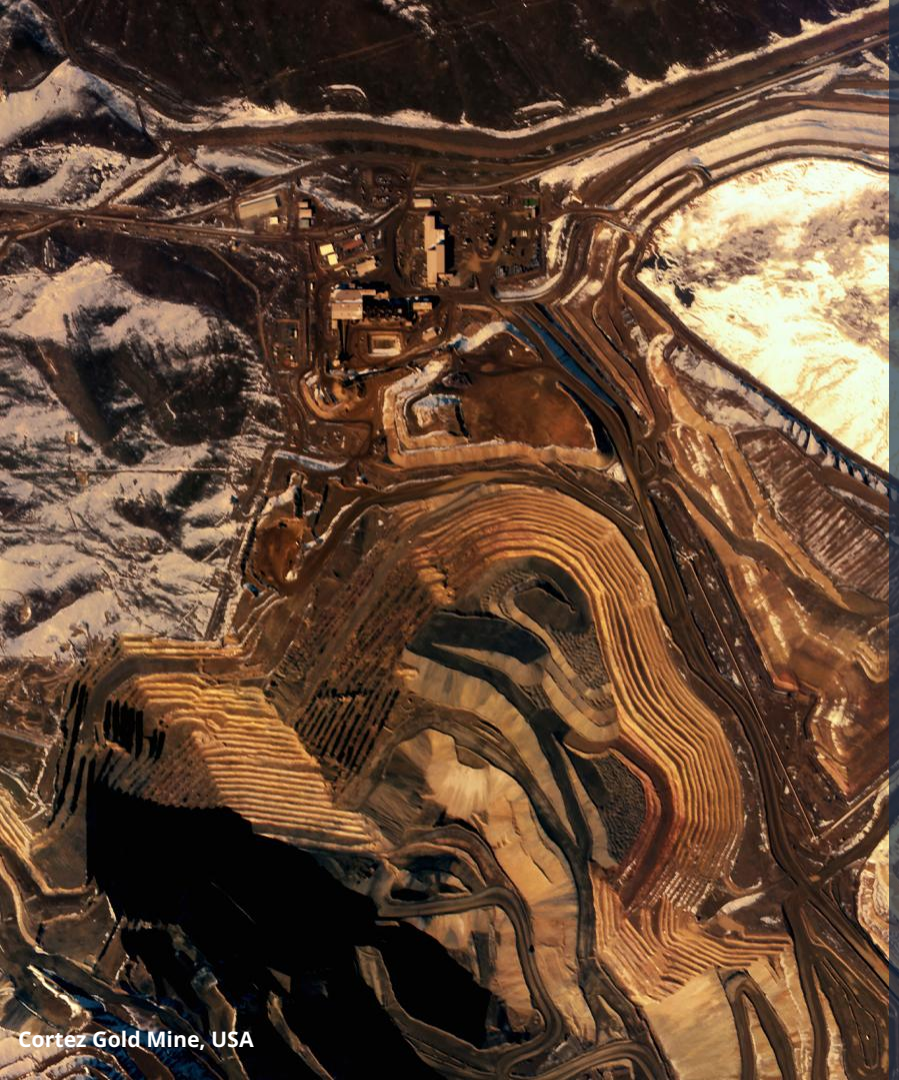

SATELLOGIC
NASA CSDA Program
Vendor Focus
Satellogic



Cortez Gold Mine, USA

SATELLOGIC®

Democratizing Earth Observation
Satellogic makes high-resolution, high-frequency Earth Observation data affordable and accessible at global scale.

We are creating a Searchable Earth that empowers better decisions and helps tackle critical challenges including food security, climate change, and sustainable energy.

COMPANY OVERVIEW

SATELLOGIC

The first vertically integrated geospatial company delivering sub-meter resolution at planetary scale.

US-Domiciled
HQ in Charlotte, NC

NASDAQ: SATL
Publicly traded

55+ Satellites
Launched with 100% Success Rate

14+ Years
Launch and Operational Heritage

TIMELINE:

2010	Founded
2013	First satellite launched
2020	Constellation operational
2022	Listed on NASDAQ (SATL)
2026	55+ satellites launched with 100% success rate

ADVANCING NASA RESEARCH OBJECTIVES

Satellogic for NASA

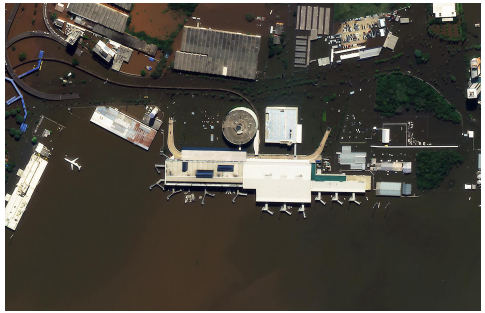
- NASA CSDA partner since 2024
- Providing high-resolution imagery for Earth science research and environmental monitoring

