

**GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA**

UNSTARRED QUESTION NO:764
ANSWERED ON:24.02.2006
EARTH SYSTEM SCIENCE
Sugavanam Shri E.G.

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) whether the Government have formulated any plan for the development of Earth System Science;
- (b) if so, the details thereof; and (
- (c) if not, the reasons therefor?

Answer

MINISTER OF SCIENCE & TECHNOLOGY & MINISTER OF OCEAN DEVELOPMENT (KAPIL SIBAL)

(a) Yes Sir. Having realized the need for better management and exploitation of natural resources as well as mitigation of natural disasters the Department of Science and Technology had set up a division – viz. The Earth System Science (ESS) Division to focus research and development for understanding better the spatial and temporal evolution of the Indian Lithosphere.

The programs under ESS envisage to cover a wide spectrum of studies on the Solid Earth, its atmosphere, the oceans and their interrelationships. National Coordinated projects, long and short term projects involving extensive/intensive field observations, data acquisition, processing and analysis, and manpower development are supported.

(b) The details of the activities – is annexed.

(c) Does not arise.

ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (b) OF LOK SABHA UNSTARRED QUESTION NO. 764 FOR 24.2.22006 RAISED BY SHRI E.G.SUGAVANAM IN LOK SABHA

b) The Earth System Science (ESS)

The Earth System Science (ESS) covers a wide spectrum of study of the solid earth, its atmosphere, the oceans, their interrelationships and even the relationship the earth bears to the Universe at large. It constitutes a complex multidisciplinary intermesh of branches of knowledge dealing with natural phenomena as well as anthropogenic forces operating in the earth's realm. The basic character of programmes being implemented by the ESS Division is in the framework of nationally coordinated, long-term, extensive and intensive observation/field-based programmes involving data acquisition, data processing/analysis, subject-specific indigenous state-of-the-art technology development, advanced training/services, etc. The various coordinated programmes on various focused themes are given below:

Programm Advisory Committee on Earth Science (PAC-ES)

Programme Advisory Committee on Atmospheric Sciences (PAC-AS)

Science of Shallow Sub-Surface Programme (SSS)

Deep Continental Studies Programme (DCS)

Himalayan Glaciology Programme

Monsoon and Tropical Climate (MONTCLIM) and Agrometeorology Programme

Indian Climate Research Programme (ICRP)

New Initiatives (DST Schools in Mathematical Modeling in Earth System Sciences) Objectives

PAC-ES extends support to carry out research in forefront areas of Earth Sciences. The programme also strives to improve the

research climate through manpower training, contact/field workshops, create state of art facilities and identify/nurture new areas of research in earth sciences.

DCS programme, has undertaken studies on deep structural configuration of Indian Lithosphere along selected transects.

The primary objective of the Monsoon and Tropical Climate and Indian Climate Research Programme is to understand the weather and climate all over the Indian region especially for the monsoon period with the aim of improving the forecasting skills.

Agrometeorology programme aims at establishing the relationships between various weather parameters and crop growth and yield parameters for various major crops in India.

Himalayan glaciology programme coordinates studies on glaciers in the Indian side of the Himalayan region by organizing expeditions and through systematic observations over selected glaciers.

DST schools on Mathematical modeling in Earth System Sciences Program aims to develop manpower in mathematical modeling and computer simulation for better understanding of processes and phenomena in Earth System Sciences (Earth, Atmosphere and Oceanic Sciences), which can fill up the present and future needs of our country, through organizing various types of inter-disciplinary and multi-institutional training activities in different parts of the country.