



On Official Indian Perspective Related on Climate Change

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Abstract: Global climate change trends, including those in India, are sending out warning signs that, taken together, it could make our planet uninhabitable in the future. Climate change and its impact on agriculture, forests, biodiversity, health, and seaside management are some of the issues on which global environmental crisis is manifested in a complicated way in the third world countries such as India. The process of westernisation, i.e. increasing industrialization, and urbanisation are further adding to these complications. Due to its large population and status as an emerging superpower, India is especially susceptible to the belongings of climate alteration. Just like any third world country, India has made a relatively small contribution to historical emissions but will make a sizable contribution to future emissions. In international climate negotiations, India plays a crucial role, and the country's leaders have stated their desire and intention to take action at home and abroad to combat climate change. In this paper, an attempt is made to analyse and examine the Indian viewpoint on climate change and to see if there is any changing dynamics therein.

Keywords: Climate Change, Environment, India

Introduction

Climate change has become one of the most disputed topics of international development in the modern times. Countries of the first world are the primary responsible one, for the increase in greenhouse gases in the atmosphere (GHG). The increased concentration of carbon dioxide in the atmosphere has been partially attributed to human activities including the combustion of fossil fuels and alterations in land use, while agricultural practices have contributed to an increase in atmospheric methane and nitrous oxide. Scientists use the term "Global Warming" to refer to the gradual upsurge in average air temperature near the Earth's surface and seas during the past few decades. Developing Nations are now particularly susceptible to it because of their meagre resources, though they have historically lesser contribution in this process. (Dubash, Khosla, Kelkar, & Lele, 2018) (Ministry of Environment and Forest, 2013)

Since the mid–eighteenth century, human activities have started significantly increasing the atmospheric concentrations of all three of the most prominent Green House Gases: carbon dioxide, methane, and nitrous oxide. Naturally, the western world, the early leaders of modernization had been the pioneer in polluting the environment at a large scale in this manner. The developing countries of the third world have started joining this bandwagon in a significant way only after the World War II, after the former colonies got liberated one by one. (Hakami, 2013)

Now, the cumulative effect of global and regional climate change trends is predictable to render this planet uninhabitable, albeit in the distant future. However, some parts of the world have already begun to show the tell-tale indicators of being unable to sustain life. In many areas, desertification has become a serious issue due to the depletion of groundwater supplies. Due to human development, many forest-dependent insectivore, avian, and mammalian species have





lost their forest-dependent habitats. Extreme weather conditions like high temperature summer, or very cold winter, or absence of normal deviation in temperature, — chaotic signals with serious consequence in climatic and environmental balance have started occurring in almost every continent very frequently.

Even as some parts of India are getting baked in the sun, others are being inundated by floodwaters. These differences can also be attributed to human-caused climate change.Human activity is to blame for global warming, changed snow patterns, and an increase in the frequency of dangerous weather occurrences in India. However, India is no stranger to the devastation that can result from extreme severe weather.

India plays a significant role in international climate politics and policy. As a large developing country with a low per capita income, India is home to a disproportionate bigger share of the world's most vulnerable people. In terms of emissions, India's role as a rapidly developing emerging market has been twofold: the country has contributed very little to historical emissions but is expected to contribute significantly to future releases though not on a per capita basis.

India took the helm during the early stages of international negotiations, when many of the fundamental ideas and concepts were being discussed. The climate regime in the country has relaxed over time, but this trend has not been met without criticism. India's consistent incorporation of climate considerations into domestic policies has made the country a test bed for rules that aim to mix climate thoughts into growth (Mahony, n.d.)

Objective & Method of this Study

In this paper, we would take a look at the writings that describe the climate change arc from an Indian perspective. In a rudimentary effort, this paper would attempt to present Indian position on climate change. This paper therefore aims at understanding and exploring the viewpoint of India on climate change. The objectives of the study are twofold:

- To examine the existing literature and empirical data on climate change reporting from an Indian perspective from the existing literature related to different aspect of climate change.
- Examine the issues from India's vantage point on climate change.

Even performing a literature review can provide fresh insights on the subject at hand. That is the limited objective of this paper.

The method of this study is to analyze the secondary literature and categorize such secondary sources to understand the major issues related to climate change related discourse in India.

We have also used a quantitative measure through observing the data related to Official Press Releases of Government of India by the Official Body of PIB (Press Information Bureau) under the Ministry of Information & Broadcasting, Government of India.

