related to the monitoring of compliance are therefore restricted only to Annex I countries.

The protocol was negotiated in the context of increasing scientific certainty and preparedness by developed countries (particularly the EU countries) to take mitigation commitments. The Protocol establishes legally binding emission targets for developed countries, to be taken up within a time frame. It introduces market mechanisms to reduce the cost of compliance. The commitments are backed by procedural obligations in terms of reporting, review, and compliance system (Art.3, Kyoto Protocol, UNFCCC 1998).

The Protocol requires developed countries listed in its Annex B to reduce the overall GHGs emission by at least 5% below 1990 levels in the 1st commitment period (2008-2012) (Article 3, Kyoto Protocol, UNFCCC, 1998). These gases are listed in Annex A of the protocol. The protocol also identifies individual targets for each country towards this aim, which range from 8% [below the 1990 level for EU and its member states] to 10% to above 1990 levels [for Iceland]. These individual targets are legally binding, quantitative, and absolute. These targets are based on national offers agreed upon by respective parties (UNFCCC, 1998).

Kyoto Protocol (UNFCCC, 1998) introduces market mechanisms to reduce the cost of mitigation. These are the Clean Development Mechanism (CDM), Emissions Trading (ET), and Joint Implementation (JI). These 3 CDM and JI are project-based mechanisms. CDM is between developed and developing countries and JI is between developed countries. These mechanisms are considered an innovation to allow countries to meet their commitment cost-effectively. They have triggered emissions trading around the world, particularly in the EU (UNFCCC, 1998).

The Kyoto Protocol's (UNFCCC, 1998) initial commitment lasted from 2008 to 2012. As can be seen, the protocol recognizes that developed countries are largely responsible for the accumulation of GHGs in the atmosphere and therefore places a heavier burden on them. The strong, 'prescriptive' nature of the Protocol in favour

of the developing countries led the US to reject the Protocol (UNFCCC, 2016). At the Conference of Parties (COP) 18 in Doha Qatar, held in 2012 Parties' agreed to extend the Protocol until 2020. However, several developed countries opted out of the Protocol, including Canada, Japan, and Russia. This was the second commitment period starting from 2013 to 2020. "The Parties also reaffirmed their pledge for a new climate treaty by 2015 something which they had pledged in the COP 17 in Durban, South Africa that would require all big emitters not included in the Kyoto Protocol such as China, India, and the US to reduce their GHG emissions. The new treaty (what came to be called the Paris Agreement) was to fully replace the Kyoto Protocol by 2020. However, the Paris Agreement came into effect earlier, in November 2016" (UNFCCC, 2016).

e. The Paris Agreement (2015)

The Paris Agreement too pursues the objective of the Framework Convention but in its own distinctive way. It was adopted in 2015 and entered into force in 2016. It came into full effect when its parties nationally determined contributions took full effect in 2020. It takes over from the Kyoto Protocol, while Kyoto Protocol puts legally binding obligations on the developed countries and emphasizes the principle of "Common but Differentiated Responsibilities" (CBDR) but the Paris Agreement requires all parties (both developed and developing) to set emission reduction goals, depending upon their respective capabilities (UNFCCC, 2016).

Article 2.1 discusses the aims and objectives of the Agreement, which is to keep the global temperature increase below 2 degrees centigrade, preferably to 1.5 degrees centigrade, above the pre-industrial level (Paris Agreement, 2016 United Nations Framework Convention on Climate Change, UNFCCC, 2016). In order to achieve the long-term temperature goal, the Agreement requires the Parties to reach the global peaking of GHG emissions as soon as possible and undertake 'rapid reductions' thereafter so as to achieve a balance between GHG emissions by sources and removal by sinks, which is popularly known as 'carbon neutrality, in the mid of the 21st century (Paris Agreement, 2016, United Nations Framework Convention on Climate Change, UNFCCC, 2016).

The mitigation goal is complemented by 'Long term goals' for adaptation and resilience (Paris Agreement, 2016, United Nations Framework Convention on Climate Change, UNFCCC, 2016). It also states that financial goals are to be re-oriented, and consistent with mitigation and adaptation objectives.

