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Environmental Protection Policies in Asian Countries: With Special Reference to India

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Abstract: Ecological problems are increasing globally, studies are being done seriously for environmental protection; Efforts are being made to improve the deteriorating relationship between development and the environment. Since the publication of the issue,'Development and the Environment' by the World Bank in 1992, several articles on the relationship between development and the environment have been published in the economic literature, most of which suggestthe government policies to improve this deteriorating relationship. In the direction of environmental protection, there have been many policy changes in various developed and developing countries, which have yielded promising results. Some countries have adopted the policy of financial incentives; some countries have given colour codes based on the pollution of factories. Some countries have adopted a policy of campaigning against pollutants and some have started following a policy of punitive recovery based on polluted emissions. Many countries have begun making industrial workers and the public aware of pollution because they are the worst affected by pollution. These efforts have yielded good results.In Asian countries, many positive trends can be found in environmental protection through governance. On the other hand, environmental policies & laws were strengthened, particularly in the 1970s and again in the 1990s.India follows the basic principle of the United Nations Framework Convention on Climate Change (UNFCCC). According to which, countries responsible for climate change have to contribute more to emission reductionsthan other less accountable countries. Thus, India is not bound by these responsibilities but can make voluntary contributions.At the world level, ever since the environment has become an important issue in international politics, India has been working on it responsibly. India is trying to fulfil the commitments made at the world level. India signed the Paris Agreement on April 22, 2016 with the objective of reducing greenhouse gases under UNFCCC. India is actively working with China and G-77 for joint programme development on the agreement. UNFCCC has given a number of presentations on finance, technology, forestry and other sectors.

Keywords: Environmental Protection, India, Climate Change, Asia, Development and Environment.

Introduction

Five means of production are accepted in economics: land, capital, labour, courage and organization. Of these, only land is natural, the remaining four are humanitarian. Land, in

economics, is not limited to land only. The land has been defined as a free gift of nature. That is, whatever is in its natural form. The land is a passive mean of production while man is active.Therefore man has used land, nature or environment arbitrarily, and the economic development efforts made by man have had an impact on environmental wealth. And now that ecological problems are increasing globally, studies are being done seriously for environmental protection; Efforts are being made to improve the deteriorating relationship between development and the environment. Since the publication of the issue,'Development and the Environment' by the World Bank in 1992, several articles on the relationship between development and the environment have been published in the economic literature, most of which suggest the government policies to improve this deteriorating relationship. By studying various papers and connecting the environmental pollution data of different countries with the per capita national income with the help of curves, it has been concluded that environmental pollution is inevitable in the early stages of development and after attaining a certain income level. Only after this, the protection and improvement of the environment can be possible.Many other studies (Shafiq and Bandopadhyay, 1992) have also shown that with the increase in the income level in the country, the level of drinking water and the cleanliness of living continuously increase, but the amount of sulfur-di-oxide in the atmosphere initially increases, which gets reduced only after attaining a certain income level. They have also shown that the amount of carbon-di-oxide in the atmosphere increases with the increase in the level of income.On studying the waste generated in the cities of developed and developing countries of the world, it has been found that the amount of urban waste is directly related to the per capita income. The amount of urban waste per capita is much higher in developed countries than in developing countries. Thus, studies on economic development and environmental pollution show that environmental pollution increases with the increase in economic development. In conclusion, there is a tussle between development and the environment. If there is development, then there is also environmental pollution, and if environmental protection is given more importance, then development gets affected.Scientists are constantly drawing new conclusions on the damage to the environment caused by industrial development and its effect on the prosperity of human life. Generally, people are not yet aware of the far-reaching consequences of development. The reason is that environmental problems in countries having low income, have not yet become severe.