The Growing Literature on Climate Change

It is more than a decade now, Climate change has been identified as one of the most dangerous issues by Balasubramanian et al. (2012). Wide range of difficulties arises out of it: agriculture, water resources, forests, biodiversity, to name a few of those. When compared to China, the United States, or the European Union, India now ranks as the fourth largest contributor to global warming.

Alex et al., (2019) indicated that between 1991 and 2018, scientists in India evaluated studies related to climate change using Scientometric methods. Scientometrics has been defined as the quantitative study of science, communication in science, and science policy. Information was obtained via Web of Science (Science Citation Index). Twenty-eight years of data were analysed, spanning from 1991 all the way up to 2018. This data was used to examine the rise in climate change research. The term "Climate Change" was entered into the database search bar.





To narrow down the search for climate change records to India, we used a more specific search term in the "Subject" column and a shorter time frame (1991-2018). They were able to locate and retrieve 5360 records. Researchers looked at the data to determine the most prolific authors, institutions, nations, fields of study, journals, and years of publication for their work on the topic of climate change.

According to Dubash et al., India plays a significant role in international climate politics (2018). It has been an outspoken participant in international climate negotiations, though its position within these talks has shifted ended time. Because of the fluid exchange of ideas between domestic and foreign stakeholders, India has become a test bed for policies that factor environmental concerns into economic growth. India's climate policy and politics have been examined in depth in this article. The article begins with a review of the changing Indian public's views on climate change from a variety of angles, including ethics, climate influences, India's energy change, sustainable links, and carbon confiscation. Global and national trends in politics, policy, and administration are also dissected. According to the authors of the paper, changes in the global context have influenced and been reflected in both domestic and foreign policies in India.

<u>Climate Change & Economy</u>

Hussain et al. (2019) took a quantitative method to the query of how climate change has affected India's economy by analysing secondary data on climate change variables, GDP, and the populace of India from 1980 to 2016. Insights were gleaned from databases maintained by the World Bank and Data.gov.in. The statistical methods and software included multiple regression analysis and the Pearson correlation coefficient (E-views 9.0 and SPSS 22.0 were also used). The relationship between global warming and India's economic growth was analysed with a Pearson correlation coefficient. The study concluded that rainfall and population growth were the primary drivers of India's economic growth, while rainfall and population growth were also significant independent influences. Temperature was found to be insignificant. There was also data signifying an optimistic correlation between populace and GDP and a negative correlation between temperature and GDP. Because significant increases in temperature and rainfall may aid in agricultural production, contributing to economic growth, the study concludes that climate change significantly affects India's economic development.

Chandel et al. make the case that climate change has been made worse by the increased production of conservatory gases due to the increased usage of fossil fuels worldwide during the past few decades (2016). India is the fourth greatest emitter of carbon dioxide in the world, behind China, the United States, and the European Union. As part of its effort to prevent global warming and boost the Indian economy at the same time, India has unconfined its National Action Plan on Climate Change (NAPCC). There are eight different "National Missions" operating under the NAPCC. The Indian government has recently taken steps to increase the widespread adoption of renewable energy sources as part of its National Action Plan for Climate Change. The purpose of this research is to analyse how recent renewable energy initiatives relate to climate change and electricity generation challenges as defined by the NAPCC working groups. We conduct a comprehensive evaluation of the plan's initiatives and identify any issues that have surfaced so far. There is an explanation of the technological challenges that have prevented renewable energy sources like solar, wind, hydro, and bio-energy from becoming more widely used. Renewable energy sources are discussed, as is the need for constructive suggestions on resource and technological development initiatives in the country. Dubash et al. (2013) observed that India inhabits an intriguing liminal space in international climate politics, with a history of low emissions and a rapidly expanding economy.

Because of mounting external pressure, the first viewpoint is gaining prominence, while the





second has had a profound effect on the development of climate politics in India. This study of Indian climate politics begins with a historical overview of how the country's current climate policies came to be. (Dubash et al. 2013)

According to Prabhakar et al., there is mounting evidence that climate change affects droughtprone India. Studies predict potential declines in future monsoon-linked rainfall in the country (2008). Using what we've learned from dealing with other disasters, we analysed the current drought risk mitigation and response procedures and found places where they fell short. The goal was on finding "no-regret" adaptation solutions that would both minimize current risks while making adaptation the norm in the future, as long-term climate predictions at the scales necessary for successful policy-level planning are notoriously unreliable. Increased preparedness, The most significant effects of climate change on drought-prone India involve a review of existing monsoon and drought prediction approaches, the construction of drought monitoring and early warning systems, and corresponding input-level preparedness.

