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National Satellite Land Remote Sensing Data Archive

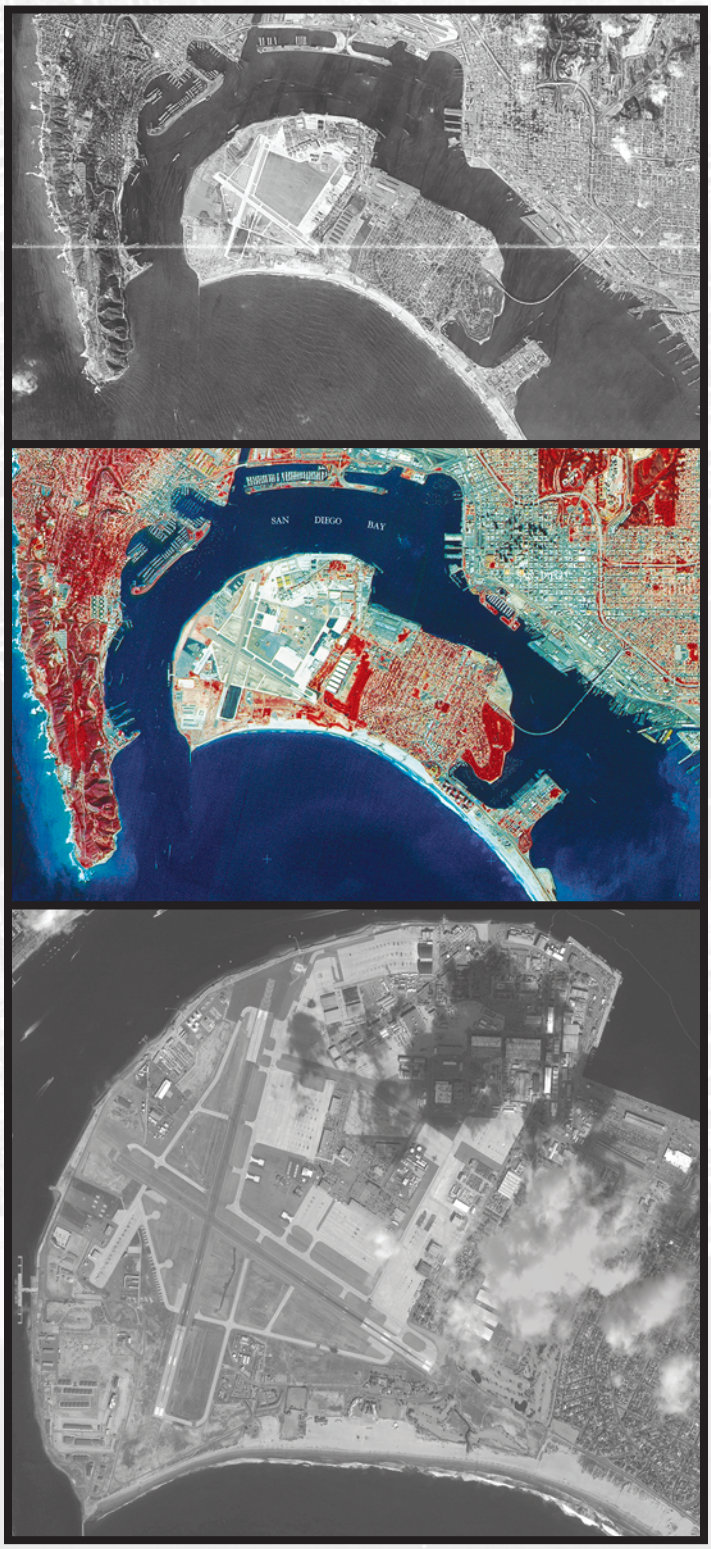
Background

The National Satellite Land Remote Sensing Data Archive (NSLRSDA) is managed on behalf of the Secretary of the Interior by the U.S. Geological Survey's (USGS) Earth Resources Observation and Science (EROS) Center. The Land Remote Sensing Policy Act of 1992 (51 U.S.C. §601) directed the U.S. Department of the Interior to establish a permanent global archive consisting of imagery over land areas obtained from satellites orbiting the Earth. The law also directed the U.S. Department of the Interior, delegated to the USGS, to ensure proper storage and preservation of imagery, and timely access for all parties. Since 2008, these images have been available at no cost to the user.

This one-of-a-kind archive allows unbiased views of the Earth's land surface dating from the 1960s to present. Early imagery can be compared with contemporary imagery to detect changes, rates of those changes, and trends in land use and environmental processes on a global scale. This archive of data can support a wide range of scientific, environmental, and land management purposes, including environmental monitoring, agriculture and natural resource management, and disaster management.

Before and after images provide a multidecadal view of change, and with additional monitoring, science investigations, policy considerations, and human actions are better informed. The synoptic, long-term view provided by NSLRSDA imagery assists decision makers in the United States at local, regional, and global scales.

Many of the collections complement each other. Combining multiple sources affords researchers additional information for their analysis of environmental change, their energy and mineral assessments, and many other interdisciplinary studies.



