

GOVERNMENT OF INDIA  
MINISTRY OF HOME AFFAIRS

LOK SABHA  
STARRED QUESTION NO.\*326

TO BE ANSWERED ON THE 22<sup>ND</sup> DECEMBER, 2015/PAUSHA 1, 1937  
(SAKA)

MANAGEMENT OF EARTHQUAKES

\*326. SHRI MUTHAMSETTI SRINIVASA RAO (AVANTHI):

Will the Minister of HOME AFFAIRS be pleased to state:

(a) whether the National Disaster Management Authority (NDMA) had undertaken multi-State exercise and awareness campaign to assess preparedness of local authorities to deal with the earthquakes and if so, the details thereof along with deficiencies noticed therein and the corrective action suggested thereon;

(b) whether all the States/UTs have constituted State level Disaster Management Authority, if so, the details thereof along with the steps taken to persuade the defaulting States to constitute State level Authority expeditiously;

(c) whether any other vulnerability study on earthquakes has also been undertaken in this regard and if so, the details thereof; and

(d) the follow up action taken by the Government along with the steps being taken to ensure that buildings and structures located in high seismic zones are earthquake proof/resistant?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF HOME AFFAIRS  
(SHRI KIREN RIJJU)

(a) to (d): A Statement is laid on the Table of the House.

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STATEMENT REFERRED TO IN LOK SABHA STARRED QUESTION  
NO.\*326 FOR 22.12.2015

(a): Yes, Madam. National Disaster Management Authority (NDMA) has undertaken two multi-state exercises in this regard:-

(i) A scientific study for development of M 8.7 (Richter Scale) Shillong 1897 Earthquake Scenario to assess the vulnerability of the North Eastern (NE) Region covering all the eight NE states including Sikkim, to understand the impact of a big earthquake was conducted. Gaps identified during Mega Mock Exercise in 8 NE States, which have been communicated to all 8 States are as under :

- State and District Emergency Operation Centres (EOCs) were either not functioning or functioned from ad-hoc locations.
- Though State Disaster Response Force (SDRFs) have been formed in some of the States, but they lacked Disaster Management (DM) equipment.
- State and District Disaster Management (DM) Plans were not up-to-date. Incident Response System (IRS) was not incorporated.
- Decision Support System (DSS) was not available or was not used.
- Police personnel lacked knowledge and training in traffic and crowd management.
- Fire and emergency services lacked training and basic equipment.
- Hospitals did not have emergency communication plan.
- Municipal Corporations/Councils lacked basic Disaster Management (DM) equipment.
- There is a need for a standalone Disaster Management network based on High Frequency (HF), Very High Frequency (VHF) and satellite phones.

(ii) In collaboration with Indian Institute of Technology (IITs) Bombay and Madras, NDMA has undertaken a project titled Mw8 Mandi Earthquake Scenario : Multi State Exercise and Awareness Campaign to provide a scientific understanding of the consequences of a large earthquake in the Himalayas. The gaps observed and lessons learnt are:

- Necessity of establishment Disaster Management Plans at various levels;
- Need for state-of-the art Emergency Operation Centres at the state and district level with redundancy;
- Setting-up and use of wireless communication system for the stakeholders to more effectively deal with an earthquake disaster scenario;
- Need for better road accessibility in case of disaster;
- Identification of requirements of state-of-the-art equipment and systematic inventory of resources, both with govt. and private sector;
- Need for adequate number of ambulances;
- Greater public awareness and sensitization of people for enhanced preparedness.

In addition, NDMA has also conducted 174 Mock Exercises on Earthquake in various States to sensitize and spread awareness. State wise list may be seen at Annexure-I

To create awareness, NDMA has issued guidelines for Management of Earthquake in 2007 for improving earthquake preparedness, public awareness on earthquake risk and vulnerability on earthquake prone areas and improving the enforcement and compliance on earthquake resistant building codes and other safety provisions. These guidelines were widely circulated among Ministries of Government of India, States and Union Territories(UTs) for its adoption to minimize the loss of life and property due to earthquake.

(b): All States Governments/UTs have constituted their State Disaster Management Authorities (SDMAs).

(c): NDMA has undertaken 4 such studies as under:-

(i) A study on Development of Probabilistic Seismic Hazard Map of India (PSHA) for creation of a national database catalogue of earthquakes for seismic hazard analysis.

(ii) A study on "Geo Technical Investigation for Seismic Microzonation of Indian Land Mass".

(iii) A project through Building Materials Technology Promotion Council (BMTPC) for upgradation of Earthquake Hazards Maps for the country.