According to a study by Dash et al., the need for additional research into climate change in India and the exploration for strong indications is a pressing issue (2007). Given the well-known fact that people with lower incomes are more susceptible to the belongings of climate change, this is an issue of particular importance. Climate in India varies greatly from one region to another and from season to season due to the country's vast size and varied topography. Major weather occurrences that influence India include, "floods and droughts, monsoon depressions and cyclones, heat waves, cold waves, prolonged fog, and even snowfall." This in-depth review of the data in consideration by the author and re-analysed model fields during the winter and during the monsoon seasons finds that India's air surface temperature has risen by 1 to 1.1°C over the last century. Sometime between the years 1955 and 1972, annual low temperatures in northern India plummeted, only to surge in the decades that followed. But the average low temperature in southern India has been steadily rising over the past few decades. The Arabian Sea and Bay of Bengal have both been experiencing a slow but steady rise in sea surface temperature (SST). There have been an increasing number of incidents along the eastern coast of India that have been attributed to either abnormally high or low temperatures. A decrease increase in the frequency of major depressive episodes is experiential during the summer monsoon season low pressure areas. The frequency of cyclones in November has been on the rise over the past century. The frequency with which devastating cyclones hit the coast of the Indian Ocean has also increased. Seasonal analysis shows that summer monsoon rainfall across the Indian subcontinent is on the decline while pre- and post-monsoon months are on the rise.

State of climate change discourse in India

Intergovernmental Panel on Climate Change (IPCC)

The United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) collaborated to create the Intergovernmental Panel on Climate Change (IPCC) in order to generate reliable scientific studies on climate change. Working Group I will give the physical science basis; Working Group II will discuss impacts, adaptation, and vulnerability; and Working Group III will address assessment for mitigation of climate change as part of the IPCC's work on the Fifth Assessment Report.

Climate Change and its impact on India

India's most pressing environmental problems have become more severe during the past two decades. Natural ecosystems are being impacted by climate change, and the country stands to lose a great deal as a result. And this is especially true when considering agriculture, the threat of sea level rise, which threatens a lengthy coastline and human settlements, glacial water storage in the Himalayas, which is still essential to the survival of 58% of the region's





population. There will be more instances of floods and droughts because of climate change. In turn, they would affect concerns about food and water security in India.(Economic Survey, 2013).

India is bearing the brunt of the belongings of global warming. Changes in fever and precipitation have already had significant consequences in India: (Alex et al., 2019; Balasubramanian et al., 2012)

- Heatwaves, droughts, and floods are occurring more frequently and with greater intensity in India as a consequence of climate change. It is possible for lives to be lost, property to be destroyed, and infrastructure and crops to be ruined as a result of such occurrences.
- A major economic driver for India, agriculture is seeing its output reduced due to climate change impacts like rising temperatures and shifting precipitation patterns. Lowered crop yields from drought and high temperatures, as well as damage from flooding and flooded crops and infrastructure, are two examples of the negative effects of climate change.
- Water scarcity: Climate change is making existing water scarcity worse in many parts of India, especially in arid regions. The melting of glaciers in the Himalayas reduces the availability of water from glacial melt, while decreased rainfall and increased evaporation from rising temperatures reduces the availability of surface water.
- Heat stroke, respiratory disorders, and vector-borne infections are just some of the health challenges that are flattering more shared as a result of India's warming climate. Warmer temperatures and shifting patterns of rainfall and humidity, brought on by climate change, are aiding the spread of these diseases.
- Coastal flooding: As the sea level rises and storms become more powerful, the risk of coastal flooding in India rises, threatening the lives and livelihoods of those who live in low-lying coastal regions.

Overall, climate change is expected to have plain consequences in India, necessitating extensive measures to adapt to and lessen those consequences.

