

Effects of Earthquakes in Pakistan

Introduction

Seismically, Pakistan is prone to earthquakes as it is one of the most active areas. The country is located at the intersection of three plate boundaries, which are Arabian, Indian and Eurasian. About 80% of earthquakes occur where plates are pushed together, called convergent boundaries. Hence, Pakistan is more vulnerable to earthquakes. Previously, many high-magnitude earthquakes in Pakistan have impacted the lives of people and the infrastructure. In 2005, the most disastrous earthquake hit the country, affecting **3.5 million** people and estimated economic losses of around Rs. **135 billion**. Approximately **73,276** people died, **70,000** were injured, and **2.8 million** were homeless. It had a devastating impact on the housing sector, as at least **400,000** homes were destroyed. Even though many houses were reconstructed, the challenges remained for people due to aftershocks, remoteness of the area, landslides and harsh weather conditions. Earthquakes are a natural phenomenon, and no one can predict with accuracy when they are going to strike. However, Pakistan must be prepared as recently. Turkey faced a lot of loss in the recent earthquake, with a magnitude of **7.9**.

Challenges

- Massive destruction of homes leaves people homeless for years. It makes them more vulnerable as they must wait for government and private sector funds and information.
- Damaged schools and universities impact the education and mental health of students.
- The destruction of roads and bridges affects transportation services, and people cannot travel easily. The supplies of goods also cannot reach on time due to damaged or inaccessible roads.
- Damage to medical and healthcare facilities makes it difficult for people affected by the earthquake.
- Reduced income sources, and people cannot get back to work.
- Buildings made with poor materials to save costs have more tendency to collapse.
- Fires due to rupture of fuel pipelines and electric pipelines.
- People build homes without basic knowledge about improving the seismic resistance of their homes. It makes them more vulnerable to future earthquakes.

Recommendations

- Sustained financial, technical and political support for the reconstruction and relief efforts.
- Effective mass communication strategies that promote seismically-safe construction.
- Government should identify and acquire suitable land for developing infrastructure. They should implement the equitable eligibility process, verification, registration and land allocation.
- The government must ensure that the affected people have durable winterised shelter and essential goods until they return.
- The Pakistani government must closely work with humanitarian NGOs and international communities that work towards sustainable living and recovery.
- Awareness must be raised in the community, and effective resilience measures must be taken.
- Early warning systems must be installed in all buildings.
- The government should develop a task force ready to respond quickly to emergencies, especially in remote areas.

Turkey as an example Lesson for Pakistan

After over 20 years, on 6th February 2023, the most devastating earthquake with a magnitude of **7.8** occurred in Southern Turkey, followed by an earthquake of magnitude **7.5** in Southwest. Governments worldwide responded quickly when the Turkish government declared it a level-4 emergency. As of 24th February, more than **9100** aftershocks have occurred. According to the World Bank, the initial damage assessment for Turkey was **\$34.2 billion**, approximately **4%** of its economic output (2021). Pakistan must learn from this unfortunate incident and prepare accordingly, as Earthquakes are unpredictable. We have a long way to go towards integrating development with disaster management strategies. The event in Turkey must remind us that we should be prepared beforehand if and when the next major earthquake strikes. Government must join hands with the real estate sector to study the vulnerability of buildings to different intensities of earthquake earthquakes and ensure all new construction can resist natural phenomena such as earthquakes.

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