GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:758
ANSWERED ON:04.08.2011
NATIONAL TSUNAMI WARNING SYSTEM
Abdulrahman Shri ;Ananth Kumar Shri ;Gowda Shri D.B. Chandre

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the Government has evaluated the functioning of the National Tsunami Warning System (NTWS);

(b) if so, the details of the outcome of the said evaluation alongwith the shortcomings noticed;

(c) the details of the funds allocated and released for the development of such new technology during each of the last three years and the current year;

(d) whether it is a fact that fishermen vandalise the Tsunami buoys and take away metal parts thus making the entire system non-functional; and

(e) if so, the steps taken to protect the Tsunami buoys from getting stolen/damaged?

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) A detailed performance evaluation of the NTWS, that was made operational since October 2007 at the Indian National Centre for Ocean Information Services (INCOIS), Hyderabad is carried out in respect of detecting earthquakes globally and tsunami over the Indian Ocean region. No shortcomings have been noticed so far.

So far, since its inception NTWS has monitored 259 earthquakes (EQ) of M > 6.5 out of which 51 are detected in the Indian Ocean region. Details of evaluation carried out as per the stipulated by the Intergovernmental Oceanographic Commission (IOC) and comparative performance with that of the United States Geological Survey (USGS) are presented below:

S.No.	Parameter	Targets	Achievements
1	Elapse Time from EQ to Initial EQ information issuance (Local/Distant)	10/15 min	06 Min
2	Probability of Detection of IO EQ with Mw >= 6.5	100 %	100 %
3	Accuracy of Hypocenter Location (with respect to USGS)	within 30 km	9.5 km
4	Accuracy of Hypocenter Depth (with respect to USGS)	within 25 km	22.5 km
5	Accuracy of Earthquake Mw Magnitude (with respect to USGS)	0.2	0.2
6	Reliability of RTWP Operations (Power, Computer, Communications)	99.5%	Achieved

The forecasts issued by NTWS, Pacific Tsunami Warning Centre (PTWC) and Japan Meteorological Agency (JMA) for a few tsunamigenic events have been evaluated in detail. As of now, only for 4 occasions, tsunami Watch/Alert was issued by the NTWS, that too only for selected near-source areas in Andaman & Nicobar Islands; whereas other centres viz. PTWC, JMA, issued Local/Regional/Indian Ocean basin-wide tsunami watches for all of those events. This indicates that the accuracy of Tsunami Warming issued by NTWS for the Indian Ocean turned out to be more accurate.

Further, NTWS has also monitored 3-major Global Ocean earthquakes: (1) Chile Earthquake (M8.6) on February 27, 2010 06:34:11 (UTC), (2) Vanuatu Islands Earthquake (M 7.6) of December, 25 2010 13:16:38 (UTC), and (3) Honshu, Japan Earthquake (M8.9) of March 11, 2011 05:46:23 (UTC). Timely "No Threat" Bulletins were issued for Indian Ocean in all these occasions, so as to avoid false alarms and evacuations.

(c) Grants of Rs.10.56crores during 2009-10 and Rs.10.0crores in 2010-11 have been utilised. An allocation of Rs. 12.0crores is made for the current 2011-12.

(d) Yes Madam.

(e) The operational sustenance of the deployed moorings over the open seas is highly challenging as they are becoming vulnerable to vandalism, theft, inadvertent damage by passing vessels etc. The non-functional moorings are attended by a maintenance support team with necessary spares and the sensors are replaced/serviced in open seas using the research vessels at the earliest opportunity. Due to the rough open sea conditions, most of the service activities involving research vessels are scheduled during the non-monsoon seasons. Assistance of Indian Navy has been sought.

National Institute of Ocean Technology (NIOT) has now catered for few spare moorings and totally non-serviceable mooring can be replaced by a spare mooring in the open seas so that operational sustenance potential of the moored buoy network is maintained.