The Paris Agreement emphasizes the 'Respective Capabilities' within CBDRRC, 'in light of different national circumstances. Emphasis on 'Respective Capabilities' is a compromise between the United States and China, it has brought dynamism in the interpretation of the CBDRRC (UNFCCC, 2016).

Thus, the Paris Agreement turns away from the 'prescriptive' model of differentiation as given by the UNFCCC (2016) and the Kyoto Protocol and sets 'customized' and 'nuanced' differentiation categories of commitments. Different forms of differentiation can be seen from self-differentiation to differentiation based on capacities in relation to transparency (Rajamani, 2011). The Paris Agreement thus puts aside the differentiation based upon the Annex I and Non-Annex countries (UNFCCC, 2016).

f. Commitments

The Paris Agreement contains procedural obligations to communicate a Nationally Determined Contribution (NDC) every 5 years, with clarity, transparency, and understanding (Article 4.8, Paris Agreement, 2016, United Nations Framework Convention on Climate Change, UNFCCC, 2016). Parties' contributions are nationally determined rather than internationally negotiated. Parties are obliged to submit NDCs but are not under obligation to achieve the outcome. Parties are also obliged to participate in an 'ambition cycle,' whereby parties are supposed to provide information regarding progress in achieving their NDCs (as part of the transparency framework). The idea behind this is to accumulate information into a 'global stake' scheduled every 5 years (Article, 4.9, Paris Agreement, 2016, United Nations Framework Convention on Climate Change, UNFCCC, 2016).

Although the contributions are nationally determined, there are normative expectations attached to the NDCs. Parties are expected to ensure that each NDCs reflect a 'progression' from the last, in the sense of highest possible ambition. Thus, the Paris Agreement adopts the principle of differentiated responsibilities but interprets it considering respective capabilities and national circumstances (Rajamani, 2021).

The Paris Agreement elaborates on adaptation (Article, 7, Paris Agreement, 2016, United Nations Framework Convention on Climate Change, UNFCCC, 2016). It establishes a 'global goal' to strengthen resilience and reduce vulnerability to climate change and suggests parties to communicate how they intend to achieve this goal. The Agreement also refers to the work on 'loss and damage'- the adverse effects of climate change including extreme weather events and slow onset events such as sea-level rise and desertification. Article 8 states that Parties commit to work together to avert, minimize, and address these effects" (UNFCCC, 2016).

The Paris Agreement follows the UNFCCC (2016) template regarding finance it asks the developed countries to take the lead. It intends to mobilize 100 billion per year by 2025, through public and private sources to support developing countries in their meaningful mitigation efforts (Rajamani, 2011).

3. Research Methodology

The paper follows an analytical and normative approach. Qualitative research methods and secondary sources like the UN documents like the UNFCCC, the Kyoto Protocol, the Paris Agreement, Annual reports of the IPCC, books, and articles related to climate change have been used to study the issue.

4. Analysis and Discussion

The following section examines India's contribution to the management of global climate change.

4.1. India's contribution to the management of global climate change.

India has played an active role in shaping the international narrative on climate negotiations which began in the early 1990s (Dubash, 2012). From the very beginning, India took the lead and called a conference on global environmental issues in April 1990 and built a coalition of the global south and became its voice. At the heart of the climate change problem was how to allocate responsibility regarding the mitigation of GHGs which had accumulated over a period, and how to allocate finite atmospheric space to developing countries for development as they needed to use fossil fuel for growth. It was an issue concerning the allocation of rights over the global commons (Agarwal & Narain, 1991). At the conference, India succeeded in securing the support of the southern countries that the Northern countries had the primary responsibility for the mitigation of GHGs; the Southern countries would not accept emission reduction and that the Northern countries would provide the Southern countries with finance and clean technology to deal with the climate change problem (Sengupta, 2011).

In its original draft, the Intergovernmental Panel on Climate Change (IPCC) in its First Assessment Report had noted that climate change was a 'common responsibility' of all the countries. Recognizing that this would have huge repercussions, India with the help of developing countries ensured that it was modified to 'common but differentiated responsibility' (CBDR) of the developed and developing countries (Sengupta, 2011).