How Researchers Use Satellogic Data

- Detect land-use change over time
- Track climate-related infrastructure risks
- Monitor agricultural productivity and water resources
- Support disaster damage assessment workflows

Hydropower Monitoring - Grand Ethiopian Renaissance Dam, Bameza, Ethiopia

Energy Infrastructure Monitoring - Ruppur Nuclear Power Plant, Bangladesh



Flood Mapping - São Sebastião do Caí, Brazil

Mining Activity Monitoring - The Fimiston Open Pit Mine, Australia


SATELLOGIC
Satellogic
Constellation

SATELLOGIC

TODAY

55 SATELLITES LAUNCHED

Largest Commercial Constellation of 20 Satellites

FUTURE

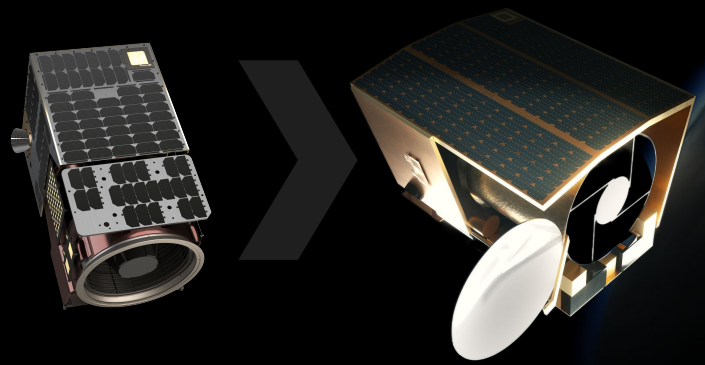
DAILY REMAPS OF THE PLANET

With automated tip and cue functionality

SATELLOGIC'S COORDINATED CONSTELLATION

Providing high-resolution, high-revisit imagery to support global Earth science research and planetary-scale monitoring.

Site Monitoring

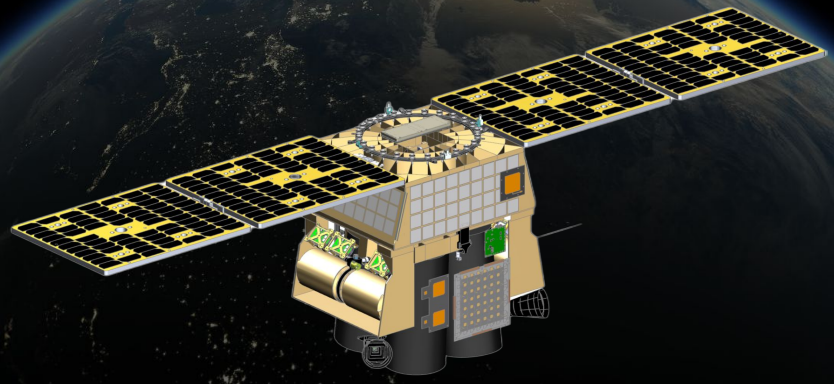


NewSat

NextGen

Daily Broad Area Monitoring

1st Launch in 2026



Merlin

NewSat

Mission Highlights:

- Mk-V 50 cm SR, 70 cm native, 6.5 km swath
- Mk-IV 70 cm SR, 99 cm native, 5 km swath
- All bands (RGB-NIR) collected at the same VHR resolution, pansharpening unnecessary
- 50 kg smallsat design, 5 Year Design Life
- > Daily revisit at equator from ~20 satellites

Tasking Cutoff & Delivery Latency:

- Tasking: Up to 6hrs before capture
- Delivery: Up to 3hrs after capture (L1 Basic)

NextGen (In Development)

Mission Highlights:

- 30 cm SR, 45 cm native, 8 km swath
- All bands (RGB-NIR) collected at the same VHR resolution, pansharpening unnecessary
- NextGen will replace NewSat

Tasking Cutoff & Delivery Latency:

- Same as NewSat

Merlin - Launching October

Mission Highlights:

- Daily global monitoring
- 1 Meter GSD
- 11 Bands (Pan+MS - Sentinel-2 Aligned)
- 170 km km swath at nadir
- Best in class aperture/optics - Unique Product

Tasking Cutoff & Delivery Latency:

- Tasking: Systematic Global Collections
- Delivery: Up To 10 mins Delivery (Edge Processed, Intersatellite Delivery)

