

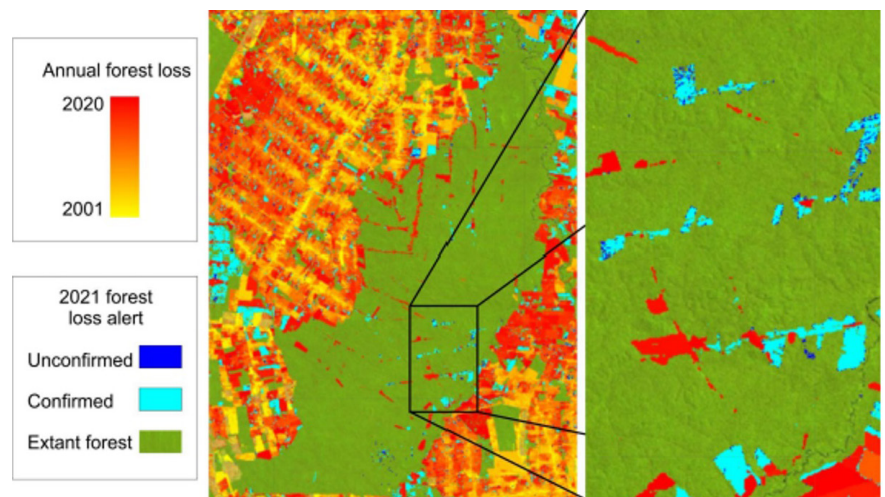
OPERA Land-Surface Disturbance Product Suite

Satellite Needs Working Group - Product Fact Sheet

The Observational Products for End-Users from Remote Sensing Analysis (OPERA) project, managed by NASA's Jet Propulsion Laboratory (JPL), is developing a suite of near-global Surface Disturbance (DIST) products. These products utilize Harmonized Landsat Sentinel-2 (HLS) optical imagery to provide low-latency land-surface disturbance data for almost the entire globe. The suite includes DIST-ALERT which provides expedited land-surface disturbance alerts every 2 to 4 days. The product also includes general disturbance information based on deviations in reflectance from historical norms.

This DIST-ALERT disturbance map shows annual forest lost between 2001-2020 into the Karipuna Indigenous Reserve in Rondonia, Brazil (2021) with new incursions in 2021. Gathering accurate land surface disturbance data is critical to successfully combating deforestation.

Credit: Global Forest Watch, University of Maryland Global Land and Analysis laboratory



Data Benefits

- Provide near-global land-surface disturbance data at 30-m resolution
- Use multiple sensors to provide disturbance data for agile monitoring and operational decision making
- Detect land-cover changes at different magnitudes, spatial scales, and temporal scales
- Provide disturbance alerts for events that may require a rapid response
- Advance global ecosystems research by supplying detailed observations of surface disturbances

OPERA Land-Surface Disturbance Product Suite

OPERA DIST Product	DIST - ALERT - HLS
Platform	Harmonized Landsat 8/9 Sentinel-2A/B (HLS)
Processing Level	3
Temporal Coverage	February 2023 - present
Temporal Frequency	Sub-weekly
Spatial Coverage	Near-Global (all land masses except Antarctica)
Spatial Resolution	30 m
Data Format	Cloud-Optimized GeoTIFF

How do I access this data?

OPERA DIST products are distributed by NASA's LP DAAC along with product documentation. Data can also be accessed using NASA's Earthdata Search tool.



LP DAAC



Earthdata Search

Where can I find more information?

NASA SNWG and community-contributed materials are available on the Stakeholder Engagement Program (SEP) webpage. The OPERA website provides further information on OPERA DIST and other OPERA products.



SEP Webpage



OPERA Webpage

Background Image Credit: Generated in QGIS using provisional DIST-ALERT products