India also played an important role in determining the 'appropriate' forum for climate negotiations, while many developed countries favoured that those negotiations be held in the IPCC itself, developing countries like India and Brazil persisted that negotiations should be conducted under the aegis of the UN General Assembly by a specially constituted Intergovernmental Negotiating Committee (INC) to ensure 'openness, transparency, universality and legitimacy, and it succeeded in its efforts'(Rajan, 1997).

India thus shaped the background conditions, against which international negotiations were held. It helped in creating a 'level playing negotiating field' and then went on to play a key role in determining the principle of the UNFCCC in 2016. It succeeded in embedding the principle of equity and differentiated responsibility in the Framework Convention (Article 3, UNFCCC, 2016). It succeeded in ensuring that differentiation was maintained between developed and developing countries and that the obligations imposed on the developing countries were none or minimal (Agarwal & Narain, 1991).

India's major role in the post-UNFCCC negotiations (from Rio to Copenhagen) has been to protect and preserve the principle of equity and the differentiated nature of the climate regime. Since the very beginning of the negotiations in the Intergovernmental Negotiating Committee, developed countries pressurized the developing countries to accept mitigation commitments. The issue was raised again at COP-1 (1995) held in Berlin by the US-led coalition (Japan, Canada, Australia, and New Zealand - JUSCANZ) and EU countries (led by Germany), during the debate on the appropriateness of commitments. These groups maintained that climate change was a global problem combatting it required the participation of all countries especially the emerging powers China and India, and new categories be formulated in the UNFCCC (2016) depicting the reality of the divide between developed/developing, Annex I / Non-Annex countries. The Southern countries felt that another attempt was being made to divide the global South. India got together a Green Group of 72 developing states (including the Alliance of Small Island States, AOSIS) that called for a strong legal protocol favouring differentiated responsibility principle but without any additional commitments for developing countries. India also gathered the support of International NGOs working on climate change, which was sympathetic towards the Southern countries and advocated a strong legal protocol (Dubash, 2013a). Then India went on to influence the EU countries for a strong legal protocol. Ultimately the coalition led by India succeeded in persuading the EU and the JUSCANZ to drop their insistence on mitigation commitments for developing countries. Hence the Berlin Mandate, (the concluding document of the COP-1 held in Berlin) asked for the development of a protocol with 'quantified' mitigation targets only for the developed countries. The Berlin Mandate laid down the ground for the Kyoto Protocol. India, thus, showcased her strength and ability to engineer support and build a coalition of like-minded countries. India was also protecting its national interests at the same time.

From 1995 to 1997, during the Kyoto negotiations, India worked closely with G-77 states especially China (its ally in the climate issue) to exclude the idea of 'voluntary commitments for developing countries, which the developed countries were trying to introduce in the Kyoto Protocol through the idea of 'flexible' mechanisms. India was

skeptical about the 'flexible' mechanisms and actively opposed their inclusion in the Kyoto Protocol.

In the beginning, when the UN Framework Convention was being adopted, discussions were held for the introduction of Joint Implementation (JI), India at that time viewed it as an attempt by the Northern countries to abdicate and shift their responsibilities to the Southern countries. It was like luring the Southern countries to do their mitigation on a cheap basis (Sengupta, 2011). These concerns were again expressed at COP1, but a decision was taken up to set up a voluntary, and non-crediting, 'pilot phase' for (Joint Implementation) JI projects in developing countries, to test the project in the field. However, the idea of JI resurfaced again and was pushed by the US under the guise of a 'Clean Development Mechanism' (CDM), in the Kyoto Protocol. This time India accepted the proposal when Brazil, its ally accepted the proposal (Sengupta, 2011). CDM is one issue where India's position took a turn around from opposition to support. India had begun to realize that it could significantly benefit from the mechanism (Sengupta, 2011). This change was made possible because of the new policymakers in the government who actively supported these mechanisms. The business groups in India and other organizations like the Energy and Resources Institute (TERI), Development Alternatives, and the Confederation of Indian Industry (CIJ) held that these projects would facilitate technological know-how and finance (Dubash, 2013a). Thereupon, India played an important role in sketching the outline principles, rules, and designs of these mechanisms.