Satellogic Data Products

MSI Specifications

Imagery Product	L1 Basic	L1 Ortho-Ready	L1 Ortho	L1 Ortho SR
Pixel Resolution	VARIABLE GSD (NATIVE) 99cm@nadir Mark IV 70cm@nadir Mark V	VARIABLE GSD (NATIVE) 99cm@nadir Mark IV 70cm@nadir Mark V	FIXED GSD 99cm Mark IV 70cm Mark V	FIXED GSD 70cm Mark IV 50cm Mark V
Multispectral bands	Blue: 450 - 510 nm Green: 510 - 580 nm Red: 590 - 690 nm NIR: 750 - 900 nm Check Satellogic's developer's site for detailed spectral response of each satellite			
Radiometric Accuracy TOA	10%			
Geolocation Accuracy	30m CE90 (with GCPs)	10 m CE90 (with GCPs)		
Image Delivery bits/pixel	Top Of the Atmosphere Reflectance (TOA) 16 bits VISUAL 8 bits			
File Format	GeoTiff			
File Compression	LZW lossless			
Image Metadata	ISO and STAC			
Projection	UTM	WGS84	UTM	UTM
Swath Width	5km@nadir Mark IV 6.5km@nadir Mark V			
Full product description	https://developers.satellogic.com/data/processing-levels/l1basic.html	https://developers.satellogic.com/data/processing-levels/ortho-ready.html	https://developers.satellogic.com/data/processing-levels/ortho.html	https://developers.satellogic.com/data/processing-levels/ortho.html

**Specifications stated above are subject to change due to continued iterations for enhancements.*

CAL / VAL

Radiometric Cal/Val

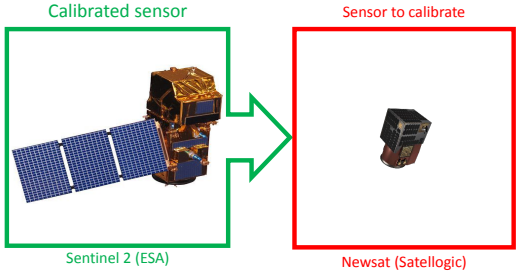
Target:
10% radiometric accuracy

In orbit correction

Measured in the lab

$$L_{e,\Omega,\nu} = \frac{NL[DN_{raw}(x,y) - DN_{dark}(x,y)]}{DN_{flat}(x,y)} \cdot \frac{1}{\frac{t.A.\Omega.K}{hc} \cdot \int_{\lambda_0}^{\lambda_1} T_F(\lambda).T_T(\lambda).Q_\lambda.\lambda.d\lambda}$$

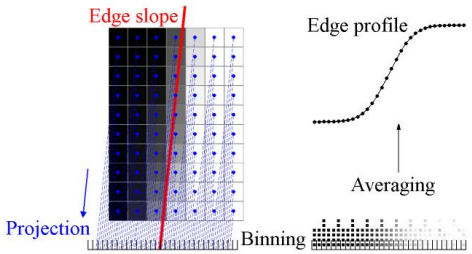
In Orbit cross calibration

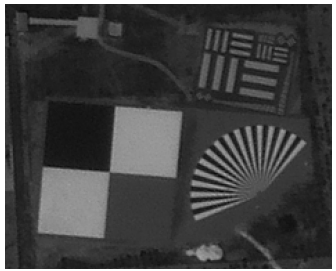


RadCalNet pseudo-invariant calibration sites

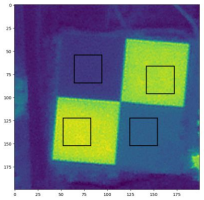
Resolution Cal/Val

Define contributors to sharpness budget → **Measure contributions individually** → **Define thresholds** → **Calibrate to meet thresholds** → **Automated monitoring to decide if a new calibration is needed**





