

Downloads and reference material

National Archive:

<http://edc.usgs.gov/programs/NSLRSDA.html>

Data Access via Earth Explorer:

<http://earthexplorer.usgs.gov>

EROS Data Center:

<http://edc.usgs.gov>

USGS:

<http://www.usgs.gov>

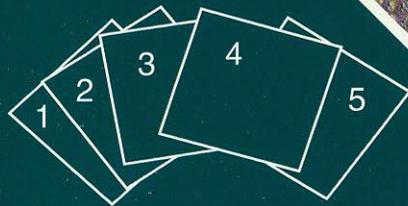
National Satellite Land Remote Sensing Data Archive

Long-term preservation and access for:

- natural resource management
- natural hazards mitigation
- environmental studies



Preserving a Record



1. Star Dunes, Libya
2. Bogda Shan Mtns., China
3. Sahara Desert, Saudi Arabia
4. San Francisco, CA, United States
5. Great Sandy Desert, Australia

U.S. Department of the Interior
U.S. Geological Survey
EROS Data Center

of the Earth's Surface...

National Satellite Land Remote Sensing Data Archive

The Earth's surface is constantly changing. Continents shift. Seacoasts erode. Floods inundate one region while drought scorches another. Cities grow and developed lands encroach on wilderness areas.

It's difficult to observe — let alone interpret — such changes from ground level. A much broader view is needed, together with a consistent record of global change over time.

Satellites that capture images of large areas of the Earth's surface at regular intervals can provide this view. And by comparing past and present satellite images, it's possible to see global changes in an unparalleled way.

In 1992, Congress directed the Department of the Interior to establish a permanent government archive containing satellite remote sensing data of the Earth's land surface, and to make these data readily available for study. This invaluable collection of information — formally known as the National Satellite Land Remote Sensing Data Archive — resides in the U.S. Geological Survey's (USGS) EROS Data Center near Sioux Falls, South Dakota.

The Archive is a comprehensive, permanent, and impartial record of the planet's changing land surface.

Current Holdings

Over the past three decades, the Nation has invested billions of dollars to acquire and distribute data worldwide from the Landsat series of satellites. More than 200,000 gigabytes of data from Landsats 1 through 5 are archived at the EROS Data Center. This collection forms the core of the Archive's holdings.

The Archive also contains some 24,000 gigabytes of data from the Advanced Very High Resolution Radiometer (AVHRR) sensor carried aboard the National Oceanic and Atmospheric Administration's polar-orbiting weather satellites, and more than 880,000 declassified Corona satellite photographs.

Future Expansion

The number, and diversity, of earth-observing satellites continues to grow. As short-term archives are filled to capacity with data from these systems, older data will be transferred to the long-term Archive.

By 2003, the Archive holdings will expand to include data from the following sources:

- Landsat 7's Enhanced Thematic Mapper+ Sensor (launched April 15, 1999)
- NASA's MODIS instrument, part of the Mission to Planet Earth-Earth Orbiting System (launched December 18, 1999)
- ASTER, a cooperative effort between NASA and Japan's Ministry of International Trade and Industry (launched December 18, 1999)
- The Shuttle Radar Topography Mission, a joint venture of NASA, the National Imagery and Mapping Agency, and the USGS (Shuttle mission, February 11 - 22, 2000)

By the year 2005, the Archive's holdings are estimated to grow to 2,400,000 gigabytes of data, roughly ten times their current size.

Accessing the Data

A primary objective of the Archive is to distribute data on demand to a worldwide community of scientific users.

The USGS EROS Data Center is a world leader in archiving remotely sensed data, and in getting those data to users quickly, affordably, and in the most accessible form.

For most users, the easiest way to access the Archive's vast data holdings is via the USGS's Earth Explorer web interface. Earth Explorer provides background information on all of the satellite holdings in the Archive, and allows users to submit queries, examine preview images, and order data with a credit card.

To access Earth Explorer, visit the website <http://earthexplorer.usgs.gov>

Questions can be addressed to the EROS Data Center's toll-free User Services number: 1-800-252-4547.

Who Uses the Data — And How?

The Archive's holdings are used for environmental research, land management, natural hazard analysis, and natural resource management and development, with applications that extend well beyond America's borders. The worldwide community of Archive users includes personnel in Federal, State, and local governments, researchers at academic institutions, and private enterprise.

Two specific examples reveal how data from the Archive are used for diverse applications. With techniques developed largely through cooperative Federal research activities, it is possible to use AVHRR data to identify classes of vegetation and moisture levels at regular intervals. Using this information, a consortium of State and Federal agencies compiles estimates of fire danger in the western United States so that fire crews can be deployed in high-risk areas.

Elements of the Archive also form the nucleus of the pioneering and cost-effective Multi-Resolution Land Characterization project. Pooling their resources to buy and share various kinds of data, a number of Federal agencies are able to analyze land surface characteristics for purposes such as water quality assessment, wildlife habitat condition, and expansion of American cities.

The data in the National Satellite Land Remote Sensing Data Archive form a baseline chronology of environmental change on Earth, both natural and human-induced. The Archive is a truly invaluable tool for scientific assessment and prediction.