

The International Program extends our knowledge and understanding of earth processes by undertaking comparative studies of climate change, assessments of hazards, analyses of land cover change, and monitoring dynamic earth processes. The International Program specializes in projects that use remotely sensed data or Geographic Information Systems to address issues of sustainable development, resource management, land cover change, hydro-climatic monitoring, and early warning systems in many countries around the world.

International Program website: <http://edcintl.cr.usgs.gov/>



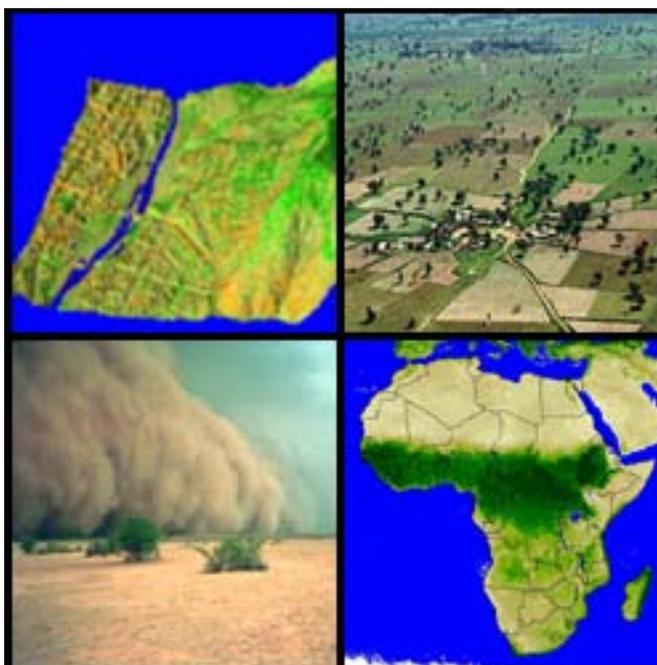
- Projects are developed based on specific requests from other U.S. agencies, non-governmental organizations, international donors and host countries.
- Training, capacity building, Geographical Information Systems (GIS) and remote sensing needs assessments, and personnel development are integral components of projects that emphasize both scientific and development activities.
- The development of spatial data sets and innovative methods of spatial analysis are integral to our work. The development of geospatial data management and dissemination capabilities has naturally evolved as a feature of our program as well.
- In addition to long-term projects, our objectives are also implemented through training courses and seminars on geospatial data clearinghouses, metadata standards and implementation, GIS, remote sensing and technology briefings for decision makers.

## Contact the EDC International Program

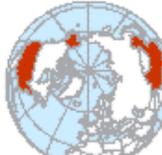
**James Verdin, Ph.D.**  
International Program  
Manager  
[verdin@usgs.gov](mailto:verdin@usgs.gov)  
phone (605) 594-6114 (USA)

**Larry Tieszen, Ph.D.**  
Deputy Manager,  
International Program  
[tieszen@usgs.gov](mailto:tieszen@usgs.gov)  
phone (605) 594-6114 (USA)

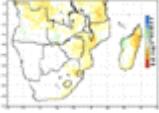
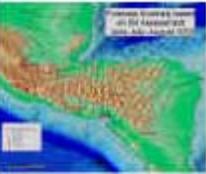
International Program website:  
<http://edcintl.cr.usgs.gov/>



# Current Projects

	<p><b>Africa Geospatial Data (EMIS)</b>          This project consists of a collaborative effort with regional and national entities in Africa to jointly determine their spatial data inventories, needs, and capacities. The objective aims to improve networks for information exchange, establish clearinghouses of environmental information, and strengthen the capacity to collect and analyze data and information about the region's natural resources.</p>		<p><b>Carbon Sequestration</b>          The International Program assists the understanding of the importance of carbon sequestration in soil and biological sinks including feasibility studies among smallholders in Senegal, the integration of remote sensing with carbon flux measurements in Central Asia grasslands and during land reclamation, and sequestration in agroforestry applications in Cameroon.</p>
	<p><b>FEWS NET</b>          FEWS NET food security analysis is supported through timely provision of satellite data and derived products in order to identify potential or actual food security problems related to drought and/or flood hazard in sub-Saharan Africa, Afghanistan, and Central America.</p>		<p><b>Invasive Species Monitoring and Modeling</b>          The objectives of this effort, a partnership between USGS colleagues and the Chinese State Bureau of Surveying and Mapping, involve estimation of the native and invaded distribution of selected invasive plants in the US and China and prediction, of their future distribution using ecological modeling, remote sensing, and GIS.</p>
	<p><b>Land Cover Performance</b>          Scientists are investigating the use of various types of remotely sensed data to detect and study climate impact and human-caused trends in land productivity over West Africa.</p>		<p><b>Madagascar Conservation</b>          The objectives of the Madagascar Conservation project are to support natural resource management, biodiversity conservation, and geospatial data dissemination via GIS and remote sensing technology.</p>
	<p><b>Mesoamerican and Caribbean Geospatial Alliance (MACGA)</b>          MACGA strives, as an "alliance" of organizations with shared interests, to facilitate the development of spatial data with appropriate standards and descriptions, assist efficient data management, and support access, dissemination, and applications in Mesoamerica and the Caribbean.</p>		<p><b>Rift Valley Fever</b>          This research establishes a local Rift Valley Fever prediction capability based on ecological, climate, and remote sensing variables. The project investigates the relationship between climate, landscape, and Rift Valley Fever outbreaks.</p>
	<p><b>Sahel Land Use</b>          Scientists are collaborating with West African scientists and regional institutions to monitor long-term land use and land cover trends over the West African Sahel, including socio-economic driving forces.</p>		<p><b>Sustainable Tree Crops</b>          This project builds capacity of cocoa, coffee, and cashew growers to collect data to develop Internet-based information systems that will document parcel history, production certification, natural resource management practices, and environmental protection in Africa and Latin America.</p>
	<p><b>UNEP/GRID</b>          UNEP/GRID Sioux Falls analyzes data and information about people and the environment using satellite remote sensing and computer technologies. This information is used to respond to questions about human population, fresh water, biodiversity, food security, climate change, wild fires, and other global population-environment issues.</p>		