SNR & Sharpness is monitored by measuring calibration targets



FLEXIBLE DATA ACCESS & DELIVERY WITH ALEPH

Aleph Platform

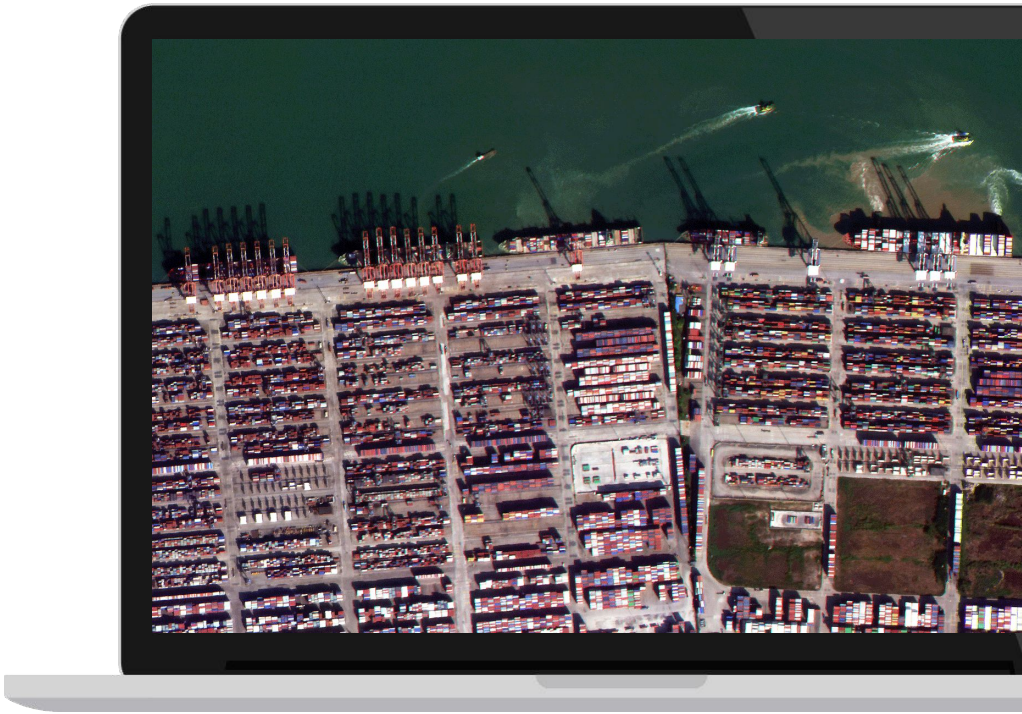
- Web-based platform for discovering and accessing Satellite imagery
- Tools to search, visualize, and analyze satellite data
- Enables researchers to explore imagery across the globe, throughout time

S3 Bucket Delivery:

- Scenes get pushed into an S3 bucket right after processing

Satellogic REST API

- API Key authentication
- Tasking Service for POI and AOI captures, mimics UI capabilities
- Delivery Service to list, seach, and download scenes
- Documentation & API Schemas



LEARNING & RESOURCES

Access the [Satellogic Documentation Center](https://developers.satellogic.com/) for guides, tutorials, and technical references.

API Documentation

Integration guides, endpoints, and example workflows for working with the Aleph API.

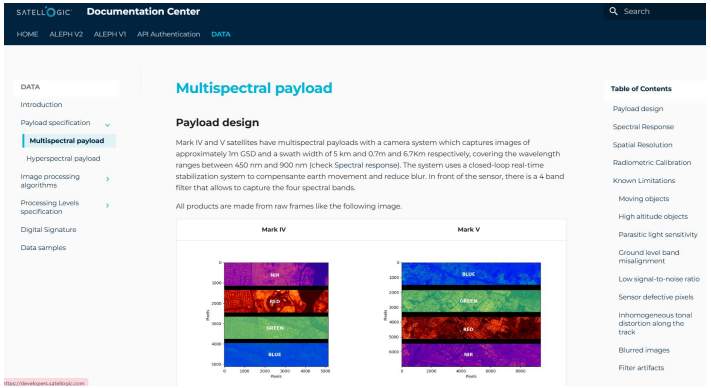
Platform User Guide

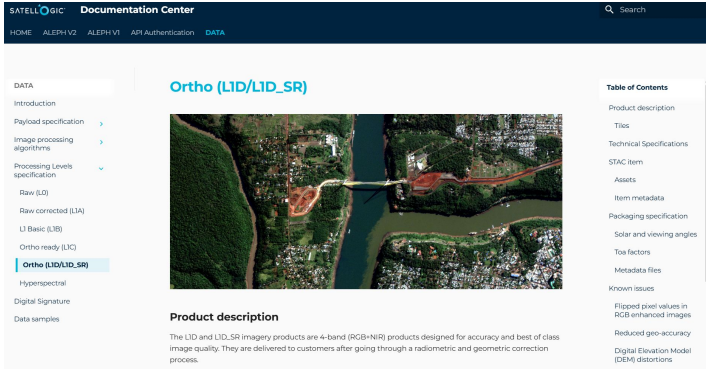
Step-by-step tutorials for discovering imagery, placing orders, and managing data in Aleph.

Data Specifications

Detailed information on imagery formats, processing levels, sensor characteristics, and metadata.

