

**GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA**

UNSTARRED QUESTION NO:2580
ANSWERED ON:29.03.2012
PROGRESS MADE IN EARTH SCIENCES
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Will the Minister of EARTH SCIENCES be pleased to state:

- (a) the progress made in the field of Earth Sciences during the last three years and the current year;
- (b) whether the Government is satisfied with its achievements;
- (c) if so, the details thereof;
- (d) if not, the reasons therefor ; and
- (e) the steps taken by the Government in this regard?

Answer

MINISTER OF STATE IN THE MINISTRY OF PLANNING, MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE MINISTRY OF EARTH SCIENCES (DR. ASHWANI KUMAR)

a) The progress made during the last 3 years and the current year has been considerably significant under various projects of the ministry. Some of the major accomplishments are described below:

Under the Meteorological Services, a district-level agro-meteorological advisory service, providing a 5-day weather forecast for farmers, in 550 districts, has been made operational. About 2,500,000 farmers have subscribed for the information through mobile for planning their agricultural activities. As a part of modernization meteorological Services, Atmospheric Observing Systems has been strengthened through installation of 1000 state-of-the-art systems in various parts of the country for real-time monitoring meteorological parameters. To process the huge volume of data and run the weather forecasting models, the computation facilities have been substantially augmented by commissioning of a set of 4 high performance computing systems in various centres of the ministry which has a total combining capacity of 120 Tflops. Twelve Doppler Weather Radars have been installed in various cities viz., Delhi airport, New Delhi, Nagpur, Jaipur, Hyderabad, Lucknow, Patna, Patiala, Agartala, Mohanbari, Bhuj and Mumbai which has contributed for now casting. Numerical weather prediction capability has been significantly improved from 35 km to 22.5 km resolution. Towards human resource development, an Advanced Training School was established with self contained facilities for training and research at Pune. The first batch of 20 students was inducted in August 2011 through a national selective process. A location-specific weather and air quality forecast 24 hours in advance was provided successfully for the Commonwealth Games 2010 in National Capital Region, Delhi. Under the Ocean Science and Information Services, a unique system of Fisheries Advisories based on identification of potential fishing zones (PFZ) using remote sensing technology has been made operational along with a new Tuna fishery advisory to deep sea fishing industry. A dedicated Oceansat Satellite Ground Station was installed at Indian National Centre for Ocean Information Services (INCOIS), Hyderabad for real time direct reception of satellite data for various operational Ocean Information Services. A Coral Bleaching Alert System (CABS) has been set up for providing bimonthly status on 5 major coral environments of India viz., Andaman Nicobar, Lakshadweep, Gulf of Mannar, Gulf of Kutchchh. The Indian Ocean Forecast System (INDOFOS) was setup with Regional Ocean Modeling System which has a resolution of ~13km. As a part of Ocean Observation Network, a set of 16 moored buoy network was established for acquisition of real-time data from the seas around India. A full fledged hatchery unit for the breeding and rearing of ornamental fishes was established at Agatti, Lakshadweep islands. In 2010, the fish potential in the Indian EEZ was estimated using both satellite and insitu data, which was found to be 4.32 MSY (maximum sustainable yield). Under Disaster Mitigation Support, a state-of-the-art Tsunami Warning System was set up, in September 2007, which has been recognized as a Regional Tsunami warning centre for the Indian Ocean countries which has been recognized as a Regional Tsunami Service Provider (RTSP) for the Indian Ocean Region and started operation to the Indian Ocean Rim countries. Under the Polar Science & cryosphere, the First Scientific expedition was successfully undertaken to the South Pole in November 2010. The Third Station in Antarctic in the Larsemann Hills area has been completed. Under the Ocean Technology & Resources, two more LTTD plants were commissioned in the islands of Lakshadweep one each at Minicoy and Agatti during March 2011 and August 2011, respectively. The remotely operable submersible (ROSUB) was tested at 5300 m in the Indian Ocean which is land mark achievement for exploitation of resources. Soil tester was tested in the central Indian Ocean at a depth of 5000m. India's had made claim to the extended continental shelf, in pursuant to Article 76 of the United Nations Convention on the Law of the Sea (UNCLOS). A dedicated centre for Climate Change Research was established at Pune to address various scientific issues relating to climate change. Setting up of National Knowledge Network (NKN) connection to all the centres of MoES was accomplished for efficient communication and data transfer useful for various information services being rendered by the ministry.

b) Yes. Madam.

c) The progress of the ministry is satisfactory both in quantitative and qualitative terms. The performance of the ministry has been monitored objectively by the Performance Monitoring and Evaluation System (PMES) of the Cabinet Secretariat. The Results-Framework Document submitted by the ministry for the year 2010-11, had been evaluated and the performance was estimated to be 95.07%. The efforts, made by the ministry towards augmentation of observational networks and computation capability has lead to improved prediction of weather, and climate services. According to a recent survey, various services such as agromet for farmers, potential fishing zone for fisherman, ocean state forecast for shipping, aviation services, public weather services, etc., have been extremely useful and beneficial for society at large.

d)& e) Doesn't arise.