

Chapter 6 – Sustainable Development and Climate change

Sustainable development remains core to India's development strategy, despite several challenges emerging on account of the unprecedented crisis due to COVID-19 pandemic

The 2030 agenda for Sustainable Development encompasses a comprehensive developmental agenda integrating social, economic and environmental dimensions. Both the Union and state government have undertaken several initiatives to mainstream the 17 Sustainable Development Goals (SDGs) and 169 associated targets into the policies, schemes and programmes.

In its NDC, under UNFCCC, India has sought to reduce the emissions intensity of its GDP by 33 to 35 per cent below 2005 levels by the year 2030; achieve 40 per cent of cumulative electric power installed capacity from non-fossil fuel sources by 2030; and enhance forest and tree cover to create additional carbon sink equivalent to 2.5 to 3 billion tons of carbon dioxide by 2030.

Prominent Government initiatives on mitigation & adaptation actions and their progress

- 1) India's National Action Plan on Climate Change (NAPCC) was launched in 2008. It has through 8 National Missions focussed on advancing the country's climate change related objectives of adaptation, mitigation and preparedness on climate risks

Missions	Major objective/Target	Progress
National Solar Mission	Achieve 100 GW of solar power in seven years starting from 2014-15.	The cumulative capacity of 36.9 GW was commissioned till November 2020. Around 36 GW solar energy capacity is under installation An additional 19 GW capacity has been tendered.
National Mission for Enhanced Energy Efficiency (NMEEE)	To achieve growth with ecological sustainability. <ul style="list-style-type: none"> • Mandating reduction in energy consumption in large energy consuming industries, • Energy incentives, including reduced taxes on energy-efficient appliances. 	The Perform Achieve and Trade (PAT) Scheme is one of the initiatives under the NMEEE <ul style="list-style-type: none"> • PAT Cycle I (2012-2015) has overachieved the target, saving around 31 million tonnes of CO₂ (Mt CO₂). • PAT Cycle II (2016-17 to 2018-19)-emission reduction of 61.34 MtCO₂ was achieved.
National Mission for a Green India (GIM)	Improved ecosystem services by Increasing forest/tree cover by 5 m ha and improving quality of forest cover on another 5 m ha (a total of 10 m ha).	The various afforestation activities including tree plantation were taken up over 8.49 m ha area from 2015-16 to 2019-20 under the various schemes of the Central Government inclusive of 1.42 lakh ha under this mission, state plan schemes and also plantation taken up by the NGOs, civil societies and corporate houses as reported under the Twenty Point Program
National Mission on	Development of sustainable habitat standards.	The mission is being implemented through three programmes: Atal

Sustainable Habitat (NMSH)	<ul style="list-style-type: none"> • Promoting energy efficiency as a core component of urban planning by extending the existing Energy Conservation Building Code (ECBC). • Strengthening the enforcement of automotive fuel economy standards, • Using pricing measures to encourage the purchase of efficient vehicles and incentives for the use of public transportation 	Mission on Rejuvenation and Urban Transformation, Swachh Bharat Mission, and Smart Cities Mission.
National Water Mission (NWM)	<p>Focuses on monitoring of ground water, aquifer mapping, capacity building, water quality monitoring and other baseline studies.</p> <ul style="list-style-type: none"> • Promoting citizen and state action for water conservation, augmentation, and preservation. • Focusing attention on overexploited areas. • Promoting basin-level integrated water resources management 	The National Institute of Hydrology is the nodal agency to get the State Specific Action Plan (SSAP) for the water sector
National Mission for Sustainable Agriculture	Enhancing food security by making agriculture more productive, sustainable, remunerative, and climate resilient	<p>Farm machinery banks established to reduce crop residue burning.</p> <ul style="list-style-type: none"> • Under Rainfed Area Development Programme, land is brought under Integrated Farming System • Promoted Organic Farming
National Mission for Sustaining Himalayan Ecosystems	<p>To continuously assess the health status of the Himalayan Ecosystem. Enable policy bodies in their policy formulation functions.</p> <ul style="list-style-type: none"> • Start of new centres relevant to climate change in the existing institutions in the Himalayan States. • Regional cooperation with neighbouring countries in Glaciology. 	<p>The centre of Glaciology was set up at Wadia Institute of Himalayan Geology.</p> <ul style="list-style-type: none"> • A national network programme on Himalayan Cryosphere has been launched. • A mega programme named Human and Institutional Capacity Building (HICAB) programme for the Indian Himalayan Region was launched