Climate Change and India's Actions

India has taken a number of actions to counter climate change, including: (Dubash et al., 2018; Chandel et al., 2016) The salient points in this regard are:

- India has ambitious goals for renewable energy, including generating 40% of its electricity from renewable sources by 2030, and this goal requires the development of renewable energy sources. To get there, the government has enacted several laws to inspire the growth of renewable energy bases like solar and wind.
- As the world's third-largest consumer and producer of coal, India must take steps to lessen its dependency on the resource. But the government has acknowledged the need to lessen its reliance on coal to lessen emissions of climate gases. The government has instituted measures to indorse the use of renewable energy, and it has set a goal of increasing the percentage of non-fossil fuel-based capacity to 40% by 2030.
- The Perform, Achieve, Trade (PAT) Scheme is one of many energy efficiency programmes developed by the Indian government to encourage the widespread adoption of energy-efficient technology and practices by large energy-intensive sectors.
- The National Action Plan on Climate Change and the National Afforestation and Ecodevelopment Board (NAEB) are two examples of India's long history of forestation advocacy (NAPCC).
- The Indian government has launched a number of programmes to encourage the use of environmentally friendly modes of transportation, counting the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) Scheme. It is hoped that this





programme will lead to a rise in the number of electric and plug-in hybrid vehicles purchased in India.

 Sea level rise, more frequent and severe dangerous climate events, and decreased water supply are just a few of the ways in which India is endangered by climate change, highlighting the importance of version and resilience. The government has responded by establishing a number of programmes meant to encourage adaptation and resilience in the face of these threats, such as the National Adaptation Fund for Climate Change (NAFCC).

India's Perspective of Climate Change

India has been doing its part to battle climate change, and its leaders have acknowledged the urgency of cutting down on emissions and preparing for their effects. A simple count of Official Press Releases by the different Ministries of Government of India has recently increased like anything.

In our quantitative study, we have observed a steady increase of such press releases related to Pollution, Environment, and Climate Change. Taking the period of observation as 1st January to 31st December for each year during the period between 2017 to 2022, we could see a discernable increase in the official discourse related to all three selected keywords as is clear from the Table below:

Table: Number of Press Releases of Government of India			
Year	Number of Press Releases with at least one of the words as:		
	Pollution	Environment	Climate Change
2017	22	60	11
2018	30	96	16
2019	19	64	38
2020	18	35	10
2021	40	65	28
2022	36	111	72

One does not require great statistical skills to see that the change in number of Press Releases related to Climate Change has the highest increase during the six year period. This clearly indicates a shift in the perspective and understanding of the Environment and Climate related issues. Pollution was already an important issue by the middle of last decade whereas all three key concepts had an absolute increase in number of related Press Release, Environment started to be looked at more closely during this period which is represented by its almost double growth, in comparison with the growth in number of Press Releases related to Pollution. But Climate Change related discourse had maximum growth in number.

The cumulative consequence of the stated shifts in perspective and understanding is to have complicated what had been an appealingly simple Indian narrative about climate change, which had hitherto relegated the issue to the realm of diplomacy alone. Due to the inclusion of internal distributional problems within the realm of climate ethics and the consideration of the insinuations of climate science for India's consequences, the topic of climate change has been brought up as "a part of India's development debate". A new literature body is also emerging around the topic of climate change and its associated issues, such as the energy transition, carbon sequestration in forests, and the impact on local environments and communities.

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Politics

Because of shifts in morality, as more is learned about the influences of climate change and the connection between climate change mitigation and long-term sustainable development, climate politics in India become more complex. Around the time of the "2009 Copenhagen COP", stylized depictions of Indian climate politics hinted at three conflicting and overlapping perspectives: growth realists, who downplayed climate concerns as part of a geostrategic game; There were two camps of thought on the issue of climate change: sustainable-development realists, who were concerned about global warming and local environments but were sceptical of a fair international agreement due to the legacy of colonialism and imperialism; and neo-idealists, who saw global warming as an opportunity to create a better world (Dubash et al., 2009; 2013). For instance, consider Badawi's harsh assessment "of India's domestic energy plan and negotiation stance". Before and during the Copenhagen negotiations, the Indian Parliament had a heated discussion on the principles that should drive India's negotiating position. The various topics discussed ranged widely, and included opportunities and threats, as well as past wrongs (Prabhu et al., 2012).

In the wake of increasing political variety, the English-language press also began to reflect that diversity in its portrayal of political figures. By doing so, news items published between 2002 and 2007 were characterized as further solidifying a "risk-responsibility split" couched in postcolonial terminology (Billett S., 2010). Stories about North-South polarization were still popular in 2009 and 2010, but they had expanded to include more topics, such as the increasing emissions from developing economies, China's involvement, and the resulting climate change. I. Background (Jogesh, 2012). It's unfortunate that no more recent studies can be found.