India has also played an important role in the discussions about the nature of the post-Kyoto regime. India continued to support the differentiated nature of the climate regime and emphasized that the UNFCCC is the only legitimate forum where formal negotiations on this issue can take place. This has also been the time when advanced developing countries like China and India have been facing huge pressure from the advanced countries to take mitigation commitments. The Northern countries have been trying to shift the nature of the debate from who was responsible for past emissions to who would be responsible for the future flow of emissions (Jayaraman et al., 2011). China has surpassed the US in terms of current emissions, but its per capita emissions are still low owing to its huge population. Similarly, there is a 97% increase in India's total emissions between 1990 and 2004. The developed countries have been forcefully arguing that without the participation of China and India attempts made by the developed countries would be neutralized. These arguments have been widely publicized by Western leaders and the global media (Dubash, 2013a).

The COP 13 held in 2007 December in Bali, was to guide future negotiations, and India played an important role in these negotiations too. India joined forces with other developing countries to ensure that the essence of future negotiations remained

consistent with the framework and principles of the UNFCCC (2016) and the Kyoto Protocol. India's aim was to ensure that a clear differentiation was maintained between the developed and developing countries commitments in the future (Dubash, 2013a). The climate negotiations reached a stalemate between the period 2007-2009, starting from Bali to Copenhagen. There was no progress in the negotiations for the future regime that was to follow the Kyoto Protocol.

However, despite the stalemate, India started to act on the domestic front which included - Establishment of a Prime Minister's Council on Climate Change (PMCCC) in June 2007, the appointment of a special envoy of the Prime Minister, and the Launch of a National Action Plan on Climate Change (NAPCC) in June 2008, but it continued to emphasize on differentiation principle at the global level.

The first pointers of change in India's foreign policy on climate change started appearing in July 2009, when Prime Minister Manmohan Singh signed the Declaration on Energy and Climate Change with Major Economies Forum (MEF) Leaders at a meeting which was being held next to G-8 Summit in Italy. The declaration recognized that the rise in global temperature 'ought not to exceed 2 degrees Centigrade' and that MEF countries would work together to reduce global emissions by 2050 (Dubash, 2013a). This was basically an indication in theoretical terms that India was willing to make changes at the domestic level.

This became further clear when Jairam Ramesh India's Environmental Minister attempted to change India's position in the period leading to Copenhagen Summit in 2009 and noted that 'when India is refashioning its place in the world community based largely on its economic performance (and not just potential) its climate change negotiating strategy both in terms of substance and style has to be nuanced, flexible, and responsive to changing circumstances and challenges' (Ramesh, 2021). It was time to adopt a 'per-capita plus approach' an approach which recognizes that specific targets must be assigned and fulfilled through domestic legislation. "India should take a more flexible stand on the question of allowing external reviews of India's domestic mitigation actions and detailed national communications to the UNFCCC" (Ramesh, 2021; Dubash, 2013a).

This led to a great deal of debate on the domestic front, it was felt that the official negotiating team was being ignored and unilateral concerns were being expressed by a senior minister. There were debates within the Parliament also, in the final debate held before COP 15, Ramesh (2021) expressed that India would go to Copenhagen with a positive frame of mind' and prepared to be 'flexible' but three things were non-negotiable that India would not accept 'legally binding emission reduction cut'; it would not accept any peaking year; and that it would not allow scrutiny of mitigation actions externally. Further, the author announced that India would voluntarily reduce the emission intensity of its GDP by 20-25 % by 2020 (Sethi,

2009). This was a reflection of the shift taking place in India's position since the UNFCCC was adopted.

