GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:3739
ANSWERED ON:25.08.2011
DIGITAL MAPPING OF COASTAL AREAS
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Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the Ministry has recently conducted a digital mapping of coastal areas especially in Gujarat for the purpose of gaining knowledge on resources available, forewarning in case of tsunamis, cyclones etc.;

(b) if so, the outcome thereof, Statewise; and

(c) the other uses of this digital mapping of coastal areas in the country?

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(SHRI ASHWANI KUMAR)

(a) Yes Madam.

(b) Indian National Centre for Ocean Information Services (INCOIS) has initiated work on cutting edge research areas such as: (i) Multi-hazard Vulnerability Mapping, (ii) Real-time tsunami inundation modeling as well as (iii) 3-D GIS for street level inundation estimates within the near coastal most vulnerable zones purely for the purposes of quantifying depth and extent of coastal inundation due to tsunami and cyclone generated storm surges.

Tsunami inundation modelling for the areas of Mandvi and Dwaraka in Gujarat is currently being done by Integrated Coastal and Marine Area Management (ICMAM) Project Directorate located at Chennai, by using topographic data obtained through Real-Time Kinematic (RTK) GPS surveys.

National Remote Sensing Centre (NRSC) is carrying out Airborne Laser Terrain Mapper (ALTM) survey to generate digital topographic information for the near coastal zones, for use in inundation modelling. The data acquisition so far has been completed for Orissa, Andhra Pradesh, and Tamil Nadu. ALTM-based digital topographic mapping has so far been completed for near coastal areas between Nagapattinam (Tamilnadu) to Puri (Orissa). The broad scientific methodologies for 3-D GIS have been established and pilot work over the Nagapattinam-Cuddalore area of Tamilnadu has been successfully. Work is under way for the remaining near coastal most vulnerable zones of the country.

Survey of India (SOI) has completed preparatory work for generating micro-scale topographic data over Gujarat completed under the Integrated Coastal Zone Management (ICZM) Program of the Ministry of Environment & Forests.

Coastal vulnerability mapping for multi-hazards has been completed by INCOIS at macro-scale for planning purposes for entire Indian coastline including Gujarat coast.

(c) The Ministry plans to develop micro-scale vulnerability maps for all the near coastal vulnerable areas of the country that can be used by administrators and risk managers for micro-level multi-hazard resilient development planning, ICZM, saving lives and property.