# Special Features

	<p><b>Outlook for crop growing conditions in Southern Africa for 2003/2004</b>          Much of Southern Africa is coming out of a series of poor seasons in which production was generally below normal.</p>		<p><b>Carbon Sequestration, Land Cover Monitoring, and Desertification in the Sahel: "The Dakar Workshop"</b>          This feature summarizes an international workshop and project development in Senegal. In addition to the data and presentations, which document major changes in carbon stocks and mitigation opportunities, a special issue will be published by the <i>Journal of Arid Environments</i>.</p>
	<p><b>International Projects apply Biogeochemical Modeling and Carbon Flux Tower data for Spatial Extrapolations in the U.S.</b>          The EROS Data Center is applying its expertise in satellite remote sensing, biogeochemical modeling, analysis of large spatial data sets, and geographic information systems applications to develop a quantitative understanding of the terrestrial carbon cycle.</p>		<p><b>Secretary of Interior, Gale Norton's speech on the importance of sharing spatial data.</b>          EDC program illustrates the value of shared information on a global scale, and puts into practice the principles offered in the Earth Observation Summit declaration. The Sahel (West Africa) partnership is illustrative of the necessity for sharing data for effective decision making, from national to regional to local scales.</p>
	<p><b>June-July-August 2003 Rainfall Forecast Interpretation for Central America</b>          This report presents an interpretation by USGS/FEWS NET of the seasonal precipitation forecast for the 'primera' rains in El Salvador, Guatemala, Honduras and Nicaragua.</p>		<p><b>Regional Ecosystems Map</b>          The World Bank, in collaboration with CCAD, CATIE, and many institutions and organizations in all seven Central American countries spearheaded an effort to produce a new map of the ecosystems of Central America at a scale of 1:250:000.</p>

# Data

[ADDs](http://edcintl.cr.usgs.gov/adds/): The Africa Data Dissemination Service server provides public access to satellite data, maps and other African data sets archived by the FEWS NET project. <http://edcintl.cr.usgs.gov/adds/>

[CEPNET](http://www.cep.unep.org): The Caribbean Environment Programme, through the CEPNET Programme for Strengthening the Capabilities for Managing Coastal and Marine Environmental Resources in the Wider Caribbean Region, provides a Clearinghouse for Marine and Coastal Environmental Data and Information for the region. <http://www.cep.unep.org>

[DAAC](http://edcdaac.usgs.gov): Distributed Active Archive Center, was established as part of NASA's Earth Observing System (EOS) Data and Information System (EOSDIS) initiative to process, archive, and distribute land-related data collected by EOS sensors, thereby promoting the inter-disciplinary study and understanding of the integrated Earth system. The EDC DAAC role subsequently was expanded to include processing and distribution responsibilities related to Landsat 7 data. We archive and distribute ASTER and MODIS data from Terra, the first EOS satellite. We also produce ASTER higher-level products. <http://edcdaac.usgs.gov>

[Earth Explorer](http://earthexplorer.usgs.gov): Query and order satellite images, aerial photographs, and cartographic products through the U.S. Geological Survey. <http://earthexplorer.usgs.gov>

[Earthshots: Satellite Images of Environmental Change](http://edcwww.cr.usgs.gov/earthshots/slow/tableofcontents): Earthshots is a collection of annotated Landsat images designed to show environmental changes and to introduce remote sensing of a changing world. <http://edcwww.cr.usgs.gov/earthshots/slow/tableofcontents>

[Global 30 Arc Second Elevation Data Set](http://edcwww.cr.usgs.gov/landdaac/gtopo30/gtopo30.html): A global digital elevation model (DEM) with a horizontal grid spacing of 30 arc seconds (approximately 1 kilometer). <http://edcwww.cr.usgs.gov/landdaac/gtopo30/gtopo30.html>

[Global Land 1-KM AVHRR Project](http://edcwww.cr.usgs.gov/landdaac/1KM/1kmhomepage.html): The data set is composed of 5-channel, 10-bit, raw AVHRR data, at 1.1-km resolution (at nadir) for every daily afternoon pass over all land and coastal zones using data from NOAA's polar-orbiting TIROS. <http://edcwww.cr.usgs.gov/landdaac/1KM/1kmhomepage.html>

[Global Land Cover Characterization](http://edcwww.cr.usgs.gov/landdaac/glcc/glcc.html): A recently completed database of global land cover is now available on line. <http://edcwww.cr.usgs.gov/landdaac/glcc/glcc.html>

[Hydro 1K Elevation Derivative Database](http://edcwww.cr.usgs.gov/landdaac/gtopo30/hydro/index.html): A geographic database aimed at providing comprehensive and consistent global coverage of topographically derived data sets, including streams, drainage basins and ancillary layers derived from digital elevation models. <http://edcwww.cr.usgs.gov/landdaac/gtopo30/hydro/index.html>

[UNEP/GRID](#): The United Nations Environment Programme/Global Resource Information Database (UNEP/GRID) WWW site provides access to UNEP, USGS and NASA data sets.

---