

[24 March, 2005]

RAJYA SABHA

**Modernising the Survey of India**

2584. DR. K. KASTURIRANGAN: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether Government have plans to modernise the Survey of India;

(b) if so, the details thereof;

(c) whether new approaches like Global Positioning System, Geographic Information System and use of space imageries are employed by the organization to update its topo maps; and

(d) if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) Yes, Sir.

(b) Schemes have been approved to introduce state-of-art technologies in the fields of data acquisition, data transformation, data archival, data dissemination including Digital photogrammetric work stations; Handheld GPS integrated with tablet PCs for field verification; Differential Global Positioning System for establishing provision of precise ground control points; hardware and software for the digitization of maps, upgradation of maps using satellite imageries and Aerial photographs and converting data into GIS ready format. Automatic pattering and generation of colour separates of film positive for publishing of maps, State-of art printing machines for high speed printing of paper maps. Also, the Hardware and software required for storage and management of spatial data base.

(c) and (d) Yes, Sir. The Survey of India has already started using Global Positioning System, Geographical Information System and satellite imageries/aerial photographs to update the maps.

**Launch of Cartosat-I**

2585. DR. K. KASTURIRANGAN: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the planned launch of Cartosat-I this year will provide Survey of India with unique inputs to improve mapping methodology;

(b) if so, the details thereof;

(c) whether the preparatory work to use the capabilities of Cartosat-I are progressing as per plans; and

(d) if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) and (b) Yes Sir, Cartosat-I Satellite mission, to be launched in the near future has the capability to systematically cover the country with along-track stereo images with 2.5m. spatial resolution and 30 Km. swath. This unique high-resolution along-track stereo imaging capability, carried out for the first time anywhere in the world, will enable operational generation of the Digital Elevation Models (DEMs) and various derived value added products thereon. The mission is expected to provide enhanced inputs for various large scale mapping applications and stimulate newer applications in the urban and rural development; land and water resources management; disaster assessment; relief planning and management environment impact assessment; and various other applications of Geographical Information System. Survey of India could make use of the Cartosat-I data for updating their topographic maps, besides making use of them in the generation of Large Scale topographic maps.

(c) and (d) Pilot activities for the generation of along-track stereo images and the Digital Elevation Models (DEM) have been satisfactorily completed. Activities pertaining to large scale base maps at 1:10,000 scale and related techniques for parameter retrieval etc. are already initiated, and these activities are likely to get a further boost after the launch of Cartosat-I.

### **Satellite Navigation System**

2586. SHRI C. RAMACHANDRAIAH: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether it is a fact that country is planning a regional satellite navigation system, similar to the global positioning system of the United States;