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Geosystem of systems gets boost

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After last year's hurricanes and the Indian Ocean tsunami, National Oceanic and Atmospheric Administration deputy chief Jack Kelly says he has hope that governments around the globe will cooperate to set up a Global Earth Observing System of Systems with international end-to-end alerts and visualization—not merely data collection.

The tsunami has "moved Earth observations out of the science realm and into the policy realm" where funding chances are better, he said today at the 7th annual federal user conference in Washington, sponsored by ESRI of Redlands, Calif.

Kelly said 15 federal agencies operate observing systems, but he was shocked to learn NOAA itself collects 286 unique environmental parameters. The agency's first job is to "make these congruent with where the other agencies and the rest of the world are going."

Under a federal interagency working group led by NOAA, NASA and the White House Office of Science and Technology Policy, the United States' portion of GEOSS is about to get under way. NOAA last month announced it will spend \$37.5 million over the next two years deploying 32 advanced sensor buoys in the Pacific and Indian oceans for early warning of potentially catastrophic ocean events. The United Nations also plans to spend about 10 percent of its tsunami aid donations on warning systems, Kelly said.

"We need metadata and quality indicators" worldwide as other nations join in with disparate formats and measurements, he said. "There will be a hundredfold increase in data storage, and we need new browser and visualization systems." Also, the U.S. portion of GEOSS must map into the Federal Enterprise Architecture.

A Feb. 16 international meeting in Brussels could bring other nations into GEOSS, Kelly said. His U.N. experience has shown there are "sometimes bitter, bitter arguments" over whether one nation will share information with another. "We have to move out of our comfort zones," he said.

Lee Schwartz, deputy geographer for the State Department, described how State, NOAA, NASA, the Agency for International Development and other agencies threw together an interagency working group to build databases of the dead and missing in Southeast Asia and to document infrastructure damage.

The group sent more than 25,000 e-mails and pages to affected nations, set up a public File Transfer Protocol site and created many other types of geographic information packages, buying large amounts of commercial satellite data.

The group gained valuable experience in standardizing inconsistent data and disseminating the results through diplomatic channels around the world, Schwartz said. It used Documentum eRoom collaboration software from EMC Corp. of Pleasanton, Calif., in the United States and Groove Workspace from Groove Networks Inc. in Beverly, Mass., for collaboration with Pacific Command units that aided relief efforts.

Among the lessons learned, he said, is that "geospatial efforts should be driven by requirements in the field. The jury's still out as to whether geographic information systems saved any lives. It's more for rehabilitation than relief, but we do know better how to move more rapidly the next time" there is an international disaster.

Several dozen people in the 1,500-person audience stood for applause for their work on the ad hoc interagency group, part of whose output appears at hiu.state.gov and geodata.gov.