

PHIVOLCS EARTHQUAKE INTENSITY SCALE

1990 Luzon Earthquake

A measure of how an earthquake was felt in a certain locality or area. It is based on relative effect to people, structures, and objects in the surroundings. It is represented by Roman Numerals, with intensity I being the weakest and intensity X the strongest. It is used since 1996, replacing the Rossi-Forel scale.

I. SCARCELY PERCEPTIBLE



- Perceptible to people only under favorable circumstances.
- Delicately-balanced objects are disturbed slightly.
- Still water in containers oscillates slightly.

II. SLIGHTLY FELT



- Felt by few individuals at rest indoors.
- Hanging objects swing slightly.
- Still water in containers oscillates noticeably.

III. WEAK



- Felt by many people indoors specially in upper floors of buildings. Vibration is felt like the passing of a light truck. Dizziness and nausea are experienced by some people.
- Hanging objects swing moderately.
- Still water in containers oscillates moderately.

IV. MODERATELY STRONG



- Felt generally by people indoors and some people outdoors. Light sleepers are awakened. Vibration is felt like the passing of a heavy truck.
- Hanging objects swing considerably. Dinner plates, glasses, windows and doors rattle. Floors and walls of wood-framed buildings creak. Standing motor cars may rock slightly.
- Water in containers oscillates strongly.
- Rumbling sounds may sometimes be heard.

REPORT AN EARTHQUAKE

Text only 0918-9428354

Text / call 0905-3134077

or call (02) 426-1468 local 124 / 125
(02) 929-9254

For text, send:

Name / Date and time of earthquake /
Location at the time of earthquake /
Intensity rating

(All personal information will be kept private and secured.)



V. STRONG



- Generally felt by most people indoors and outdoors. Many sleeping people awakened. Some are frightened; some run outdoors. Strong shaking and rocking are felt throughout the building.
- Hanging objects swing violently. Dining utensils clatter and clink; some are broken. Small, light and unstable objects may fall or overturn. Liquids spill from filled open containers. Standing vehicles rock noticeably.
- Shaking of leaves and twigs of trees is noticeable.

VI. VERY STRONG



- Many people are frightened; many run outdoors. Some people lose their balance. Motorists feel like driving with flat tires.
- Heavy objects and furniture move or may be shifted. Small church bells may ring. Wall plaster may crack. Very old or poorly built houses and man-made structures are slightly damaged, though well-built structures are not affected.
- Limited rockfalls and rolling boulders occur in hilly to mountainous areas and escarpments. Trees are noticeably shaken.

VII. DESTRUCTIVE



- Most people are frightened and run outdoors. People find it difficult to stand in upper floors.
- Heavy objects and furniture overturn or topple. Big church bells may ring. Old or poorly built structures suffer considerable damage. Some well-built structures are slightly damaged. Some cracks may appear on dikes, fish ponds, road surfaces, or concrete hollow block walls.
- Limited liquefaction, lateral spreading and landslides are observed. Trees are shaken strongly. (*Liquefaction is a process by which loose saturated sand loses strength during an earthquake, and behaves like liquid.*)

VIII. VERY DESTRUCTIVE



- People are panicky. People find it difficult to stand even outdoors.
- Many well-built buildings are considerably damaged. Concrete dikes and foundations of bridges are destroyed by ground settling or toppling. Railway tracks are bent or broken.
- Tombstones may be displaced, twisted or overturned. Utility posts, towers and monuments may tilt or topple. Water and sewer pipes may be bent, twisted or broken.
- Liquefaction and lateral spreading cause man-made structures to sink, tilt or topple. Numerous landslides and rockfalls occur in mountainous and hilly areas. Boulders are thrown out from their positions particularly near the epicenter. Fissures and fault rupture may be observed. Trees are violently shaken. Water splashes or slops over dikes or banks of rivers.

IX. DEVASTATING



- People are forcibly thrown to the ground. Many cry and shake with fear.
- Most buildings are totally damaged. Bridges and elevated concrete structures are toppled or destroyed.
- Numerous utility posts, towers and monuments are tilted, toppled or broken. Water and sewer pipes are bent, twisted or broken.
- Landslides and liquefaction with lateral spreading and sandboils are widespread. The ground is distorted into undulations. Trees are shaken very violently with some toppled or broken. Boulders are commonly thrown out. River water splashes violently or slops over dikes and banks.

X. COMPLETELY DEVASTATING



- Practically all man-made structures are destroyed.
- Massive landslides and liquefaction, large scale subsidence and uplifting of landforms, and many ground fissures are observed. Changes in river courses and destructive seiches in lakes occur. Many trees are toppled, broken or uprooted.