In the direction of environmental protection, there have been many policy changes in various developed and developing countries, which have yielded promising results. Some countries have adopted the policy of financial incentives; some countries have given colour codes based on the pollution of factories. Some countries have adopted a policy of campaigning against pollutants and some have started following a policy of punitive recovery based on polluted emissions. Many countries have begun making industrial workers and the public aware of pollution because they are the worst affected by pollution. These efforts have yielded good results. For example, in China, where economic opening up and economic growth accelerated in the 1980s and 1990s, air quality initially declined sharply. Still, it was later halted by pollution control efforts and some improvements.Environmental awareness in Machakos district of Kenya has shown good results. Here the population grew five times more in 1990 than in 1930. The per capita income has already increased, but due to the

program of controlled development, land erosion has reduced, and the number of trees has also become more than in 1930. (IGES, 1999)

Environmental Protection in Asia

The best efforts on environmental protection by Asian countries in the second half of the 20th century and the first decade of the 21st century are the creation of an environmental index to examine the extent and status of environmental degradation, on the basis of which each country does the environmental assessment. How much damage has been done to the environment can be assessed on the basis of 32 performance indicators. The figures shown in the Environmental Performance Index in the year 2020 will be enough for us to know how Asian countries have made effective efforts in this direction in the past years.

As far as Asia is concerned, the performance of Asian countries in the recently released biennial 'Environmental Performance Index (EPI)' by Yale University is as follows:

Environmental Performance Index (EPI) by Countries in Asia (2020)

Country	Rank	EPI Score	10 Year Change
East Asia			
China	120	0.373	8.4
Japan	12	75.1	-0.5
South Korea	28	66.5	2.2
Mongolia	147	32.2	-7.6
Southeast Asia			
Cambodia	139	33.6	-0.2
Indonesia	116	37.8	4.1
Philippines	111	38.4	-4.1
Singapore	39	58.1	-8.4
Thailand	78	45.4	4.1
Viet Nam	141	33.4	5.4
Malaysia	68	47.9	4.4
Laos	130	34.8	-2.8
Myanmar	179	25.1	-1.2
South Asia			
Bangladesh	162	29	-0.1
India	168	27.6	-
Nepal	145	32.7	-8.1
Pakistan	142	33.1	6.1
Sri Lanka	109	39	-0.6
Afghanistan	178	25.5	5
Bhutan	107	39.3	-9.6
Maldives	127	35.6	6.7

*Source: https://epi.yale.edu/epi-results/2020/component/epi

The 'Environmental Performance Index' assesses the sustainable status of different countries of the world on the basis of various performance statistics.India was ranked 177th in the EPI-

2018 with a score of 30.57 (out of 100). Whereas India's rank in EPI-2020 is 168th and score is 27.6.The category 'Climate Change' in the EPI has been assessed on the basis of the following indicators:

- adjusted emissions growth rate;
- growth in a category consisting of four major greenhouse gases and one pollutant;
- The rate of increase in carbon dioxide emissions from the reduction in land cover;
- greenhouse gas intensity growth rate;
- per capita greenhouse gas emissions. (Report Yale University: 2020)

If we talk about the present, we feel that the main environmental problems faced by the countries of Asia can be assembled under four groups in the present study:

- **Water Management,**
- **Deforestation and Land Degradation,**
- **Air Pollution, and**
- **Climate Change**

Marine ecosystems and resources, biodiversity, waste management, and other issues are also important. Still, from our point of view, the four areas or groups mentioned above present the most promising challenges to Asia's Countries over the next two decades.

Deforestation and black carbon emissions in Asian countries have essential drivers of global warming, both in terms of contribution and also because their mitigation could be a low-cost option with short-term benefits. In addition, energy demand in the Asian region is expected to explode with ongoing economic expansion and, accordingly, so will coal use and greenhouse gas emissions. As a result, it appears that Asian countries will be a major contributor to the expansion of global emissions if countries in the region do not make planned efforts. (Sapru, 1998)

According to the Fourth and Fifth Report of the Intergovernmental PanelofClimate Change (IPCC), tropical regions are at risk of being more affected by climate change. Therefore, India is also not immune to these effects. Therefore, India faces the challenge of tackling the global threat of climate change as well as maintaining the growth rate of its rapidly evolving economy.

