



Understanding Global Ecosystems to Support Informed Decision-Making: A 20-Year Research Vision



NOAA is pleased to announce the publication of its first corporate 20-year research vision. The research vision is a forward looking document that anticipates society's evolving needs for environmental information and services over the coming decades. In the next 20 years, the world will increasingly depend on NOAA for detailed and reliable information to make optimal decisions about a range of key areas affecting the ecosystems in which we live. NOAA will provide the public with easy-to-use, integrated products and information services that will vastly improve the way Americans lead their daily lives and the nation manages its natural resources. Fueled by dramatic improvements in our understanding of global ecosystems, NOAA anticipates significant advances in:

- Severe storm and event warnings
- Air quality forecasting
- Seasonal to decadal climate predictions
- Ecosystem approaches to the management of coastal and ocean resources
- Ocean exploration
- Weather, location, topographical, and other environmental information availability in real time

Providing the products and services described in the 20-Year Research Vision depends on four key technology sectors that will allow NOAA to describe, understand, and predict the environment. These technology sectors will also see major advances over the next 20 years:

- *Sensors* – Increasingly developed to be rugged and low cost, sensors will be capable of gathering large amounts of information from the environment
- *Platforms* - Mobile, unmanned aerial and autonomous undersea vehicles will enable observations to be targeted at regions of particular interest
- *Information technology* - Computer processing speed will allow better data management and analysis tools
- *Telecommunications* - Global networks will link diversified modeling centers seamlessly and effortlessly with service providers and users

The above technologies will be exploited in developing an integrated **Global Earth Observing System of Systems (GEOSS)** and holistic, high resolution **Earth system models**.

NOAA is dedicated to delivering the information and services that the nation will need now and in the future to make informed decisions about our environment. The 20-year Research Vision reflects NOAA's commitment to meeting our nation's future environmental and ecological needs.

You may download a copy of the NOAA 20-Year Research Vision at <http://www.nrc.noaa.gov/reports.htm>. Comments and questions can be directed to Dr. Terry Schaefer at Terry.Schaefer@noaa.gov.