Perspectives – Tsunami

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Every time we think of the recent Indian Ocean Tsunami we are reminded of the victims and their survivors. This event reminds us tsunamis can be as damaging as earthquakes, floods and windstorms – or worse. The death, grief and damage a tsunami can cause are clear in our minds.

Tsunamis occur more frequently than one might suspect. An agency of the US government reports there were 1101 tsunamis since January 1, 1900; 89 of them were mega tsunamis in which a total of more than 200,000 died.

Beyond the personal devastation, there is of course an economic impact. Insurance buyers around the world are now reading their Property insurance policies to see how they would respond to property damage caused by a tsunami. Contrary to what has been reported elsewhere, tsunami insurance is available worldwide for buyers who normally insure against flood and earthquake. But there is little consistency in how insurers cover tsunami damage.

Perspectives is a periodic publication of the Willis Property Resource Group, addressing timely and pertinent property risk and protection issues for the risk management professional.

A New Word for an Old Peril

One of the first problems is that the insurance industry and the scientific community cannot agree on the definition of the term. The word tsunami did not exist before the 1960s. The scientific community created the term – from the Japanese words for harbor (tsu) and wave (nami) – to distinguish tsunami damage from other forms of flood and earthquake damage. Shortly after the word was coined, the US Geological Survey (USGS) defined tsunami as "a wave caused by an earthquake, volcano eruption, landslide or collision of the earth with a meteorite, comet or asteroid." The insurance industry never adopted this usage; in fact, while insurance policies commonly mention waves, tidal waves and seismic sea waves, they do not usually use the term tsunami at all.

Recently, another agency of the US Government, the National Oceanic and Atmospheric Administration (NOAA), published the following definition on its web site: "The term 'tsunami' and 'tidal wave' mean the same thing. 'Tsunami' is the preferred term nowadays, because it avoids the confusion with 'tides'. 'Tidal Wave' is most often seen in reproduction of old news reports and older text books. In this sense, it is like the term 'seismic sea wave'. Earthquakes, submarine landslides and volcanic eruption are sources of these waves. Asteroids hitting the earth have also been sources in the distant past of Earth's history." (Source: Harold Mafjeld, NOAA)

In the US, the National Flood Insurance Plan (NFIP), the Insurance Services Office (ISO) and the Factory Mutual Insurance Company (FMG) consider all forms of wave damage including tsunamis and tidal waves as flood losses. These groups are not concerned with what caused the flood.

Differing Interpretations

While many other insurers in North America use flood definitions similar to NFIP's, it is not safe to assume that they follow NFIP's interpretation. Many (perhaps most) insurers in North America make some or all of their exclusions subject to concurrent causation provisions. A concurrent causation provision has the effect of making an excluded peril (or risk or cause of loss) take precedence over an insured peril if both are involved in a loss. If the excluded peril contributes in any material extent to a loss, whether in an unbroken chain of events or where several perils occur simultaneously, the entire loss is excluded even if the predominate or proximate cause of the loss is an insured peril.

When reading a concurrent causation policy, one looks at the insuring agreement first to make sure a tsunami loss falls under the generality of the coverage grant. One then looks to see if any "concurrent causation exclusion" applies. The practical effect is that in order to be assured of coverage for tsunami waves on concurrent causation policies one must make certain the policy insures (and does not exclude) all forms of damage by surface waters and all forms of earth movement including earthquake, landslide, sudden collapse of land into the sea, collision of the earth with objects from space, and volcanic eruption.

Almost everyone agrees if a tsunami is covered under the flood policy and an insurance buyer suffers earthquake and tsunami damage in the same occurrence, the loss will be apportioned between the two perils based on the percentage of the damages caused by each peril. To be made whole, one must have both coverages.

There are of course exceptions to these generalities. Some North American insurers, such as Chubb, Allianz and Zurich, include tsunami under their definition of earthquake.

In Europe, Asia and most of the rest of the world, tsunami coverage usually depends on the proximate cause of the tsunami. For example, if an earthquake causes a tsunami, the tsunami is insured under the earthquake insurance. Some policies actually define tsunami as a wave resulting from an earthquake. Such a definition is too narrow, because, as mentioned above, not all tsunamis are caused by earthquakes.

"Earth movement" is a very broad term that includes earthquakes, landslides, rockslides, mudslides, collapses (collapse of a hillside, mountain or a large pile of dirt), subsidence, sinkholes, etc. On the other hand "earthquake" is a narrow term meaning "shaking or trembling of the earth caused by volcanic or plate tectonic activity." If a policy insures against tsunamis caused by earthquake, it does not insure against tsunamis caused by other kinds of earth movement or by such events as an asteroid colliding with the earth.

Selected List of Tsunamis in the Western Hemisphere

Source: The National Geophysical Data Center of NOAA

Location	Date	Recorded Fatalities
Guatemala – El Salvador	1902	185
Off Coast of Columbia	1906	500
Off Coast of Ecuador	1906	500
Louisiana, USA	1909	300
Puerto Rico, USA	1918	42
Puerto Angel Mexico	1920	4
N. Chile	1922	200
Newfoundland Canada	1928	26
Grandbanks Newfoundland, Canada	1929	51
S. California USA	1930	1
Central Mexico	1932	75
S. California USA	1933	3
East Aleutian Islands Alaska, USA	1946	165
Dominican Republic, Haiti & Puerto Rico	1946	1790
Dominican Republic	1946	75
Chile	1955	3
Central Aleutian Islands Alaska, USA	1957	2
S. Alaska USA	1958	5
Central Chile	1960	1260
Peru	1960	13
Gulf of Alaska (Alaskan Peninsula), USA	1964	123
Hawaii, USA	1975	2
Ecuador – Columbia	1979	500
Mt. Saint Helens Washington, USA	1980	57
Nicaragua	1992	168
Skagway Alaska, USA	1994	1
Mexico	1995	1
Peru	1996	12
Peru	2001	26

An insurance buyer on the Florida coast may decide not to purchase earthquake insurance because, historically, Florida is not in an earthquake prone area. The buyer, however, will not be insured against a tsunami in Florida caused by an earthquake in, for example, the Canary Islands.

Protection in an Imperfect World

In an ideal world, all companies would follow the example of FMG and insure tsunami damage under flood insuring agreements. Our alternative is to rely on a less perfect solution.

Tsunami coverage can be reasonably assured if a Property insurance policy is written to insure all kinds of flood, earth movement and volcanic eruption. (This assumes even the most conservative underwriters do not exclude "collision of objects from space with the earth.")

Finally, to assure concurrency, the limits, sublimits, deductibles and waiting periods in the policy should, if possible, be the same for all these perils.

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