Climate change can transform the spread and quality of India's natural resources and adversely affect the livelihood of its people since India's economy is closely linked to its natural resources and climate-sensitive areas, such as agriculture, water, and forestry. Thus, India may face a major threat due to possible changes from climate change.

East Asia: In East Asia, which mainly includes China, Japan, South Korea and Mongolia, in this study, the environmental protection contribution of these countries have been evaluated. This is the region of the Asian continent in which industrial development is increasing rapidly, which results in environmental degradation.

According to the Global Carbon Atlas report released in the year 2019, the carbon dioxide emissions of major countries in 2017 are as follows:

Table -II (List of World's Highest CO_2 & CFC Emitting Countries)

Rank	Country	CO2 and GHG emissions (Mt CO2)	Percentage
1	China	9839	27.20%
2	USA	5269	14.60%
3	India	2467	6.80%
4	Russia	1693	4.70%
5	Japan	1205	3.30%

*****Source**:** http://www.globalcarbonatlas.org/en/CO2-emissions

The data of the Global Carbon Atlas for the year 2019 shows that China produces the world's largest carbon and greenhouse gases emissions; China alone emits 27.2% of the world's total carbon dioxide gas and greenhouse gases. Japan is in fifth place in this list; it emits 1205 metric tons of CO2. (Report: Global Carbon Atlas: 2017)

In 1994, the Chinese government released China's 'Agenda 21' White Paper on Population, Environment and Development in the 21st Century to respond to the outcomes of the Earth Summit. Later, the former NationalEnvironmental Protection Agency (NEPA) was upgraded to the status of ministry and named the State Environmental Protection Administration (SEPA), which symbolizes rising environmental awareness in China.

Southeast Asia: In Asian countries, many positive trends can be found in environmental protection through governance. On the other hand, environmental policies & laws were strengthened, particularly in the 1970s and again in the 1990s. policies & laws were strengthened, particularly in the 1970s and again in the 1990s.

- **Indonesia:** The pollution emission level of Indonesia's capital Jakarta remains almost the same as the level of Bangkok. A World Bank report shows that a large number of people in Jakarta suffers from respiratory diseases due to the severe effects of particulate pollution. As one of the world's largest contributor to greenhouse gas emissions, the Indonesian government has taken several policy measures to reduce environmental degradation. However, the country, plagued by widespread rural poverty, has given more priority to sustainable development in rural areas than in urban areas. It has given international environmental pressure to protect its vast tropical rainforest.Indonesia launched a new type of innovative programmein June 1995 for public disclosure of environmental exposure to pollutants. The initiativeis called 'Program for Pollution Control, Evaluation and Rating'(PROPER). It has adopted the policy of giving Rang Koot (Color Code) to factories based on pollution.(Makarim, N. et al.,1995) The factory, which makes a great effort to control pollution, is given a golden colour code; and black to the minimally conscious factory. Similarly, the one who tries equally to the national standard is given red, and the one who tries better than the national standard is coded as green. Those who attempt less than the national standard are awarded the blue colour. 'PROPER' started this plan well too. It personally told all the factories their colour codes and said that the colour codes would be made public after re-evaluation after the next six months. This policy had a good effect. Many factories made improvements to suit their market reputation. Further modifications were made after the colour codes were made public.

- **Myanmar, Vietnam, Cambodia and Laos:** Urbanization has progressed more slowly in these Indo-China countries as compared to their Southeast Asian neighbours. Most of the areas in these countries still remain rural. Given their relatively closed economic systems, the low FDI here did not promote industrialization as much. Public discussion of environmentally sustainable urban development has been more about rhetoric than practice. Limited physical resources and lack of nationally available expertise have further diminished any urgency for sustainable urban development. Vietnam is the most urbanized country in this group, and given the appropriate level of urbanization and industrialization, the government has paid more attention to sustainable urban development and environmental protection.

