



Taking the Pulse of the Planet:

EPA's Remote Sensing Information Gateway

How do forest fires impact the health of residents living thousands of miles away? How do we better track the effects of heavy urban rain runoff into nearby lakes and estuaries? These and many other questions are the focus of a 10-year international plan to provide unprecedented access to and use of global Earth observation information to track, predict and address threats to the environment.

The U.S. Environmental Protection Agency has joined forces with NASA, National Oceanic and Atmospheric Administration (NOAA), other agencies and nations to integrate satellite and ground-based monitoring and modeling systems to evaluate environmental conditions and predict outcomes of events such as forest fires, population growth and other developments that are natural and man-made. The initiative is called the Global Earth Observation System of Systems (GEOSS) and is a collaborative, international effort to share and integrate Earth observation data. The tools that are developed will aid in managing air quality and watersheds, improve drinking water, protect the food supply and ensure a safer transportation system.

As part of this global endeavor, EPA's Office of Research and Development has established a Remote Sensing Information Gateway in Research Triangle Park, North Carolina, to develop the information needed to address complex environmental problems that often cross over geographic and political boundaries and impact regions, states and countries. As part of a near-term focus of the Gateway, EPA, NASA, NOAA, and academia will integrate a complex variety of air quality information to better understand and address the impact of air quality on the environment and human health.

With state-of-the-art information technology at EPA's National Computer Center (NCC), EPA will have the capability to process complex data into useful information and knowledge on environmental conditions for use by local and state governments to make decisions to protect the environment and public health. The NCC provides the Agency's environmental modeling and visualization services that include computing resources and staff expertise in the areas of high performance scientific computing, visualization, and geographical information systems (GIS). The NCC is a leader in environmental computational modeling, data storage and connectivity to other government agencies, universities, and research labs around the country.

The Remote Sensing Information Gateway is one of the efforts undertaken by EPA to support GEOSS. Other GEOSS activities involving EPA include the better characterization of urban air pollution through demonstrations of optical remote sensing technologies, incorporation of real-time monitoring data into models that forecast environmental threats such as unhealthy recreational waters and tracking major ecosystem stressors in sensitive ecological systems.

For more information about GEOSS, visit the Web site at: <http://www.epa.gov/geoss/>.

Technical Contact: Val Garcia: 919-541-2649 or garcia.val@epa.gov

Press Officer: Ann Brown, 919-541-7818 or brown.ann@epa.gov

April 2005