Some international interlocutors have mostly dismissed these opinions as "hackneyed and arguably counterproductive," which is a sobering aide-memoire of the let-down to grasp insights across a North-South divide (Boykoff, 2010). A better analysis would have been to deconstruct how Indian officials make sense of climate politics. This would have demonstrated the "discursive reproduction" of "north" and "south" categories in such reporting while also illuminating the role that crucial material conditions, such as limited resources, increased susceptibility, and information on comparative levels of cumulative releases, play in sustaining this discourse.(Joshi, 2013).

India: Policy and Governance

Over the past decade and half, there has been a shift from viewing climate change as primarily an international issue to viewing it as an issue that requires domestic policy adjustments and new forms of governance. There is a strong connection between the two levels of government, and one piece of evidence is the fact that domestic efforts are frequently prompted by international pressures, ideas, and networks. Furthermore, although federal policy changes were initiated at the federal level, they rapidly spread to the state and local levels. For this reason, addressing climate change is becoming a multilevel governance challenge in India, as it is elsewhere. This needs coordination between different tiers of government and a growing number of NGOs (Dubash et al., 2009).

"The National Action Plan on Climate Change of 2008", is largely responsible for the development of national climate policy (NAPCC). For many, the NAPCC represented India's effort to appease its critic's abroad (Atteridge et al., 2012). The NAPCC characterized India's climate method as being driven by the chase of synergies, which it hoped would help the country meet both international requirements and domestic concerns about equity and differentiation. Contrary to what was believed at the time, co-benefits help countries achieve their development goals in addition to improving the climate. Energy security, for example, was the primary, "national objective that assured climate co-benefits when promoting renewable





energy sources", at least in the case of India's efforts to provide energy to fuel its rapid economic expansion (Dubash et al., 2013).

The NAPCC implemented eight different national missions spanning from bettering urban habitat and water management to increasing solar energy use and energy efficiency. Due to NAPCC's efforts, the official institutional structure for climate governance (shown in Figure 1) now comprises, "sectoral line ministries, the Planning Commission (later renamed NITI Aayog), the Ministry of Finance," and, as well as various other governance mechanisms at the state level too (Dubash et al., 2016). Synergy between climate and development was sought out because neither the breadth of capacity nor the requirement for an institutionalized co-benefits-based linkage between the two was realized.



Figure 1: The Institutional Structure of India's Climate Governance

Despite the NAPCC's breadth and importance, there has been surprisingly little investigation into its application. Little congruence was identified between the missions, and the aims were often indistinct and difficult to pin down, according to an early analysis of "the NAPCC procedure rather than outcomes" (Byravan et al., 2013). In circumstances where the objectives were more clearly stated out, such as the energy efficiency mission, the NAPCC approach was able to provide new institutional chances material to the realization of measurable achievements. India has submitted an NDC as part of the Paris process (GOI, 2015), though it is too early to





tell how much this will affect upcoming policy or institutional changes (the NAPCC machinery is still in operation). Besides the three measurable commitments, the NDC also made several more aspirational statements, such as those pertaining to enhanced adaptation and capacity building. Most notably, India extended its commitment from Copenhagen to cut its releases intensity by 33–35% from 2005 levels by 2030 (GOI, 2015). While estimates for India's emissions vary widely, a meta-analysis of the available literature suggests that the country's current policies are consistent with this pattern (Dubash et al., 2017). Over the past few years, India's emission intensity in relation to GDP have been steadily decreasing, and the country's emissions intensity is now roughly at the global average.(figure below).



India plans to have 40% of its electricity generation capacity come from non-fossil fuel foundations by 2030. If domestic targets for the promotion of renewable energy are met, this objective can be reached. Third, we pledge to have the forest industry "additionally" remove 2.5-3 billion tonnes of CO2eq from the atmosphere by 2030. Future research is likely to be informed by the process of keeping track of and accounting for these commitments.



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INDIA: EXPECTED EMISSIONS

(with 35% reduction in emission intensity by 2030)



The various GDP growth assumptions are a constant annual average for 2016-30

Source: IMF, World Resources Institute (WRI) and Mint calculations

Figure 3: India GHG emissions

Though scattered, there is more writing on climate action at the state and local levels. As a means of analyzing the connection between local development goals and climate change, the literature primarily focuses on mainstreaming or co-benefits. Therefore, the advantages or aims were detailed, exposing the intricacy and complexity of climate planning. State-level initiatives may have been sparked by the central government, but they soon took on a flavour specific to their location, as evidenced by climate plans that priorities "coal-fired power in Odisha and desertification in Rajasthan" (Atteridge et al., 2012).

