

US LAUNCHES ATLANTIC TSUNAMI WARNING SYSTEM

In response to concerns over the generation of catastrophic tsunami in the Atlantic Basin, the Bush Administration has unveiled plans to spend US\$37.5 million on upgrading the Pacific Tsunami Warning System and building a new system in the Atlantic Basin. The US National Oceanic & Atmospheric Administration (NOAA) has announced its intention to establish an Atlantic tsunami early warning system as early as the year after next. The agency plans to have seven DART (Deep-ocean Assessment and Reporting of Tsunamis) buoys in place by mid-2007 - five in the Atlantic and a further two in the Caribbean. The buoys are linked to sea-bed pressure sensors that are capable of detecting and measuring tsunami with amplitudes as small as 1cm. Once a possible tsunami is detected, an acoustic signal is sent from the sensor to the buoy and onwards via radio to the GOES satellite. From here the data are sent via satellite ground stations to tsunami warning centres, which NOAA currently operates in Hawaii and Alaska.

Although the Atlantic has hosted just 2 percent of all recorded tsunami, a real risk still exists. Tsunami generated by the 1755 Lisbon earthquake killed many thousands in Portugal and sent waves as high as 7 m across to the Caribbean, where they caused damage and reported loss of life. Earthquake-generated tsunami in the English Channel are reported to have killed hundreds in Dover in 1580, while an earthquake and submarine landslide off Newfoundland took 30 lives in 1929. The Caribbean is particularly tsunami-prone, and large earthquakes here took lives in 1842, 1876, 1918 and 1946. On scales of many thousands of years, collapsing volcanic islands and gigantic sediment slides off the continental margins are also capable of generating 'megatsunami', with wave heights at the coast of many tens of metres having the potential to affect the entire North Atlantic Basin.

[Image: How a DART buoy works. Courtesy NOAA. BPR=Bottom Pressure Recorder]

