

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

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UNSTARRED QUESTION NO. 4055  
TO BE ANSWERED ON: 07.04.2022

**Development of regional climate projections for robust risk assessments**

4055. SHRI S. SELVAGANABATHY:

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

- (a) whether Government is planning to rope in premier research institutes to develop regional climate projections for robust risk assessments;
- (b) if so, the details thereof, and if not, the reasons therefor; and
- (c) steps taken by Government to develop well functional markets for environment friendly products and disseminate them for the desired behavioural change?

**ANSWER**

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

(SHRI ASHWINI KUMAR CHOUBEY)

(a) and (b) Climate change is a cross-cutting issue spanning various Ministries/ Departments and institutions under them. Within the Government of India, research on climate change is mainly sponsored by the Department of Science and Technology (DST), Ministry of Earth Sciences (MoES), Ministry of Environment, Forest and Climate Change, Indian Space Research Organisation (ISRO), Ministry of Agriculture and Farmers Welfare, and Council of Scientific and Industrial Research. Sectoral aspects of climate change are also studied by different Ministries/Departments concerning sectors like agriculture, water resources, human health, power, renewable energy, transport, urban, etc. A large number of universities and government research institutions such as the Indian Institute of Technologies (IITs), Indian Institute of Science (IISc), Indian Council of Agricultural Research Institutions, Central and State Universities and their departments also carry out climate change related research.

The Ministry of Earth Sciences has established the Centre for Climate Change Research (CCCR) at the Indian Institute of Tropical Meteorology (IITM), Pune in January 2009. The centre is dedicated to carry out research on global and regional climate change with particular focus on the Indian climate and the monsoons. The CCCR has led the Coordinated Regional Downscaling Experiment (CORDEX) for the South Asia region for generating high-resolution regional climate change projections, which are frequently utilized for assessment of the impacts of climate change on different sectors. Risk assessment under climate change scenarios requires robust climate change projections at regional scale. The Regional CORDEX projections for India are freely accessible at IITM website.

Further, DST has supported several premier institutes - IITs, Indian Institutes of Science Education and Research (IISERs) and Central Universities which are actively engaged in carrying out dynamic downscaling of coarse global climate model projections to high resolution regional climate projections using regional climate models. Centre of Excellence established at Banaras Hindu University (BHU), Varanasi is working on analyzing the performance of regional climate model (RCM) ensemble to simulate heatwave events over India and dynamically downscaled different RCMs. In another study conducted at IISER, Bhopal a regional earth system model (for the first in India) is employed over the select region and a novel approach to downscale climate change scenario over India for vulnerability and risk, impact, and adaptation studies have been done. Many other research institutions inside and outside the Government contribute to such research on regional climate change.

(c) Development of environment friendly products and services must be recognized as taking place within the scope of India as a developing country. Hence, for a large range of products and services, the need for low cost, easy access and efficiency in production or delivery are important parameters to ensure that they are accessible also to the low-income and vulnerable sections of the population. Development of such products and services must also adhere to the goals of 'Atmanirbhar Bharat' and 'Make in India' to promote domestic production capacities. Environment friendliness can be promoted keeping in mind these parameters as well as adopting best practices that suit our conditions. Keeping the above in view, the Government through its various Ministries/Departments has taken specific steps to develop well functional markets for environment friendly products/services which inter-alia include:

- Ministry of Heavy Industries formulated a Scheme Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme in 2015 to promote adoption of electric/hybrid vehicles in the country. At present, Phase-II of FAME India Scheme is being implemented for a period of 5 years w.e.f. 1<sup>st</sup> April, 2019 with a total budgetary support of Rs. 10,000 crores. This phase focusses on supporting electrification of public and shared transportation and aims to support, through subsidies, e-Buses, e-3 Wheelers, e-4 Wheeler Passenger Cars and e-2 Wheelers.
- The Government of India launched a voluntary eco-labelling scheme known as 'Ecomark' in 1991 for easy identification of environment-friendly products. Any product which is made, used or disposed of in a way that significantly reduces the harm it would otherwise cause the environment could be considered as environment friendly product. The 'Ecomark' label is awarded to consumer goods which meet the specified environmental criteria and the quality requirements of Indian Standards. Government has so far has notified final criteria for a number of product categories, namely, soaps & detergents, paper, food items, lubricating oils, packaging materials, architectural paints and powder coatings, batteries, electrical/electronic goods, food additives, wood substitutes, cosmetics, aerosol propellants, plastic products, textiles, fire-extinguisher, leather, coir and coir products.

- Towards efficiency improvements in large energy intensive sectors, the Ministry of Power has initiated a flagship program called Perform, Achieve and Trade (PAT). The scheme aims at reducing Specific Energy Consumption (SEC) of Designated Consumers (DCs) in energy intensive sectors, with an associated market-based mechanism to enhance the cost effectiveness through certification of excess energy savings which can be traded. The scheme has resulted in fuel / energy savings including electricity by the energy intensive large industrial units and establishments.
- Bureau of Energy Efficiency under the Ministry of Power is implementing Standards and Labelling (S&L) Programme, which aims at providing consumers an informed choice regarding the energy saving potential of various energy consuming appliances. This Programme prescribes minimum energy performance levels for appliances/equipment, rated on a scale of 1 to 5 Star with 5 Star being the most energy efficient ones. As on date, 30 appliances are covered under S&L Programme, out of which 10 appliances are under mandatory regime and remaining 20 are under voluntary regime.
- Ministry of New and Renewable Energy has launched Renewable Purchase Obligation (RPO) program which mandates certain minimum percentage of power to be purchased, by the utilities and some large power consumers, from the renewable sources.
- As per Plastic Waste Management (Second Amendment) Rules, 2021 notified by the Ministry of Environment, Forest and Climate Change carry bags made of recycled plastic or products made of recycled plastic can be used for storing, carrying, dispensing or packaging ready to eat or drink food stuff subject to the notification of appropriate standards and regulation under the Food Safety and Standards Act, 2006 by Food Safety and Standards Authority of India.
- Bureau of Indian Standards (BIS) has been established as the National Standards Body of India under the BIS Act, 2016. The standards and certification scheme of BIS apart from benefitting the consumers and industry also support various public policies especially in areas of product safety, consumer protection, food safety, environment protection, building and construction, etc.

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