

## Warning Systems Cost Peanuts

“It wouldn’t take much” to set up a tsunami warning center in the Indian Ocean basin, like the one for the Pacific, said Dr. Gerard Fryer, a geophysicist at the University of Hawaii, and Tsunami Advisor to the State of Hawaii. Already, the Hawaii center has become a global center, he told *EIR* Dec. 28.

“To set up a minimal system would not be a big expense,” Fryer said. “Maybe \$100,000 to set the system up, and \$250,000 yearly to operate it. . . . All the research is done. The seismometers exist, also the tidal gauges. . . . Setting up such a system would be one-tenth the cost of building one hotel.”

Such a system, Dr. Fryer said, wouldn’t be as advanced as the Pacific one, which uses special buoys, which register small shifts in ocean pressure and transmit data via satellite

to the monitoring system. But adding buoys is also relatively inexpensive. “The buoys used in the Pacific System cost \$150,000 each, but our government could build and sell a few,” Dr. Fryer said. “What’s in place now in almost every port is a tidal gauge. That’s not the best, but it would be pretty darn good.”

Existing tsunami monitoring systems are coupled with standard civil defense measures: local warning systems, guidelines for the population, emergency operations centers.

The Deep-ocean Assessment and Reporting of Tsunamis (DART) stations that exist in the Pacific Ocean basin have a bottom pressure recorder anchored to the seafloor, and a moored surface buoy with an antenna that links to a GOES satellite, which relays real-time data to ground stations. The seafloor component can detect tsunamis as small as 1 cm. The system operates in a standard mode and an event mode. In the latter mode, when an event is identified, data are taken every 15 seconds.

—*Marjorie Mazel Hecht*