



“Links around the Globe Provide Environmental Data”

Helen M. Wood, GEOSS Integration Manager and NOAA Senior Advisor

Imagine a world where outbreaks of diseases such as malaria and meningitis can be predicted in advance, stopping a potential epidemic. This would allow schools and villages in the developing world where people need to be vaccinated to be precisely identified, and inoculations would be given to stem the spread of disease. Likewise, decision-makers require precise information about water quality and availability to alert the public if the quality is poor or if the quantity is exceptionally high (flood) or exceptionally low (drought.)

These scenarios promise to rapidly become a reality thanks to the efforts of 67 governments and 43 international organizations that now comprise the Group on Earth Observations (GEO). GEO, with its Secretariat located in Geneva, Switzerland, provides a framework for cooperation for the Global Earth Observations Systems of Systems (GEOSS). This “system of systems” builds upon existing national, regional, and international systems of earth observations, integrating them, filling observational gaps, and ultimately supporting a broad range of societal benefits. Those benefits include

reducing the loss of life and property from floods, earthquakes, wild fires, hurricanes, and other natural disasters, water resource and energy management, and in improved understanding of environmental factors significant to public health.

Due to a new GEOSS capability, called GEONETCast, essential environmental information can be at the fingertips of decision makers and others around the world who might not have ready access to these data. Introduced at the GEO III plenary meeting in Bonn, Germany, last November, GEONETCast will become an interconnected global network of regional broadcast satellite-based dissemination systems that link GEOSS products and service providers with users around the globe. Each regional system will focus on supporting the needs of a specific sector of the world. For instance, the GEONETCast presentation in Bonn demonstrated how South Africa could receive precise data about vegetation activity across the country. This information is critical to food security and drought, wildland fire, and flood mitigation, and can aid in monitoring both air and water quality.

NOAA is developing, managing and operating and initial GEONETCast capability, known as “GEONETCast Americas,” within the Americas and adjacent ocean areas to improve timely access to Earth observation data, products, and services across the GEOSS-identified nine societal benefit areas – agriculture, weather, water, climate, energy, health, disaster, ecosystems, and biodiversity. The European Organizations for the Exploitation of Meteorological Satellites (EUMETSAT) has been using this capability to transmit meteorological information to users in Africa and beyond. GEONETcast Americas includes data and products from agencies involved in the U.S.

GEO such as the Environment Protection Agency, NASA, Department of Energy, NOAA, and others.

By including underserved GEOSS societal benefit areas like ecology, biodiversity and human health, permitting user needs to drive the data, products and services provided, and using the most appropriate, cost-effective dissemination technologies, GEONETCast is a highly visible project that demonstrates the value of GEOSS and may service as a launching pad for other GEO initiatives.

--#--