  Many cities were established here under the name of the "Eco-City" project, and the old inhabited cities were improved from the environmental point of view. The goal is to protect the environment as well as tackle the increasing environmental problems.
- **Singapore:** Singapore's Ministry of Environment and Water Resources is a ministry strongly committed to achieving a clean, green environment and sustainable environmental sustainability. It implements environmental programs with qualified government personnel, the latest equipment, and great financial means from budget surpluses. Organizationally, it operates environmental protection programs through a three-pillar "private, public, people" partnership based on business efficiency, public sector efficiency and citizen participation.(OECD, 1992)

South Asia:

India: India follows the basic principle of the United Nations Framework Convention on Climate Change (UNFCCC). According to which countries responsible for climate change have to contribute more to emission reductions than other less accountable countries. Thus, India is not bound by these responsibilities but can make voluntary contributions. To maintain the mutual balance of development, it would be best that developed and developing countries together fix their responsibilities and make policies at the national level and implement them compulsorily. Good policy benefits every society by protecting human health and the environment. But for advancement to be made across the policy on the environment in all areas (whether air quality, water, waste or biodiversity), cross-cutting, systemic flaws need to be addressed. It is required that Rules -regulations and policies should be clear, feasible and enforceable. At the world level, ever since the environment has become an important issue in international politics, India has been working on it responsibly. India is trying to fulfil the commitments made at the world level. India signed the Paris Agreement on April 22, 2016 with the objective of reducing greenhouse gases under UNFCCC. India is actively working with China and G-77 for joint programme development on the agreement. UNFCCC has given a number of presentations on finance, technology, forestry and other sectors. (Harashima, Y., 2000)

Environmental Protection: Philosophy& Steps (India)

As far as India is concerned, the history of environmental protection in India is ancient. The Harappan culture was full of environmental management, so Vedic culture establishes a new dimension for environmental protection.The source of energy, the Sun, is also considered a deity and called him 'Surya Devo Bhava'. Similarly, water is also considered as aGod; rivers

have been called life-giving. That'swhy Indian ancient cultures were born and nurtured on the banks of rivers. Various trees and plants have been worshipped in medieval and Mughal era culture in India showing environmental love. Later on,during thecolonial period, especially the Indian culture and environment suffered damage. During this period, Indian nature and forest wealth were exploited in large quantities by the developed countries for their development.

Environmental protection refers to the protection of the environment. Every unit of environment, such as trees or vegetation etc., has great importance in human life. They are handy for human beings or should be said that they are the basis of human life.

But in the process of his economic development, man is involved in activities related to indiscriminate exploitation and pollution of the environment and natural resources. Environmental pollution and overexploitation of natural resources are a threat to all living organisms on the earth. Today human beings are neglecting it, not realizing its importance and usefulness. Giving priority to secondary benefits, they are continuously being exploited. As a result, many environmental problems are present in front of man.

Human beings have realized these problems and the danger caused by them to a great extent. As a result, many efforts are being made to protect and enhance the environment and natural resources at the national and international level. These efforts have been successful to some extent, yet a lot remains to be done to ensure the life of various animals on earth.After the United Nations Conference on the Human Environment held in Stockham, the Constitution of India was amended and the protection of the environment was included as a constitutional mandate. As a result, the Constitution (42ndAmendmen, 1976) has made the protection and improvement of the natural environment a fundamental duty under Article 51 (A)(g).(India, Policy Draft, 2015)

"It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures". (Constitution of India, Part IV A)

Under the Directive Principles of State Policy (DPSP), a directive has been given to the state that it has to protect and improve the environment. Article 48A states: "The State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country".

Later on, The Environment Department in India was established in the year 1980 so that the country's environment remains healthy.(Kumar, V. 2017) Later in the year 1985, this department was changed to the Ministry of Environment and Forests. Overall, this ministry's responsibility is that environmental rules and policies should be appropriately implemented and followed.