At the Copenhagen meeting COP-15 (2009), India coordinated with similarly placed developing countries - Brazil, South Africa, and China (BASIC) to jointly resist the monitoring pressure that they were facing from a US-led North. The Northern countries insisted that the Kyoto Protocol was deeply flawed and be replaced by a new climate regime that is not based upon a strong differentiation principle. They expected the BASIC countries to accept stronger mitigation commitments in other words a regime where all GHG emitters, developed and developing world have similar mitigation commitments and are subject to similar levels of scrutiny (Sengupta, 2011).

The attempt to change the foundational principles on which the UNFCCC (2016) and Kyoto Protocol were based - equity and differentiation was strongly resisted by the BASIC and other developing countries. This was the context when COP-15 at Copenhagen was held and it was basically a compromise between the BASIC and the US. In the negotiations, India worked hard to see that none of the 'non-negotiable' presented by the Environmental Minister in the Parliament were violated (Prabhu, 2011). Thus, under the accord, it was agreed that a 'differentiated framework for the 'quantified economy-wide emissions targets for the developed countries and the 'nationally appropriate mitigation actions' of developing countries would be adopted. "Since the Copenhagen accord, India has started taking the issue of climate change seriously; it has taken steps both with regard to adaptation and mitigation. The National Action Plan on Climate Change (NAPCC) was released in 2008, basically, to accelerate India's response to climate change, the idea was to integrate issues related to poverty, vulnerability, energy, efficiency, sustainable development, and forestry into the development rubric. National Mission for Enhanced Energy Efficiency was adopted to scale up energy efficiency actions at various levels. The Green India Mission was also adopted to improve the quality of the forests. Jawaharlal Nehru Solar Mission was inaugurated by Prime Minister Manmohan Singh on 11th January 2010 with a target of 20GW by 2022. Its aim is to establish India as a global leader in solar energy. State governments too launched or announced state-level action plans to combat climate change" (Ramesh, 2021).

At the Conference of Parties (COP)-16 (2010), held at Cancun, in Mexico, India sought to bridge the gap between developed and developing countries, especially on the issue of equity (UNFCCC, 2016). This period thus saw the beginning of the change in India's approach to climate issues. From Rio to Copenhagen, there was a consensus within India - across political parties, governmental negotiators, political parties, environmental NGOs, business groups, scientists, and the media- that India's position on climate change with emphasis on the principle of equity and differential treatment was valid and legitimate. This position on climate change remained

consistent. But the changed articulations suggested that India was entering a phase of transition. What led to the change in articulations?

There are immediate as well as structural reasons for this change. The immediate reasons are that the new policymakers have a different worldview and normative position as compared to those who have been traditionally in charge of Indian climate policymaking. Besides the immediate reasons, there are structural forces pushing India to adopt a less rigid position and modify its stand. Firstly, the changes in the articulations have been due to the increasing certainty of the science of climate change and the increased awareness that climate change poses for countries like India (Dubash, 2013b). The domestic consensus on the principle of equity and differential treatment is no longer as solid as it was when the negotiations started taking place in the latter half of the 20th century. There are voices within the domestic front questioning India's traditional stand, such as the academia, civil society actors, and also from within the Parliament.

Secondly, it is believed India is more vulnerable to climate change and its impact. It has a long coastal line where millions of people dwell, engaged in day-to-day living by fishing, salt-making, and agriculture. An increase in the sea level will have an immediate impact on their livelihood, health, ability to grow food, security, and work. They are potential 'Climate refugees' (Many groups and communities in Small Island Nations have already started relocating because of the intrusion of sea salt and protracted drought. They have already become 'climate refugees' and the number is expected to rise with time). Further, India is surrounded by the Himalayan range, and the melting of these glaciers will have a direct impact on water availability to people across the Gangetic belt, disrupt crop production and affect rainfall patterns. Thus, it is considered that it is in India's own interests to evolve strategies and take action to combat climate change depending on its capability and capacity (Ramesh, 2021).

