

Chapter 1 Tsunami The Killer Wave

Question-1

Name three causes of Tsunami and explain its impact.

Solution:

Earthquakes, volcanic eruptions and underwater land slides can cause tsunamis. The impact of the earthquake, which ruptures the sea-floor causes the sea water to rise and move towards the coast with great force. These waves which travel at a tremendous speed immerse coastal areas causing immense damage to people and property.

Sometimes a tsunami causes the sea water to recede, exposing the ocean floor.

This is nature's way of warning people of an impending tsunami.

Waves head inland destroying everything in its path.

Question-2

Explain two different ways of detecting tsunami.

Solution:

(i) Coastal Tidal Gauges

Coastal tidal gauges can identify a tsunami closer to the shore. Tsunami detectors are placed in the sea about 50 km. from the shore. They are linked to the land by submarine cables. The detectors record any disturbances in the sea and transmit it to the land through the cables. These detectors can only identify tsunamis closer to the sea.

(ii) Satellite Technology

Satellite technology has made it possible to detect tsunamigenic earthquakes almost immediately. 'Tsunameters' transmit warnings of buoys on the sea surface, which relay it to the satellite. The warning time depends on the distance of the epicentre from the coast line. The warning includes predicted times the tsunami may hit different coastal cities, where the tsunami could travel in a few hours.

Deep-ocean Assessment and Reporting of Tsunamis (DART) Project was developed by the U.S. National Tsunami Hazard Mitigation Program. It strives at early tsunami detection and real-time reporting capability.

Question-3

State two preparedness measures each in pre, during and post tsunami scenario.

Solution:

As a precautionary measure the 'mock evacuation drills' should be conducted periodically so that the people are aware of it. People should be informed about the evacuation routes in case a tsunami hits the coast.

During a tsunami the whole family should immediately shift to a safer place when a tsunami warning is sounded. People should move to the upper floors of a multi-storied building to escape from drowning.

After a tsunami hits a place and recedes, people should get information about the state of the roads and bridges through the radio and TV. People should arrange

rescue operations for those trapped in flooded areas.
These are the measure that should be followed before, during and after a tsunami.

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