

Tsunami *Impact*

Tsunami waves are powerful and may contain dangerous debris such as trees, cars and boats.

During a tsunami...

Images taken from the Triton Hotel, Sri Lanka, during the 26th December 2004 tsunami.

Source: National Geophysical Data Centre NOAA Satellite and Information Services.



The withdrawal of the sea before the first tsunami wave arrives. Normally the sea breaks on the bank to the right.



View from the top floor as the first tsunami wave arrives. The sea has risen several metres above normal.



Approach of another tsunami wave – the sea took 35 minutes to reach normal levels after the previous wave and then took only 3 minutes for this wave to approach.



This was the largest tsunami wave experienced during the event and it arrived 5 minutes after the smallest wave impacted.



Lots of debris is strewn around during a tsunami – this view to the south shows the debris (destroyed furniture from the hotel dining room) on the beach.



View of the swimming pool at the hotel after the first wave recedes.



Debris in the swimming pool and lobby as a result of the tsunami waves.

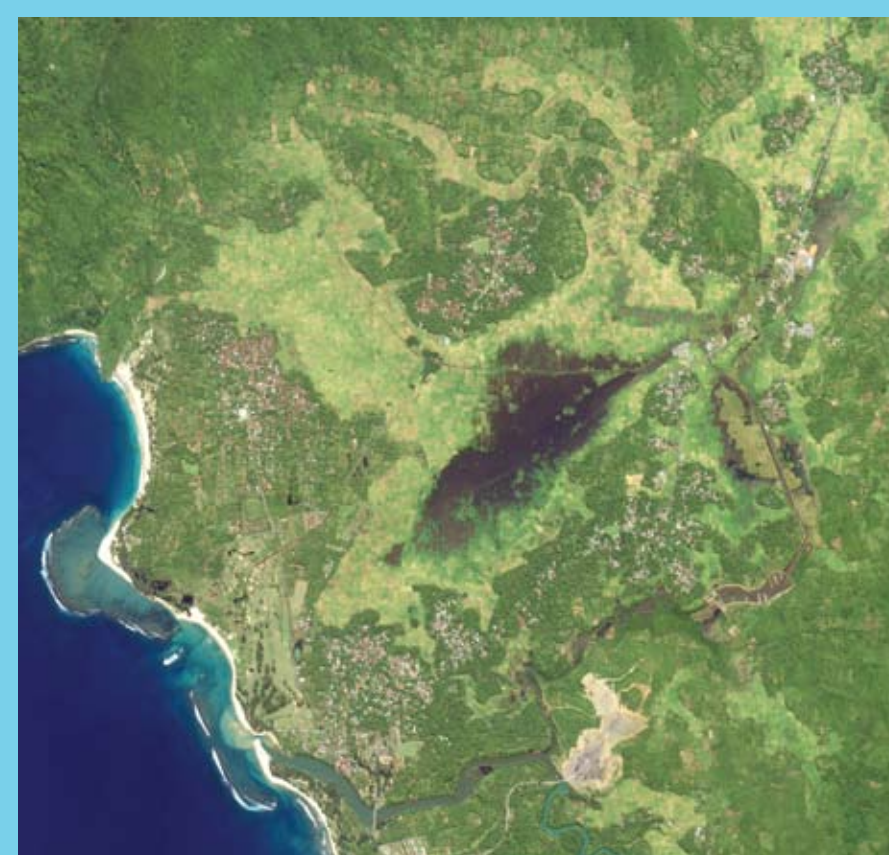
Tsunamis may be seen as a massive wall of water approaching land. There is usually more than one wave and the first is often not the largest.

After a tsunami...



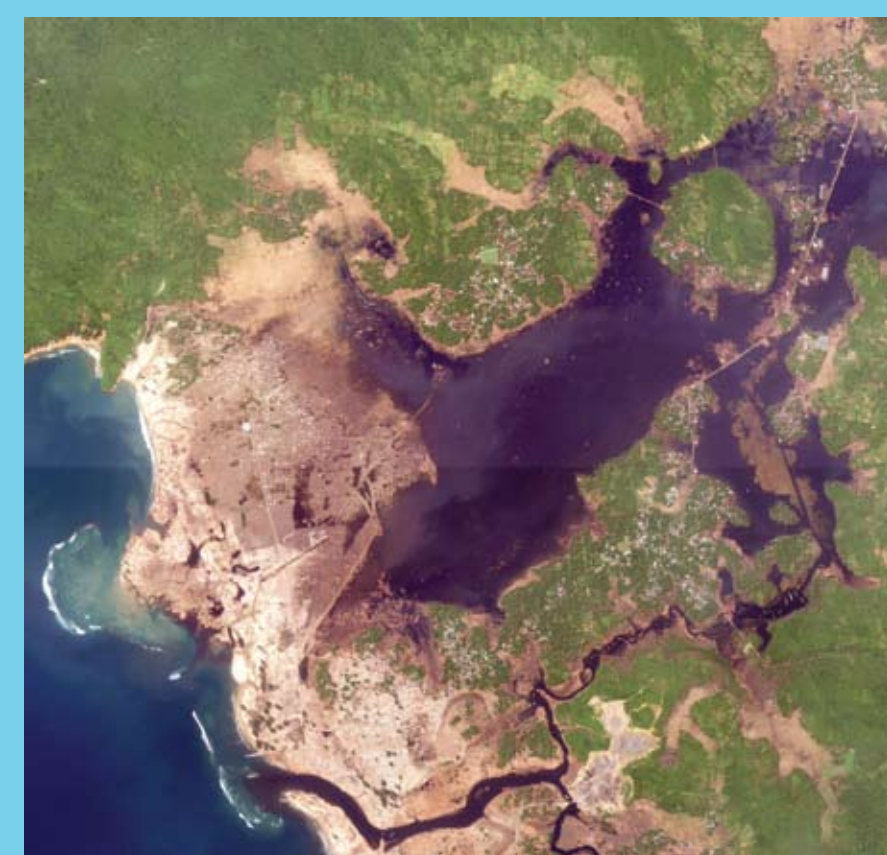
Banda Aceh, Sumatra, December 2004.

Photo: UNESCO IOC ITIC



BEFORE - January 2003

Ikonos Satellite Image © CRISP, NUS (2003)



AFTER - December 2004

Ikonos Satellite Image © CRISP, NUS (2004)

Satellite images of Lhoknga, Sumatra showing the vast degradation of the land and the watershed after the 26th December, 2004 earthquake and tsunami.

Countries may suffer great economic losses from damage to buildings and infrastructure as well as population loss - a vital asset for rebuilding.

Flood waters can create serious health risks by contaminating water and food supplies.

Many people have been killed by tsunamis often resulting in psychological trauma for survivors:

Location	No. of Deaths
Indonesia, 1883	~ 30,000
Puerto Rico/Dom. Republic, 1918	~ 30
Chile, Hawaii, Japan, 1960	~ 2,000
Papua-New Guinea, 1998	~ 2,000
Indian Ocean, 2004	~ 230,000
Samoan Tsunami, 2009	~ 200

Source: Compiled by the Seismic Research Centre, UWI.