Thirdly, India has changed since the latter half of the 20th century. In the early years, when the UN Framework Convention was being adopted, the Western World was in an ascendant position and India was under the structural adjustment program, and in a weak position. The division of the world into developed and developing, powerful countries and other countries was considered fair and legitimate. It was fair to fight and defend the principle of equity and differential treatment when the Framework Convention was been adopted and then operationalized. It was fair to demand that the Northern developed countries should take the lead and accept stronger commitments, given their historical, current, and per capita emissions of GHGs (Dubash, 2013b). However, since the adoption of the UN Framework Convention and the Kyoto Protocol, the balance of power relations within the international system has undergone a change. There is a sub-group within the Group of 77; the world is seeing the rise of China, India, South Africa, and Brazil; several plurilateral groups have emerged reflecting their interests. With rising powers, their emissions are growing,

and China is the number one emitter of GHGs (but not in per capita terms) similarly, India's pollution continues to rise. They have joined the 7 top emitters of GHGs - the UK, the US, the European Union, Russia, Japan, Australia, and Canada, (on a historical, per capita, and current basis). They are responsible for 34% of the global CO2 emissions (2019), China, 28%, and India for 7% of the total global emissions (Ritchie et al., 2020).

This has led the Northern countries to demand that countries like India and China take mitigation action. With so much pressure coming in, consequently, India had to reassess its position and go in for a more flexible approach than a rigid one. There is a sentiment that has been growing in the Indian political class that a rising India should 'shed its hardline image' demanding no action by developing countries and accept a proactive role in the given circumstances not only in matters related to climate change but all areas of governance (Narlikar, 2006). There is also a sentiment growing in the Indian business class that India can actually benefit from the emerging growth and business opportunities and clean technology mechanisms and transition to new energy mechanisms.

Fourthly, India has changed, because its allies (the developing powers), China, Brazil, and South Africa have been subsumed into the new framework of thinking and announced their own voluntary mitigation targets prior to Copenhagen, this generated considerable peer pressure on India as well, to do the same. There was also, the fear of being isolated and being blamed in the international arena, which may not look good in terms of its image.

Finally, some have attributed this change in particular to the growing bilateral relations between the US and India - the Indo-US nuclear deal. These new ties have opened up new avenues for collaborations and mutual gains thus pursuing a uni-dimensional approach under these circumstances is untenable.

In the COP-26, held at Glasgow, Prime Minister Narender Modi, committed to a 01-billion-ton reduction in its projected emissions, which is an outright scaling down of its GHG footprint, placing renewable energy at the centre of this ambition. The Prime Minister ensured that by 2030, India would derive 50% of its energy from renewable sources.

5. Conclusion and Recommendations

Global Climate change is the biggest challenge that humanity is facing today. GHG emissions, particularly CO2 and methane are the primary drivers of climate change. Limiting rapid climate change demands limiting collective emissions and this demands global management and governance. But how this responsibility should be shared between countries is a matter of contention in climate change management discussions and negotiations. The principle of equality of all nations was rejected and

differential treatment and equity were adopted by the UNFCCC (2016) and by the Kyoto Protocol. These regimes differentiated between developed and developing nations and allocated major responsibility to the developed nations for reducing GHG emissions. However, the Paris Agreement requires all parties (both developed and developing) to set emission reduction goals, depending upon their respective capabilities.

India has been instrumental in shaping the Climate regime from the very beginning. India played a key role in developing the normative framework of the climate regime, its principles, rules, and norms. It became the voice of the global south, and a coalition builder, within the non-Annex 1 countries through the group 'Group of 77 and China'. It has championed the principle of equity and differential treatment. It has defended that the per-capita emission matrix should be considered while allocating responsibilities for mitigation action. It has championed the principle of the 'Common but Differentiated Responsibilities' clause within the UNFCCC. India's engagement in Climate Change has been largely a story of continuity defending the principle of equity and differential treatment, but since the period leading to Copenhagen Summit, and after that India has seriously reconsidered its position. It has adopted a more flexible approach and moved away from the rigid line and has shown keen interest in reducing its GHGs emission.

6. Limitations and Further research

Combatting climate change demands not only climate change management and governance but also a change in the attitude of people, a shift to eco-centric ways of thinking, and acknowledgment of the rights of nature. To discuss this is beyond the purview of this article. Linking climate change with the rights of nature is imperative but it is still at the nascent stage as far as the discourses on climate change are concerned.

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