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ANNUAL REPORT - 2001

Division of Early Warning and Assessment - North America

The goal is to provide a scientific basis for environmental decision-making. The center has an active program dealing with the integration and analysis of data sets from multiple sources to derive policy-relevant information about such pressing issues as the status of the world's freshwater, the loss of forests and biodiversity, changes in land cover and population-environment interactions. An advisory committee with membership from Canada, Mexico, the United States, UNEP, NGOs and eminent scientists provides strategic oversight and guidance. Following accomplishments are highlighted for the year 2001.

Global Environment Outlook (GEO)

- North American GEO 3 report including the State of the Environment and Scenarios for North America
- Thirty years since Stockholm: depicting changes in environmentally sensitive areas using satellite data for GEO3

Diminished Earth: Atlas of Global Change

Diminished Earth: Atlas of Global Change is a coffee table book to be released during the World Summit on Sustainable Development (WWSN) in September 2002, published by the Oxford University Press, depicting inter-linkages between humans and their environment. The focus is on the past thirty years of change, since the Stockholm Conference on Human Environment in 1972, documented by satellite imagery that have an impact on human development and can potentially influence our future. It will also provide a brief and to-the-point early warning and assessment of changes for selected 100 sites around the world.

Early Warning and Vulnerability Assessment

- Development of a conceptual framework for human vulnerability to environmental changes, a review of vulnerability assessment concepts, methodologies, and case studies for GEO3 report
- Vulnerability maps
- Assessing human vulnerability in the global coastal zones and developing a Coastal Vulnerability Index^o (under review)
- Vulnerability Atlas of Mexico
- Flood forecasting techniques for Bangladesh, India and China

Environmental Indicators and Indices

- Review of environmental data, indicators, indices and reports
- Development of a composite index for environment i.e. Human Environment Index (HEI), Statistical analysis of HEI

Dissemination of Environmental information

Contribution towards Environmental Network i.e. UNEP.net

- Early Warning and Vulnerability portal
- Land cover portal
- North American portal
- Metadata tools and training

- Metadata training support at the request of the government of China
- RONA website: <http://www.rona.unep.org>

Cooperation with Global Environment Facility (GEF)

- Latin American Biodiversity Conservation Project
- GEF Project Tracking and Mapping System (PTMS)
- Dryland Degradation Assessment (LADA)
- Solar and Wind Energy Resources Assessment (SWERA)

Publications and Databases

- **An Assessment of the Status of the World's Remaining Closed Forests** released by UNEP's Executive Director
- The World's Forests 2000 (Map)
- A paper on World's Remaining Closed Forests in *Ambio*
- Key environmental issues in Africa in cooperation with Senegal (Centre de Suivi Ecologique) (under preparation)
- Transboundary Movement of Airborne Pollutants^o
- **The Mesopotamian Marshlands: Demise of an Ecosystem** in cooperation with UNEP-ROWA and GRID-Geneva
- Threats to World's Freshwater Resources
- Biodiversity Assessment and Inventory Methodology^o (under review)
- Transboundary River Basin Treaties database
- Methodology for predictive forecasting of ENSO events in Southern Africa
- Global Energy and Water Exchange (GEWEX) website: <http://www.na.unep.net/gewex>
- Support to Mekong Basin Assessment by provision of satellite data to GRID — Bangkok
- Provision of satellite data for Mt. Kenya study
- Provision of satellite data for UNEP-WCMC/Chile Forest Analysis
- Papers on Coastal Vulnerability: **Coastal Geo Tools 2001**, North Carolina and **Coastal GIS 2001**, International Conference, Canada

Partners and Cooperators

National Aeronautics and Space Administration, United States Geological Survey of the Department of the Interior, United States Environmental Protection Agency, United States Forest Service of the Department of Agriculture, National Oceanic and Atmospheric Administration, Department of Energy — National Renewable Energy Laboratory, Commission on Environmental Cooperation, International Institute for Sustainable Development, World Resources Institute, Stockholm Environment Institute — Boston, University of Maryland, Michigan State University, Oregon State University, Pennsylvania State University, Clark University, Toronto University, University of Western Ontario, Center for International Earth Science Information, Pacific Institute for Studies in Development, Environment, and Security, Centro GEO of Mexico.

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