

O.I.H.

**GOVERNMENT OF INDIA
MINISTRY OF HOUSING AND URBAN AFFAIRS**

LOK SABHA

UNSTARRED QUESTION NO. 2015

TO BE ANSWERED ON JULY 28, 2022

EARTHQUAKE RESISTANT BUILDINGS

NO. 2015. SHRI NAYAB SINGH:

Will the Minister of HOUSING AND URBAN AFFAIRS be pleased to state:

- (a) whether the Government has any proposal for construction of earthquake resistant buildings under 'Sabhi Ke Liye Awas' Yojana and if so, the details thereof;**
- (b) whether the Government has fixed any guidelines or standards for earthquake resistant constructions and quality assurance for real estate projects for private use; and**
- (c) if so, the details thereof?**

ANSWER

THE MINISTER OF STATE IN THE

MINISTRY OF HOUSING AND URBAN AFFAIRS

(SHRI KAUSHAL KISHORE)

- (a) to (c): Land and Colonisation being State subjects, their planning and construction are regulated through Development Regulation and Building Byelaws of respective States/ Union Territories (UTs). Ministry of Housing and Urban Affairs (MoHUA) is implementing the Pradhan Mantri Awas Yojana - Urban (PMAY-U) to provide pucca house with basic amenities to the eligible urban families in partnership of States/ UTs with the vision of 'Housing for All'. PMAY-U scheme guidelines stipulates that the houses under the Mission should be designed and constructed to meet the requirements of structural safety against earthquake, flood, cyclone, landslides etc. conforming to National Building Code and other relevant Bureau of Indian Standards (BIS) Codes.**

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 for earthquake resistant design and construction of buildings are required to be followed by all the public and private construction agencies including for real estate projects, for safety, stability and durability of such buildings. A list of the related Indian Standards is given below:

- i. IS 1893 (Part 1): 2016 Criteria for Earthquake Resistant Design of Structures (Part 1) General Provisions and buildings**
- ii. IS 1893 (Part 2): 2014 Criteria for Earthquake Resistant Design of Structures (Part 2) Liquid Retaining Tanks**
- iii. IS 1893 (Part 3): 2014 Criteria for Earthquake Resistant Design of Structures (Part 2) Bridges and Retaining Walls**
- iv. IS 1893 (Part 4): 2015 Criteria for Earthquake Resistant Design of Structures (Part-4) Industrial Structures Including Stack-Like Structures, Reaffirmed in 2016**
- v. IS 4326: 2013 Earthquake Resistant Design and Construction of Buildings: Code of Practice with 1 Amendment**
- vi. IS 13827: 1993 Improving Earthquake Resistance of Earthen Buildings – Guidelines, with 2 Amendments, Reaffirmed in 2013**
- vii. IS 13828: 1993 Improving Earthquake Resistance of Low Strength Masonry Buildings – Guidelines, with 3 Amendments, Reaffirmed in 2013**
- viii. IS 13920: 1993 Ductile Detailing of Reinforced Concrete Structures subjected to Seismic Forces - Code of Practice With 2 Amendments, Reaffirmed in 2013 (1st revision is under print)**
- ix. IS 13935: 2009 Seismic evaluation, repair and seismic strengthening of masonry buildings – Guidelines (first revision), Reaffirmed in 2013**
- x. IS 15988: 2013 Seismic Evaluation and strengthening of Existing Reinforced Concrete Buildings - Guidelines**

In addition, the National Building Code of India 2016, has necessary administrative and technical provisions for safety of structures against earthquakes and other hazards. Earthquake resistant codes and relevant provisions of NBC are required to be followed mandatorily for safety against earthquake hazards.

MoHUA through Building Materials & Technology Promotion Council (BMTPC) has also issued The Vulnerability Atlas of India (Third edition) which gives State-wise hazard maps with respect to earthquakes, wind & cyclone and floods and district-wise vulnerability of housing stocks, based on the materials used for walling and roofing of the building, as per the Census data. This Atlas is a tool to natural disaster, preparedness and mitigation for housing and related infrastructure. The digitized version of the Vulnerability Atlas of India is available at <https://vai.bmtpc.org/>.