National Mission on Strategic Knowledge for Climate Change (NMSKCC)	<ul style="list-style-type: none"> • Development of national capacity for modeling the regional impact of climate change on different ecological zones within the country. 	<p>12 Centres of Excellence and 10 State Climate Change Centres have been established</p> <ul style="list-style-type: none"> • 8 Global Technology Watch Groups (GTWGs) in the areas of Renewable Energy Technology, Advance Coal Technology, Enhanced Energy Efficiency, Green Forest, Sustainable Habitat, Water, Sustainable Agriculture and Manufacturing have been set up.
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- 2) **Climate Change Action Plan (CCAP)**, a Central Sector Scheme, was formulated to build and support the scientific and analytical capacity for assessment of climate change in the country and to establish appropriate institutional framework and implement climate actions. Two important components are,
 - a. the National Carbonaceous Aerosols Program (NCAP)
 - b. the Long-Term Ecological Observatories (LTEO).
- 3) **National Adaptation Fund on Climate Change (NAFCC)** was established to support concrete adaptation activities which are not covered under on-going activities through the schemes of State/UT and National Government
- 4) The Government is implementing **Faster Adoption and Manufacturing of (Hybrid&) Electric Vehicle in India (FAME India) scheme** to encourage progressive induction of reliable, affordable and efficient electric and hybrid vehicles.

The country is on its track to successfully decoupling its economic growth from GHG emissions. As per the second BUR submitted in 2018, India's emission intensity of GDP reduced by 21 per cent in 2014 over the level of 2005.

Challenges:

1) Access to Finance:

The country is relying on domestic resources to implement adaptation and mitigation action on mission mode. The financing considerations will remain critical especially as the country steps up the targets substantially.

2) Negotiating in multilateral organizations:

There is need to discuss and arrive at a consensus on

- a) transparency mechanism;
- b) Article 6 (market and non-market mechanisms); c
- c) Common time frames for nationally determined contributions; long-term climate finance etc.
- d) On finance matters, it is essential to arrive at a consensus on the definition of climate finance and on a common accounting methodology for assessment and evaluation of climate finance.

Way Forward:

- 1) Finance:
 - a. **National Voluntary Guidelines for Responsible Financing** are financial sector-specific guidelines that combine and adapt international and national best

practices. The guidelines are a voluntary instrument and raise the bar of conduct for financial institutions beyond compliance

- b. the RBI included lending to social infrastructure and small renewable energy projects within the **priority sector targets**
- c. The '**Voluntary Guidelines on Corporate Social Responsibility**' were issued in 2009 to mainstream the concept of business responsibility.
- d. In 2017, to give push to green bonds issuances in India, SEBI issued guidelines on **green bonds** including their listing of green bonds on the Indian stock exchanges. The cumulative issuance of global green bonds crossed US\$ 1 trillion mark in 2020.

2) **Climate Risk Insurance:**

It is an important tool for providing security against loss of livelihoods and of assets as a consequence of disasters. Thus, given the significant contribution of the agricultural sector in the Indian economy, coupled with looming "climatic aberrations," crop insurance becomes a necessity to mitigate the risks associated with a majority of the country's farmers.

India's initiative at international stage:

- 1) International Solar Alliance (ISA):
 - a. It has recently launched two new initiatives,
 - i. 'World Solar Bank' which would cater to the need for dedicated financing window for solar energy projects across the members of ISA. It is expected to provide low-cost financing at favourable terms for solar energy projects as well as engage in co-financing with other multilateral/bilateral development financial institutions.
 - ii. The 'One Sun One World One Grid' initiative aims to create an interconnected green grid that will enable solar energy generation in regions with high potential and facilitate its evacuation to demand centers.
 - b. ISA Secretariat has recently launched a '**Coalition for Sustainable Climate Action**' comprising of global public and private corporates. The partner organisations under the coalition would benefit from the network and the platform provided by ISA to leverage and demonstrate their expertise in promoting sustainable development globally
 - c. ISA organized the First **World Solar Technology Summit** (WSTS) in September 2020 with an objective of showcasing to Member Countries the state of the art and next-generation solar technologies
- 2) Coalition for Disaster Resilient Infrastructure (CDRI) : The Coalition functions as an inclusive multi-stakeholder platform led and managed by national governments, where knowledge is generated and exchanged on different aspects of disaster resilience of infrastructure. The CDRI is co-chaired by India and the United Kingdom (UK).