**GOVERNMENT OF INDIA**
**MINISTRY OF EARTH SCIENCES**
**LOK SABHA**
**STARRED QUESTION No. *385 (5th Position)**
**To be answered on March 20, 2020**

## SEISMIC ZONE CLASSIFICATION OF TAMIL NADU

***385. SHRI GNANATHIRAVIAM S:**

**Will the Minister of EARTH SCIENCES be pleased to state:**

(a) the details of Seismic Zone Classification/mapping done in Tamil Nadu,district-wise;
(b) the steps taken to increase awareness about earthquake resistant buildings;
(c) whether Tsunami warning systems have been installed and are functional along the Indian coastline, if so, the details thereof and if not, the reasons therefor; and
(d) the manner in which Tsunami warnings are conveyed to the people living in coastal areas?

**ANSWER**

**MINISTER OF SCIENCE AND TECHNOLOGY**
**AND EARTH SCIENCES**
**(Dr. HARSH VARDHAN)**

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

**STATEMENT REFERRED TO IN REPLY TO PARTS (a) to (d)**
**OF THE LOK SABHA STARRED QUESTION NO. *385 (5th Position)**
**SEISMIC ZONE CLASSIFICATION OF TAMIL NADU**

**To BEANSWERED ON20thMARCH, 2020**

(a) **The Bureau of Indian Standards (BIS), based on past earthquakes and soil characteristics, publish the seismic zoning map of India. According to this map, the country has been grouped into four seismic zones i.e. Zone-II, III, IV and V. Zone V is considered to be the most seismically active, while Zone II is the least. The Tamilnadu State comes under Zone II and III. Details of Seismic Zone classification in Tamil Nadu, district-wise is as follows:**

| S.No. | Tamil Nadu State (districts) | Seismic zone |
|---|---|---|
| 1 | Thiruvallur | III |
| 2 | Chennai | III |
| 3 | Kancheepuram | III, II |
| 4 | Vellore | III |
| 5 | Dharmapuri | III, II |
| 6 | Thiruvannamalai | III, II |
| 7 | Viluppuram | II |
| 8 | Salem | III, II |
| 9 | Namakkal | III, II |
| 10 | Erode | III, II |
| 11 | The Nilgiris | III, II |
| 12 | Coimbatore | III, II |
| 13 | Dindigul | II |
| 14 | Karur | II |
| 15 | Trichirappalli | II |
| 16 | Perambalur | II |
| 17 | Ariyalur | II |
| 18 | Cuddalore | II |
| 19 | Nagapattinam | II |
| 20 | Thiruvarur | II |
| 21 | Thanjavur | II |
| 22 | Pudukottai | II |
| 23 | Sivagangai | II |
| 24 | Madurai | II |
| 25 | Theni | II |
| 26 | Virudhunagar | II |

| | | |
|---|---|---|
| 27 | Ramanathapuram | II |
| 28 | Thirunelveli | III, II |
| 29 | Kanyakumari | III |
| 30 | Chengalpet | III |
| 31 | Kallakurichi | II |
| 32 | Ranipet | III |
| 33 | Tuticorin | II |
| 34 | Trichirappalli | II |
| 35 | Krishnagiri | III, II |
| 36 | Tirupattur | III |
| 37 | Tiruppur | III |

(b) MoES is not directly involved in the programmes related to the awareness about earthquake resistant buildings. The organization like Building Materials and Technology Promotion Council (BMTPC), National Disaster Management Authority (NDMA), National Institute of Disaster Management (NIDM), Central Building Research Institute (CBRI) etc. are involved and conducting training programmes for architects, masons and practicing engineers. Bureau of Indian Standards (BIS) has published criterion for construction of earthquake resistant structures. Additionally, NDMA has published guidelines for Seismic Retrofitting of buildings and structures in India to address the structural deficiency of the houses/residential buildings and structures from the impending future earthquakes.

(c) The Indian Tsunami Early Warning Centre (ITEWC) was established in the year 2007, after the deadly Tsunami on 26 December 2004, at Indian National Centre for Ocean Information Sciences (INCOIS), an autonomous institute under the Ministry of Earth Sciences, Hyderabad. The Centre is providing tsunami advisories to India and Indian Ocean Rim countries.

The Indian Tsunami Early Warning System comprises of a real-time seismic monitoring network to detect the tsunamigenic

**earthquakes, a real-time sea-level network consisting of tsunami buoys and tide gauges to monitor the tsunami waves, and the numerical model to estimate the tsunami travel times and expected wave heights of the tsunami at the coast. The system is operational on 24X7 basis. A host of communication systems also have been employed for the timely reception of data and for the timely dissemination of advisories.**

**(d) ITEWC is capable of detecting tsunamigenic earthquakes occurring in the Indian Ocean as well as in the Global Oceans within 10 minutes of their occurrence and disseminates the advisories to the concerned authorities through email, fax, SMS, Global Telecommunication System (GTS) and website. As per the standard operating procedure of ITEWC, the advisories are being disseminated to National, State and district disaster management authorities which will be further disseminated by these authorities to coastal communities. The State Emergency Operation Centre (SEOC), 13 coastal districts Disaster Management Officials (DMOs), NDRF/Navy/Coast-Guard and Strategic infrastructures (Madras Atomic Power Station, Kudankulam Nuclear Power Plant, Port & Harbors, etc.) from Tamil Nadu are part of the dissemination list.**

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