(iv) A study of the Seismic Vulnerability Assessment of Buildings Types in India.

(d): The structural safety of buildings including safety from earthquakes is a matter dealt with by the building bye-laws which is a state subject. "Regulation of Land and Construction of Building" has been included as a

municipal function in the XIIth Schedule to the Constitution of India in terms of the article 243-W. As such it is the primary responsibility of the State Governments to strictly adhere to safety norms laid down by the Bureau of Indian Standards for Disaster Management namely the National Building Code 2005 (NBC 2005) which is a comprehensive building code and a national instrument providing guidelines for regulation of the building construction activities across the country. It serves as a Model Code for adoption by all agencies involved in building construction works. The Central Government has circulated model building bye laws which has safety norms to be observed for saving the buildings from earthquakes.

The Bureau of Indian Standards (BIS) has brought out Indian Standards for earthquake resistant design and construction of buildings and structures. Various provisions contained in the relevant Indian Standards/Codes/Specifications/Guidelines and earthquake design and constructions of buildings are required to be followed for safety, stability and durability of such buildings.

All the state were advised by Ministry of Home Affairs to amend their respective Acts/Byelaws/ Regulations to incorporate necessary provisions for safety against earthquake hazards based on the Model Byelaws so that construction activities are regulated for earthquake safe construction. One day Technical Workshops were also organized to help the State Governments in making necessary amendments.

Under the Disaster Management Act, 2005, NDMA has issued guidelines related to earthquake safety from time to time.

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## Annexure-II

Summary of Mock Exercises Conducted by NDMA from 6th October 2006 to 10 July,15 06 to 10 Dec,15

		Types of disasters															
	State	1 CI	2 EQ	3 CY	4 F	5 UF	6 NE	7 TS	8 TR	9 MS	10 MM	11 CBRN	12 SA	Intern I Trainin g	13 LS	14 Disaster during on mass public gathering	15 Total
1	Assam																
		2	7	Nil	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	10
2	Arunachal Pradesh																
		Nil	6	Nil	2	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	8
3	Andhra Pradesh																
		6	1	3	1	Nil	Nil	Nil	Nil	1	1	Nil	Nil	Nil	Nil	Nil	13
4	Andaman & Nicobar																
		Nil	3	Nil	Nil	Nil	Nil	2	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	5
5	Bihar																
		1	1	Nil	2	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	4
6	Chandigarh																
		Nil	3	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	3
7	Chhatishgarh																
		1	Nil	Nil	3	2	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	6
8	Dadar & Nagar Haveli																
		Nil	Nil	Nil	Nil	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1
9	Daman & Diu																
		Nil	Nil	Nil	2	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	2
10	Delhi																
		8	62	Nil	Nil	3	Nil	Nil	36	Nil	9	Nil	Nil	Nil	Nil	Nil	118
11	Goa																
		5	Nil	Nil	2	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	7
12	Gujarat																
		5	2	Nil	1	Nil	1	Nil	Nil	Nil	Nil	1	Nil	Nil	Nil	Nil	10
13	Haryana																
		3	7	Nil	1	2	Nil	Nil	1	1	Nil	1	Nil	Nil	Nil	1	17
14	HP																
		6	8		Nil	2	Nil	Nil	1	Nil	Nil	Nil	1	Nil	Nil	Nil	18
15	J&K																
		Nil	5	Nil	Nil	2	Nil	Nil	2	Nil	1	Nil	Nil	Nil	Nil	4	14



	<b>School Safety</b>																98
		<b>83</b>	<b>173</b>	<b>20</b>	<b>24</b>	<b>22</b>	<b>6</b>	<b>2</b>	<b>48</b>	<b>5</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>8</b>	<b>509</b>

**Remarks**

<b>Mass Casualty management</b>	<b>Manmade</b>	<b>Terrorist related</b>
1.Kumbh Mela	Dam Failure	Srl Bomb Blast
2.Rath Yatra	Fire in Oil Depots	Indiscrimat firing
3.Amarnath Yatra	Chemical Leaks	Dirty Bomb
4.Char Dham Yatra	Industrial Disaster	
5.Terrorist Related		

Abbreviations

Chemical Industrial)	CI
Earthquake	EQ
Cyclone	Cy
Flood	F
Urban Fire	UF
Nuclear Emergency	NE
tsunami	TS
Terrorist Related	TR
Mass Casualty	MC
Man0made	MM
CBRN	CBRN
Snow Avalanche	SA
Internal Training	Internal Training
Land Slide	LS

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