Guide: Polar Satellite Imagery Resources

URL: https://www.pgc.umn.edu/guides/misc/polar-satellite-imagery-resources/

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PGC maintains a list of external (non-PGC) polar satellite imagery resources.

Overview

While PGC provides a distinct set of polar satellite imagery, namely commercial satellite imagery from Maxar, there are many other imagery resources available.

The list below is non-exhaustive, but is a curated list of repositories and data sets that PGC uses and recommends. PGC does not provide support for using any of these datasets.

If you are a polar imagery provider and would like to add your organization to this list, we would love to add you! Just send us a message with details.

Satellite Imagery

COMMERCIAL SMALLSAT DATA ACQUISITION (CSDA) PROGRAM

The Commercial Smallsat Data Acquisition (CSDA) program by NASA's Earth Science Division (ESD) started in 2017 and provides the scientific community access to a suite of Earth observation data. Participating vendors include: Planet, Spire, Maxar, Teledyne Brown Engineering, the PGC, and Airbus U.S.

Portal URL: https://www.earthdata.nasa.gov/esds/csda

Landsat

The Landsat sensors have been continuously imaging the Earth since the 1970s. The most recent sensor, Landsat 8, was launched in 2013. Landsat is maintained by NASA and the USGS.

Portal URL: https://earthexplorer.usgs.gov/

Landsat Image Mosaic of Antarctica (LIMA)

LIMA is a 15-meter optical imagery mosaic of Antarctica released in 2001 from over 1,000 Landsat 7 ETM+ imagery scenes, corrected and color-balanced. LIMA was produced as an international partnership between NASA, USGS, NSF, and BAS.

Portal URL: https://lima.usgs.gov

PGC ArcGIS Online Item:

https://overlord.pgc.umn.edu/arcgis/rest/services/imagery/ant pgc composite mosaic/MapServer

MODIS and Suomi-NPP

MODIS (Terra and Aqua) and Suomi-NPP products collect coarse-resolution (250-meters) of the Earth daily. There are many scientific products included with these datasets, including corrected reflectance, fires, vegetation, and air quality (among others). Data collection and the Worldview portal (not to be confused with Maxar's WorldView sensors) are maintained by NASA.

Portal URL: https://worldview.earthdata.nasa.gov

Polar View

Polar View is a resource for Arctic and Antarctic sea ice data. Datasets include Synthetic Aperture Radar (SAR) imagery, sea ice concentration, ice charts, and ice edge data. Polar View is maintained by the British Antarctic Survey.

Portal URL: https://www.polarview.aq

RADARSAT Antarctic Mapping Project

Synthetic Aperture Radar (SAR) imagery mosaics of the entire continent of Antarctica, outlying islands immediately adjacent to the coast, and an approximately 100km wide band of sea ice surrounding the coast. Maintained by NASA Distributed Active Archive Center (DAAC) at National Snow and Ice Data Center (NSIDC).

Portal URL: https://nsidc.org/data/radarsat

Sentinel

The Sentinel constellation includes sensors which collect medium-resolution imagery. Sentinel-2 collects optical satellite imagery at 10-meter resolution. Data collection and the Copernicus Open Access Hub (registration required) are maintained by the European Space Agency.

Portal URL: https://scihub.copernicus.eu