The provision related to environmental protection is in the constitution, and many acts and rules support it. Most of our environmental legislations are enacted in the form of Acts by Parliament or State Legislatures. These Acts are generally given to the controlling body to make rules so that they can be implemented.

Wildlife (Protection) Act, 1972

In 1972, the Government enacted the Wildlife (Protection)Act, 1972, with the objectives ofthe Stockholm Conference and to protect the wildlife of the country and control the trafficking, poaching and illegal trade in wildlife and its derivatives. The Act was amended

inJanuary 2003 and renamed as the Wildlife Protection of India (Amended) Act,2002. Under this, penalties have been further tightened.Except for Jammu and Kashmir(which has its own wildlife), this law is applicable all over India. The Act provides protectionto wildanimals, birds and plants. It has a total of six categories that protect wildlife in differentways.Under the Act, a Wildlife Advisory Board has been constituted to advise the State Government to protect and conserve wildlife. In addition, World Environment Dayis celebrated on 5thJune as part of the International Agenda on Human Environment held at the United Nations Conference held in Stockholm on 5thJune 1972. India is the first country to make provisions for environmental protection in its Constitution.

Environment (Protection) Act, 1986

The Environment (Protection)Act, 1986is more effective than all laws relating to environmental protection before it, which has taken effective and transparent measures to tackle the problem of pollution. The law effectively emphasizes the 'environment'. Its definition also includes the relationship between air, water, land, humans, animals, plants, bacteria and nature. The Act hastwenty six parts and four chapters. The law empowers the Central Government to take all necessary steps to control pollution. Through this, the Central Government has the power to enter and inspect any area. The law also provides for punishment for violation of rules framed.

National Forest Policy (1988)

The first forest policy in India was framed in 1894 by the British government. Later on, after independence, the Forest Policy was revised in 1952. In view of the continuous degradation of forests, the National Forest Policy was developed in 1988. Under this, a target has been set to achieve 33% forest area in India.

Draft National Forest Policy (2018): The Minister for Environment Forest and Climate Change released the draft on National Forest Policy in 2018. The primary thrust of the policy is for the management, conservation and protection, of forests along with addressing other issues related to forest and forest management.

Key features of the policy:

- The policy proposes restricting schemes and projects that interfere with forests that cover steep slopes, catchments of rivers, lakes, and reservoirs, geologically unstable terrain, and other ecologically sensitive areas.
- The policy (2018) suggests that the Ecologically Sensitive Catchment Areas (ESCA) stabilized with suitable soil and water conservation measures and by painting appropriate plants/trees, grass etc.
- It also suggests setting up of two national-levelmechanisms —National Community Forest Management Mission (CFM) and National Board of Forestry (NBF)—for healthier management of the India's forests.
- The proposed policy aims to safeguard the ecological and livelihood security of people, of present and future generations, based on sustainable management of the forests for the flow of ecosystem services.
- The policy also calls for "promotion of trees outside forests and urban greens" while stating that it will be taken up in "mission mode".

- With respect to forest fires, the policy states that suitable measures would be taken to safeguard ecosystems from forest fires, map the susceptible areas and develop and strengthen early warning systems and methods to control fire, based on remote sensing technology and community participation. (India Policy Draft, 2018)

National Ganga River Basin Authority (NGRBA)

The National Ganga River Basin Authority was established in February 2009 under the Environment (Protection) Act, 1986. It is a central and state planning, finance, monitoring and combining institution. The main objective of the National Ganga River Basin Authority is to conserve the River Ganga by adopting the River Valley Approach and to effectively abatize pollution.

National Green Tribunal- (NGT)

The Central Government established NGT in October 2010 for the protection of environmental rights and effective implementation of environmental laws. With the establishment of NGT, India has become one of the few particular countries in the world to have a separate judicial forum for environmental disputes. The most important thing is that appeals can now be made in this Tribunal on all the laws that have been enacted to protect against water and air pollution, including the Forest (Protection) Act, the Environment Protection Act and the Bio-Diversity Act. This Tribunal is not bound by the procedure laid down under the CrPC 1908 but is directed at the principles of natural justice. The Tribunal will have to dispose of the applications or appeals within six months of receipt of them. The Head Office of the Tribunal is in New Delhi, and there are another four sites of the meetings in Bhopal, Pune, Kolkata and Chennai Tribunals.