Subset images over San Diego, California, are, from top to bottom, 1970 Declassification I, 1986 Systeme Pour l'Observation de la Terre (SPOT), and 2007 GeoEye OrbView–3.

U.S. Department of the Interior
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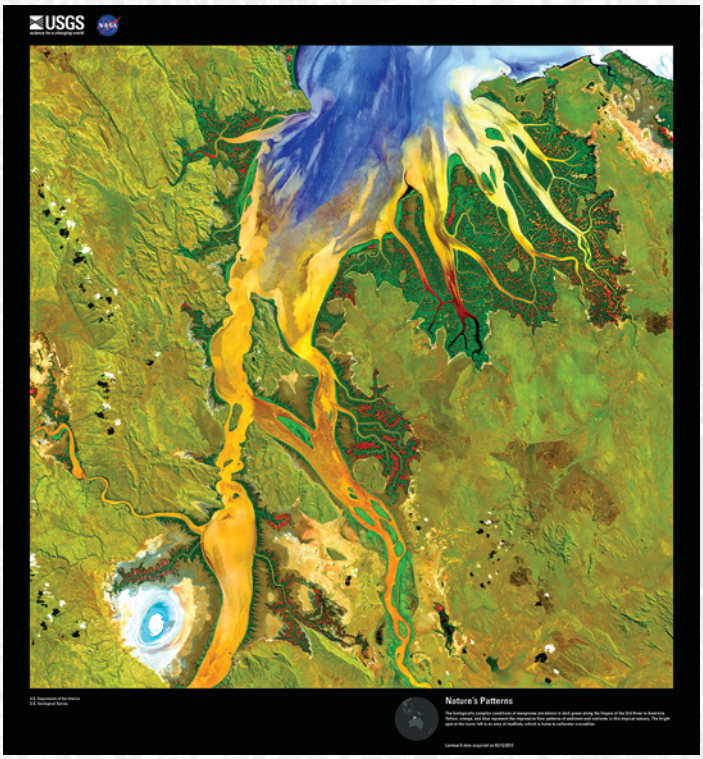
Contents of the NSLRSDA

The NSLRSDA consists of film and electronic records. These observational records date from the 1960s to present. Collections in the NSLRSDA as of 2018 are highlighted in table 1.

The collections that make up the NSLRSDA can never be recreated because they captured land areas of Earth at a specific day and time in history. These collections include different views of the land based on the system used to capture them. The detail, or ground resolution, is measured in meters (table 1); smaller numbers represent more detail. The detail of these collections ranges from less than 1 to 1,000 meters.



The biologically complex conditions of mangroves in this May 12, 2013, Landsat 8 image are shown in dark green along the fingers of the Ord River in Australia. Yellow, orange, and blue represent the impressive flow patterns of sediment and nutrients in this tropical estuary. The bright spot at the lower left is an area of mudflats, which is home to saltwater crocodiles.

Table 1. The NSLRSDA collections from the 1960s to present.

Collection name	Time span	Ground resolution[1]
Declassification I	1960–72	2–153 meters
Declassification II	1963–80	0.6–10 meters
Declassification III	1971–84	0.6–9.1 meters
Gemini	1965–66	50–125 meters
Skylab	1973–74	22–99 meters
Large Format Camera	1984	10–15 meters
Landsat Multispectral Scanner	1972–92	80 meters
Landsat Thematic Mapper	1982–2012	30 meters
Landsat Enhanced Thematic Mapper Plus	1999–present	15 or 30 meters
Landsat Operational Land Imager	2013–present	15 or 30 meters
Landsat Thermal Infrared Sensor	2013–present	100 meters
Landsat Orthoimagery	1972–2003	15–80 meters
Global Land Surveys	1972–2011	15–80 meters
Systeme Pour l'Observation de la Terre	1986–98	10 or 20 meters
Advanced Very High Resolution Radiometer	1980–present	1,000 meters
Shuttle Radar Topography Mission	2002	30 meters
GeoEye OrbView–3	2003–2007	1 or 4 meters

[1]One meter is about 39.4 inches.

How to Get the Data

There are multiple ways to discover more about the NSLRSDA and to download the data. Read more about the NSLRSDA at https://eros.usgs.gov/nslrsda.

A primary NSLRSDA data access system, called Earth Explorer, can be accessed at https://earthexplorer.usgs.gov/. For more information on the NSLRSDA, Landsat, and the USGS EROS Center, please contact:

Customer Services
U.S. Geological Survey
Earth Resources Observation and Science (EROS) Center
47914 252nd Street
Sioux Falls, SD 57198–0001

800–252–4547
605–594–6151
custserv@usgs.gov

Business hours: Monday–Friday, 8 a.m. to 4 p.m., central time

By John L. Faundeen and Ryan Longhenry

The collection background image is Declass 3. The entity identifier is D3C1201–100004A044, and the image was taken over Manhattan Beach in Brooklyn, New York, on June 16, 1971.

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