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Tsunami forecast for new generation tsunami warning system

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The need for fast and accurate forecast capability for the global tsunami warning system was clearly evident after the 26 December 2004 Indian Ocean tsunami. Following the catastrophic 2004 Indian Ocean tsunami, National Oceanic and Atmospheric Administration (NOAA) rapidly implemented an improved real-time tsunami detection strategy and forecast capability, based on NOAA/Pacific Marine Environmental Laboratory (PMEL) research. Along with DART (Deep Ocean Assessment and Reporting of Tsunamis) buoy array, PMEL developed and is working to install a new forecast system at NOAA's National Weather Service tsunami warning centers which includes site-specific models designed to forecast tsunamis at the coastal community level.

The IOC/TWS in the Indian Ocean envisioned a modeling tool to transfer expertise among the Indian Ocean nations. NOAA's Center for Tsunami Research (NCTR) developed the Community Model Interface for Tsunamis (ComMIT) to meet this goal. ComMIT distribution sessions in the Indian Ocean and other regions have trained more than two hundred scientists in basic tsunami science and modeling and resulted first generation inundation maps for many tsunami-prone shorelines. Actions taken during the Tohoku tsunami illustrated how the ComMIT technology, or some version of it, could be adapted in to a global tsunami warning operations to produce distributed tsunami forecast system.