National Clean Energy Fund (NCEF)

The Constitution of the National Clean Energy Fund was proposed in the Union Budget 2010-2011. The objective is to invest in clean energy technology enterprises, undertakings, union budget research and innovative projects. Any project which is involved in the research and development of clean energy technology and adopts innovative methods in this field is eligible for funding under NCEF. However, the government assistance under this fund cannot exceed 40% of the total project cost.

Prime Minister's Council on Climate Change

A high-Level advisory group on climate change was constituted in June 2007 by India, and reconstituted in November 2014 with the following objectives:

(i) Coordinate with national action plans for assessment, adaptation and mitigation of climate change.

(ii) Advise the government on pro-active measures that can be taken by India to deal with the challenge of climate change.

(iii) Facilitate inter-ministerial coordination and guide policy in relevant areas.(Briefing Paper: India's Progress in Combating Climate Change, MoEF&CC, GoI: 2010)

National Wildlife Action Plan – 2017

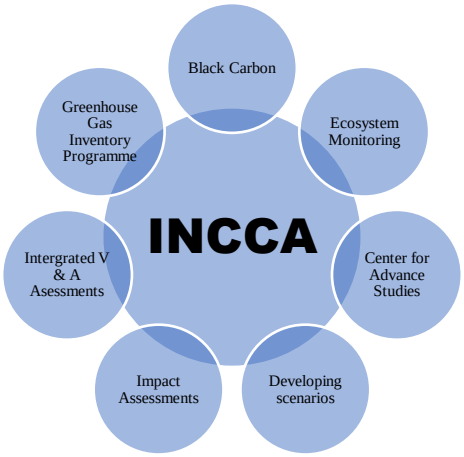
The first National Wildlife Action Plan in India was adopted in 1983. The strategy and action plan adopted for wildlife conservation are relevant even today. However, over the time some problems emerged, which felt the need to change the priorities of the action plan. The Third National Wildlife Action Plan was adopted by the Ministry of Environment, Forest and

Climate on 2nd October 2017. The period is from 2017 to 2031.For the first time, the scheme recognized concerns related to the impact of climate change on wildlife.

Indian Network on ClimateChange Assessment (INCCA)

There is no other country like India all over the world on the basis of vulnerability to climate change on various dimensions. India's long coastal line, the Himalayas, its glaciers or forests (which boast many important natural resources), etc., are highly vulnerable to climate change on various regions and resource dimensions. Therefore, external studies cannot be dependent on information on the impact of climate change on glaciers, monsoon and seawater levels. This led to the need to develop its own mechanism and reliable research capacity on this issue. Because of all these aspects, the need for science-based indigenous evaluation was felt to formulate India-friendly strategies. Thus, INCCA was brought in by the Ministry of Environment, Forest and Climate Change in October 2009. (Drishti IAS, 2020)

Figure: I (A schematic representation of the programmes in INCCA)



*Source: Climate Change And India: A 4x4 Assessment, MoE&F (2010), Govt. Of India: Accessed Link - http://www.indiaenvironmentportal.org.in/files/fin-rpt-incca.pdf

INCCA's mandate will continue to address new science questions facing humanity, including the population living in the Indian Territory. Scientific research under INCCA aims to include research that will develop an understanding of regional patterns of climate across India, how it is changing over time, and how it will behave in the future. As a result, INCCA also focuses on the impacts of climate change on regional ecosystem hotspots, human systems, and economic sectors. (India GoI Report, 2017)

National Action Plan on Climate Change (NAPCC)

