

**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 BE ANSWERED ON 20th MARCH, 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.**