Furthermore, the lack of scientific input in determining how global climate influences would translate locally led to a superficial conception of the development climate link, resulting in the apparent equivalence of climate plans and state-sustainable development plans(Dubash et al., 2014). According to Aggarwal's research, In Odisha, "strategic bundling" was utilized to address short-term development priorities inspired by the state's pursuit of climate funding opportunities, while in Delhi, "climate mitigation money was leveraged to bring attention to high theft and loss levels in the power industry." (Aggarwal, 2013). (Dubash et al., 2014). Top-down planning was used by states when the federal government provided clear direction, such as with the promotion of renewable energy; however, even in these cases, states were allowed to experiment with different policies (Jörgensen et al., 2015). Furthermore, research into climate change adaptation in the construction industry demonstrates that centralised schemes do exist; however, To promote the flow of data, funds, and innovations, they utilize both top-down connections to states and bottom-up connections among corporations, NGOs, and local government entities. (Khosla et al., 2017)

Conclusion

Numerous aspects of human life, including financial resources, ecosystems, diseases, and migration patterns, will be impacted by climate change. Despite the critical nature of the problem, it is not universally agreed how to measure the value of different parameters involved in the process. India has already begun to taste the political and policy trials posed by climate change and the Government, after identifying Pollution and Environment as two important issues by the middle of last decade, over the last six years has been attempting for an increased





understanding of Climate Change related issues as well.

Evidenced by the country's domestic policy initiatives to tackle adaptation worries and investigate connections between energy and forest policy and climate change mitigation, India's growing interest in climate change is reflected in this shift. How these manifest themselves on a local level is being studied in a growing body of literature.

India has been looking for ways to engage with the evolving new international order while still putting a premium on the issue of equity. It has widened its forms of engagement, submitting international pledges at Copenhagen and Paris, in the face of unstoppable global forces, a growing awareness of its own climate vulnerabilities, and, most importantly, an engagement with the idea that climate mitigation and development need not always be in conflict. Rising sea levels, extreme weather, and the inability to grow food and the challenge to maintain uninterrupted water resources are all threats that India and other developing countries have to face as global warming continues to worsen.

Government of India has actively participated in international initiatives like the United Nations Framework Convention on Climate Change to counteract global warming.(UNFCCC) and the Paris Agreement. In recent years, India has made significant strides toward its goal of plummeting carbon releases and cumulative use of renewable energy sources. Numerous policies and programmes have been put in place to lessen the impact of global warming and to promote long-term economic development.

There are still many obstacles for India to overcome before it can effectively combat climate change. These include ensuring that the benefits of climate action are shared fairly across the society and finding a balance between economic development and environmental protection. The government of India has replied to these threats by enacting several policies and programmes, the most comprehensive of which is the National Action Plan on Climate Change.

The increasing attention India is paying to climate alteration is encouraging, both in terms of theory and as an implementable policy challenge. To make climate change relevant to politics and governance, however, in the face of the weight of immediate development challenges are most necessary in order to address both climate change and urgent development challenges simultaneously. A solid analytical framework for this must be created.

As a whole, the Indian government is very worried about global warming, and it plans to take both domestic and international measures to combat the problem. It is still in search of a proper paradigm with a fast changing scenario.



References

- 1. Aggarwal RM. 2013. Strategic bundling of development policies with adaptation: an examination of Delhi's Climate Change Action Plan. Int. J. Urban Reg. Res. 37(6): 1902–15
- 2. Alex, P., & Kumar, K. S. (2019). Climate Change Research literature in India: A Scientometric Analysis during 1991–2018. Library Philosophy and Practice, 3637, 1-17.
- 3. Atteridge A, Shrivastava MK, Pahuja N, Upadhyay H. 2012. Climate policy in India: What shapes international, national and state policy? Ambio 41: 68–77
- 4. Balasubramanian, M., & Birundha, V. D. (2012). Climate Change and Its Impact on India. IUP Journal of Environmental Sciences.