India first needs a national strategy to adapt itself to climate change and to advance the ecological sustainability of the country's growth path. India has several options to pave the way for ecologically sustainable development since it is still in the early stages of development. Nevertheless, it has to contribute to the global challenge to play a role as a responsible and enlightened member of the international community and to find a solution to the impact on humanity as a whole. It is necessary to maintain a high growth rate to improve the living standards of a large population of people and to reduce their sense of insecurity towards the effects of climate change. Efforts have been made to achieve economic and environmental goals together through a sustainable development path. Inspired by this principle, the Prime Minister of India released the National Action Plan for Climate Change

in 2008.There will be coastal erosion and land erosion in the delta. It identifies measures that provide co-benefits for promoting development objectives and effectively tackling the problem of climate change. It lays down multifaceted, long-term and integrated strategies in terms of climate change to meet the main goals based on them. It also outlines a number of measures that can achieve India's development and adaptation, and mitigation of climate change goals. (India, MoEF, 2018) The following are eight National Missions under this:

Table – III (National Plan on Climate Change Eight Missions)

S.No.	Mission	Objective	Responsible Entity
1	**National Solar Mission**	100GW of solar power by 2022	Ministry of New & Renewable Energy
2	**National Mission for Enhanced Energy Efficiency**	10,000 MW of EE savings by 2020	Ministry of Power
3	**National Mission for Sustainable Habitat**	EE in residential and commercial buildings, public transport, Solid waste management	Ministry of Urban Development
4	**National Water Mission**	Water conservation, river basin management	Ministry of Water Resources
5	**National Mission for Sustaining the Himalayan Ecosystem**	conservation and adaptation practices, glacial monitoring	Ministry of Science & Technology
6	**National Mission for a Green India**	6 mn hectares of afforestation over degraded forest lands by the end of 12th Plan	Ministry of Environment & Forests
7	**National Mission for Sustainable Agriculture**	Drought proofing, risk management, agricultural research	Ministry of Agriculture
8	**National Mission on Strategic Knowledge for Climate Change**	• Vulnerability assessment. Research & observation, data management	Ministry of Science & Technology
	Missions focused on Mitigation		
	Missions focused on Adaptation		

*Source: http://moef.gov.in/wp-content/uploads/2018/07/CC_ghosh.pdf accessed on 12 june 2021.

- **National Solar Mission:** India is a tropical country with sufficient availability of bright sunlight, due to which solar energy has great potential as a future energy source. It also

includes the advantage of spreading decentralized distribution of energy. The second (major) aspect of the Solar Mission is to undertake research and development programs to enable more efficient and convenient solar power system creation. Also, to encourage new initiatives that enable storage of solar energy for sustainable use. It aims to generate 20 GW of solar power by the year 2022; Which has now been increased to 100 GW. (Drishti, 2021)

- **National Mission for Enhanced Energy Efficiency:**Four new initiatives will be implemented for this-
- Establish a market-based mechanism through which business can be carried out to enhance the cost-effectiveness of energy-saving reforms in large industries and facilities with high energy consumption through certification of energy savings.
- Intensify efforts to accelerate the use of energy saving devices in identified sectors through innovative measures to make products more accessible.
- Creating a mechanism that will help finance demand management programs across sectors through future energy savings acquisitions.
- Developing financial instruments to promote energy savings.
- **National Mission for Sustainable Habitat:** The National Mission on Sustainable Habitat was launched to make the habitat sustainable through energy-saving reforms in buildings, solid waste management and ensured the adoption of public transport.The mission will address the need for improving infrastructure resilience, community-based disaster management and warning systems for extreme dry climate conditions and adaptation to future climate change. An important component of this mission is 'Capacity Building'.
- **National Water Mission:** A National Water Mission will be implemented to conserve water, reduce wastage and ensure more fair water distribution within and outside the state. The mission will follow the provisions of the National Water Policy and develop a framework to rationalize water use by increasing water use savings by 20%. With this, a significant part of the water requirement of urban areas will be ensured by recycling wastewater.Its main goals include:
- To revise the National Water Policy in consultation with the States to deal with rainfall and river flow variability due to climate change.
- It is expected to increase the efficiency of the existing irrigation system.
- To design incentive structures to promote water neutral or water positive technologies, recharge groundwater sources and encourage large scale irrigation programs (which rely on a sprinkler, drip irrigation and drain irrigation).
- **National Mission for Sustaining the Himalayan Ecosystem:** It was approved on 28 February 2014. This mission was launched to develop management measures to maintain and protect the glacial and mountain ecosystems of the Himalayas.The Himalayas are the main source of perennial rivers. Therefore, under this mission, an attempt will be made to know how and to what extent the Himalayan glaciers are shrinking. To solve this problem, climatologists, glaciologists, and other experts will be required.
- **National Mission for a Green India:** Under this mission, there was a plan of starting a national mission called 'Green India' to increase ecosystem services, including carbon sinks. The National Green India Mission was approved on 20 February 2014. The role of forests in preserving ecological balance and maintaining biodiversity is very important. Forests also

