

Lockheed Martin DESWAT Hydrological Forecast System Demonstrated And Ready For Operation

Minister of Environment and Water Management Barbu: 'DESWAT will be a positive step towards enhancing our infrastructure and flood response activities ...'

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The hydrological forecast system that Lockheed Martin is providing in partnership with the Romanian Ministry of Environment and Water Management has successfully completed its first Operational Readiness Demonstration (ORD) and is helping the country guard against the effects of severe flooding. The system, called DESWAT, short for "DEStructive WATers," contributes to the modernization program initiated by the Ministry by upgrading the hydrological monitoring and flood forecasting capabilities and infrastructure of Apele Romane, the Romanian Water Authority, and improves the way that flood defense organizations are alerted to critical environmental conditions.

The two-day ORD, which took place in November, was announced today at the opening ceremony for the DESWAT National Hydrologic Forecast Center, which is located in the National Institute of Hydrology and Water Management (INHGA) in Bucharest. To reach this milestone, Lockheed Martin and its suppliers installed approximately 60 hydrological sensor stations in the Arges-Vedea basin, one of 11 river basins in Romania.

Nationwide, there will be 625 stations that automatically transmit sensor data, such as precipitation, air temperature, water level, water velocity, as well as several water quality monitoring stations, to INHGA's National Hydrological Services (NHSv) office. Data obtained from these sensor stations, along with data from the legacy Apele Romane stations, will be analyzed by NHSv specialists using the DESWAT hydrological model and forecasting system. This system provides NHSv decision makers with state-of-the art technology for analyzing a massive volume of data, and then quickly identifying and interpreting, by running large-scale forecast models, hydrological phenomena which could develop into a flood. They then generate and distribute hydrological warnings and alerts to the public and authorities charged with flood defense in Romania.

"Establishing an end-to-end river and flood forecast system provides precious time to save lives and reduces damage by as much as 30 percent," observed Curt Barrett, U.S. National Weather Service DESWAT project director.

"The first stage of DESWAT is online and providing a continual feed of information," added Tom Patello, Lockheed Martin's DESWAT program manager. "We intend to move with all possible speed to complete this essential project that will protect lives and property in Romania."

"Romania suffered euro 1.7 billion in flood damage in 2005 and early 2006. DESWAT will be a positive step toward enhancing our infrastructure and flood response activities and improving Romania's lead time on alerting community emergency response organizations so that they can take appropriate defensive actions," said Sulfina Barbu, Minister of Environment and Water Management. "The ministry is committed to modernize Romania's emergency management infrastructure and to revitalize Romania's capabilities to monitor and forecast environmental, meteorological and hydrological phenomena that affect our citizens."

Deputy Minister for Water Management Lucia Ana Varga said, "Romania is on the forefront of deploying a system that will give us the technical capability to forecast severe hydrological events and increase our country's reaction time. We also intend to share these data with our neighboring countries - Bulgaria, Hungary, Serbia, Ukraine and Republic of Moldova."

"DESWAT will help us improve our ability to react to flooding events," said Dr. Madalin Jorj Mihailovici, General Director of Apele Romane, "and complements our other activities related to water resource management. We will be able to build upon DESWAT as we continue to modernize our national infrastructure and facilitate international and regional cooperation through the exchange of hydrological information."

About a third of the content of the DESWAT system is provided by Romanian companies that are key members of the project team. These include Interactive Technological Services, which provides the communications network; Aquaproject S.A., which provides the site infrastructure design; and Mobius Solutions, which provides the data flow and database management system. Other major suppliers include HACH/OTT, which provides the sensor stations; and Baron AMS and the U.S. National Weather Service, which are implementing the hydrological forecast and modeling system. Lockheed Martin's Syracuse, NY, facility is the systems integrator for DESWAT.

DESWAT is being integrated with Romania's National Integrated Meteorological System (SIMIN), also developed by Lockheed Martin and commissioned in 2003.

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