- 5. Billett S. 2010. Dividing climate change: global warming in the Indian mass media. Clim. Change 99(1–2): 1–16
- 6. Boykoff M. 2010. Indian media representations of climate change in a threatened journalistic ecosystem. Clim. Change 99(1–2): 17–25
- Byravan S, Rajan SC. 2013. An evaluation of India's national action plan on climate change. SSRN Work. Pap. 2195819SSRN.
 - https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2195819
- 8. Chandel, S. S., Shrivastva, R., Sharma, V., & Ramasamy, P. (2016). Overview of the initiatives in renewable energy sector under the national action plan on climate change in India. Renewable and Sustainable Energy Reviews, 54, 866-873.
- 9. Dash, S. K., Jenamani, R. K., Kalsi, S. R., & Panda, S. K. (2007). Some evidence of climate change in twentieth-century India. Climatic change, 85(3), 299-321.
- 10. Dubash NK, Jogesh A. 2014. From margins to mainstream? State climate planning in India. Econ. Polit. Wkly. 44(48): 86–95
- 11. Dubash NK, Joseph N. 2016. Evolution of institutions for climate policy in India. Econ. Polit. Wkly. LI(3): 44–54
- 12. Dubash NK, Khosla R, Rao ND, Bhardwaj A. 2017. India's energy and emissions future: a synthesis of recent scenarios. Work. Pap., Init. Clim., Energy Environ., Cent. Policy Res., New Delhi.
- 13. Dubash NK. 2009. Climate politics in India: three narratives. See Ref. 182, pp. 197–207
- 14. Dubash NK. 2009. Environmentalism in the age of climate change. India Seminar, Sept. Retrieved from: http://www.india-seminar.com/2009/601/601_navroz_k_dubash.htm
- 15. Dubash NK. 2013. The politics of climate change in India: narratives of equity and co-benefits. Wiley Interdiscip. Rev. Clim. Change 4(3): 191–201
- 16. Dubash, N. K. (2013). The politics of climate change in India: narratives of equity and cobenefits. Wiley Interdisciplinary Reviews: Climate Change, 4(3), 191-201.
- 17. Dubash, N. K., Khosla, R., Kelkar, U., & Lele, S. (2018). India and climate change: Evolving ideas and increasing policy engagement. Annual Review of Environment and Resources, 43, 395-424.
- 18. Dubash, N. K., Khosla, R., Kelkar, U., & Lele, S. (2018). India and Climate Change: Evolving Ideas and Increasing Policy Engagement. Annual Review of Environment and Resources , 43, 395-424.
- Government of India. 2015. India's intended Nationally Determined Contribution: working towards climate justice. Vikaspedia, Access. April 26, 2018. http://www4.unfccc.int/ndcregistry/PublishedDocuments/India%20First/INDIA%20INDC%20 TO%
- 20. Hakami, B. A. (2013). Environmental Issues at the Global Level: Causes. International Journal of Science and Modern Engineering (IJISME), 2 (1).
- 21. Husain, U., & Javed, S. (2019). Impact of climate change on agriculture and indian economy: a quantitative research perspective from 1980 to 2016. Industrial Engineering & Management, 8(2), 2-5.
- 22. India, Ministry of Environment and Forest, Annual Report, 2012-13, p. 349
- 23. India, Ministry of Finance, Economic Survey, 2012-13, pp. 256-57.
- 24. Jogesh A. 2012. A change in climate? Trends in climate change reportage in the Indian print media. See Ref. 182, pp. 266–86
- Jörgensen K, Mishra A, Sarangi GK. 2015. Multi-level climate governance in India: the role of the states in climate action planning and renewable energies. J. Integr. Environ. Sci. 12(4): 267– 83
- 26. Joshi S. 2013. Understanding India's representation of North-South climate politics. Glob. Environ. Polit. 13(2): 128–47
- 27. Khosla R, Sagar A, Mathur A. 2017. Deploying low-carbon technologies in developing countries: a view from India's buildings sector. Environ. Policy Gov. 27: 149–62





- 28. Mahony, M. (n.d.). The predictive state: science, territory and the future of the Indian climate. The Predictive State: Science, Territory and the Future of the Indian Climate. Retrieved January 23, 2023, from https://nottingham-repository.worktribe.com/output/720711/the-predictive-state-science-territory-and-the-future-of-the-indian-climate
- 29. Prabhakar, S. V. R. K., & Shaw, R. (2008). Climate change adaptation implications for drought risk mitigation: a perspective for India. Climatic Change, 88(2), 113-130.
- 30. Prabhu S. 2012. Climate change and parliament. See Ref. 182, pp. 230-45
- 31. Prabhu S. 2012. Climate change and parliament. See Ref. 182, pp. 230-45

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