make an extremely effective carbon sink.The Prime Minister has already announced a Green India campaign for afforestation in 5 million hectares. The national target of area under forest and tree cover is 33% while the current forest and tree cover area is 24.39%.

- The National Green India Mission aims to increase forest/tree areas by 5 million hectares in the next ten years;
- Improving ecological services (such as carbon capture) along with biodiversity, hydrological services;
- To increase the forest-based livelihood income of 3 lakh families living in and around the forest.

- **National Mission for Sustainable Agriculture:** A strategy was made by this mission to make Indian agriculture more effective towards climate change. This will lead to the identification of new crop varieties, especially heat-resistant crops, and to develop varieties of crops capable of withstanding extreme weather, drought tolerant, flood, and essential moisture availability. Along with this, alternative farming methods will also be adopted, and special emphasis will be given on risk management, access to agricultural knowledge and information and the use of biotechnology.
- **National Mission on Strategic Knowledge for Climate Change:** The strategic knowledge mission is envisaged to enlist the global community through research and technology development mechanisms, including open-source platforms and to identify the challenges and responses to climate change.

- This will ensure high quality and funding of research in various aspects of climate change.
- The mission's research agenda will also include the socioeconomic impact of climate change, including its effects on health, demographics and migration patterns, and the livelihoods of coastal communities.
- It will also assist in the establishment of climate-related academic and scientific research structures of universities and other educational and scientific research institutions in the country.
- There is also a 'Climate Science Research Fund' provision to support research under the mission. (NITI, 2017)

Other Steps Taken by India for Mitigation of Greenhouse Gas Emissions

- **Integration Energy Policy**
- **Rural Electrification Policy**
- **Indian Solar Loan Programme**
- **Bachat Lamp Yojana: BLY**
- **Formation of Green Rating for Integrated Habitat Assessment (GRIHA) Council.**
- **Formation of Indian Green Building Council (IGBC)**
- **Network Project on National Innovations in Climate Resilient Agriculture (NICRA).**
- **National Communication for UNFCCC (NATCOM)**

All countries should play their part in addressing the common challenges of climate change based on the principle of common but differentiated responsibilities and varying capabilities, and developed nations should also play a major role in this regard. It would be wrong to say that all Asian countries are discharging their roles honestly, China is not paying any attention

to environmental protection in its race for industrial development. Due to which the climate crisis is deepening not only in the Asian region, but the whole earth will have to pay the price for these destructive actions. Here it is necessary to focus mainly on China because other Asian countries are far behind China in this race. It would also be worthwhile to say here that these third world countries, which got independence only a few years ago from a long colonial life, are trying to strike a balance between their development and environmental balance. It can be expected that soon Asian countries will achieve their desired development goals by following the path of sustainable environmental development.as far as India is concerned, India is trying to fulfil all the promises it has made globally in the interest of humanity. We expect that India meets its targets within the stipulated time and achieve its industrial and economic growth goals with sustainable development.

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