

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

RAJYA SABHA
UNSTARRED QUESTION NO. 3091
TO BE ANSWERED ON 27.03.2025

Climate change mitigation and adaptation

3091. SHRI AYODHYA RAMI REDDY ALLA:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) the manner in which India's Nationally Determined Contributions (NDCs) under the Paris Agreement can be aligned with the country's development priorities, and the implications for sectoral mitigation strategies;
- (b) the potential co-benefits and trade-offs of implementing climate-resilient agriculture practices, and how these can be scaled up to support smallholder farmers; and
- (c) the manner in which India's climate change adaptation efforts can be integrated with disaster risk reduction and management strategies, particularly in the context of urban planning and infrastructure development?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

(SHRI KIRTI VARDHAN SINGH)

- (a) The Government of India is committed to address challenges from climate change with firm adherence to multilateralism keeping in mind the national circumstances and based on equity and the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC), as enshrined in the United Nations Framework Convention on Climate Change (UNFCCC) and its Paris Agreement.

India's NDC has been prepared in alignment with its national circumstances, guided by the principles of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) and equity. India's NDC do not bind it to any sector specific mitigation obligation or action, including in agriculture sector.

India's climate actions are based on the overarching framework provided by its National Action Plan on Climate Change (NAPCC). The NAPCC identifies measures across many sectors including water, agriculture, forest, energy, sustainability mobility and housing, waste management, health, etc. that promotes our development objectives while also yielding co-benefits for addressing climate change effectively. The missions under NAPCC represents multi-pronged, long-term, and integrated strategies for achieving key goals in the context of climate change. In addition, the Government of India through its various programs and schemes has outlined several steps to simultaneously advance India's development and climate change related objectives of adaptation and mitigation.

As a result of the above measures, between 2005 and 2020, India's emission intensity of Gross Domestic Product (GDP) reduced by 36% as against the updated NDC target of 45% by 2030. During 2005 to 2021, additional carbon sink of 2.29 billion tonnes of CO₂ equivalent has been created against a target of 2.5-3 billion tonnes of carbon sink through additional tree and forest cover by 2030. By February 2025, the share of non-fossil sources in the installed electricity generation capacity was 47.37% against the updated target of 50% by 2030.

(b) Implementing climate-resilient agricultural practices offers co-benefits like improved food security, increased income, enhanced soil health, alternate water management practices in rice, micro-irrigation, diversified farming systems, agro forestry and improved nutrition but also presents trade-offs like increased labor demands and potential costs. These climate resilient agricultural practices are shared with the State Governments for convergence with various schemes of line departments like Mahatma Gandhi National Rural Employment Guarantee Act, Agricultural Technology Management Agency, National Food Security Mission, Rashtriya Krishi Vikas Yojana, Pradhan Mantri Krishi Sinchayee Yojana, Khet Talab Yojna and National Bank for Agriculture and Rural Development etc. for the spread of climate resilient practices at district level. At village level, village climate risk management committees (VCRMCs), custom hiring centres (CHCs), seed banks and fodder banks help in upscaling and spread of resilient technologies in NICRA adopted villages. Capacity building programs and technology demonstrations have been conducted for farmers and other stakeholders in the domain of climate resilient agriculture.

(c) The Government of India recognizes adaptation is inevitable and imperative for its development process and it has undertaken several efforts to increasingly mainstream adaptation efforts while furthering developmental requirements through a range of schemes/ projects/ programmes to improve adaptive capacities and reducing socioeconomic vulnerabilities of the people. The Disaster Management Act, 2005 provides the framework for disaster risk reduction and response at national, state and district levels with the aim to reduce vulnerability, prevention, and mitigation of disasters and execute appropriate response, rehabilitation, and reconstruction. The strategies include early warnings and communications, construction and sustainable maintenance of multi-purpose cyclone shelter, improved access and evacuation, enhanced capacity, and capability of local communities to respond to disaster and strengthening disaster risk mitigation capacity at central, state, and local levels. The Disaster Response Forces and the funds have also been setup at the national and sub-national level.

The National Mission for Sustainable Habitat (NMSH) is one of the nine missions under the NAPCC. National Mission for Sustainable Habitat (NMSH) aims at promoting low-carbon urban growth towards reducing GHG emissions intensity for achieving India's NDC and building resilience of cities to climate change impacts and strengthening their capacities to sustain climate related extreme events and disaster risks.