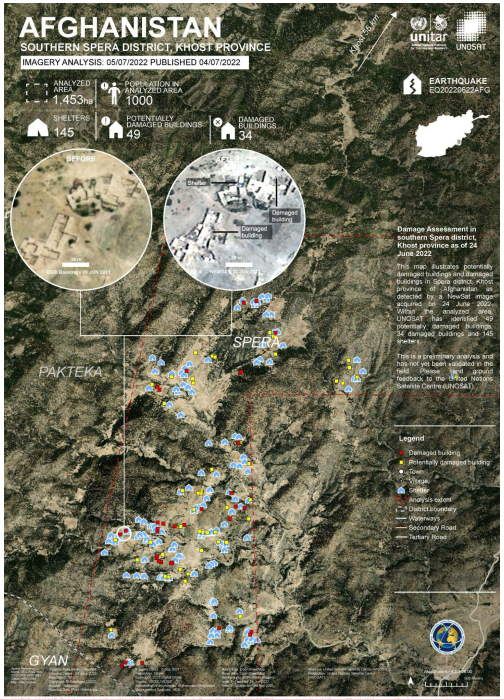
https://developers.satellogic.com/

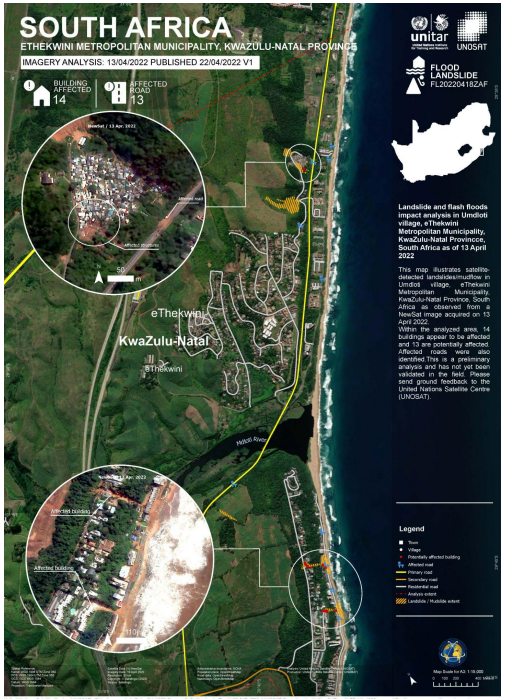


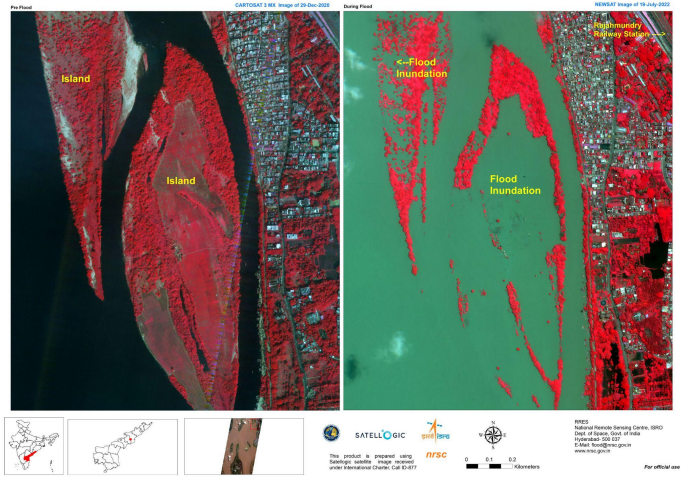


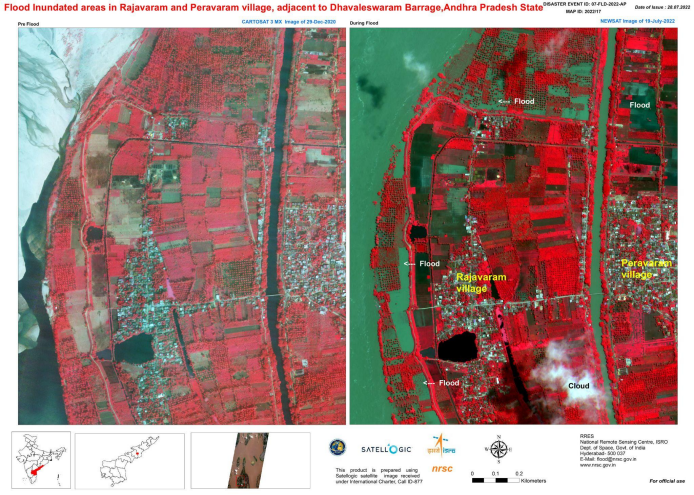
Science-Based Use Cases and Applications

INTERNATIONAL CHARTER SPACE & MAJOR DISASTERS

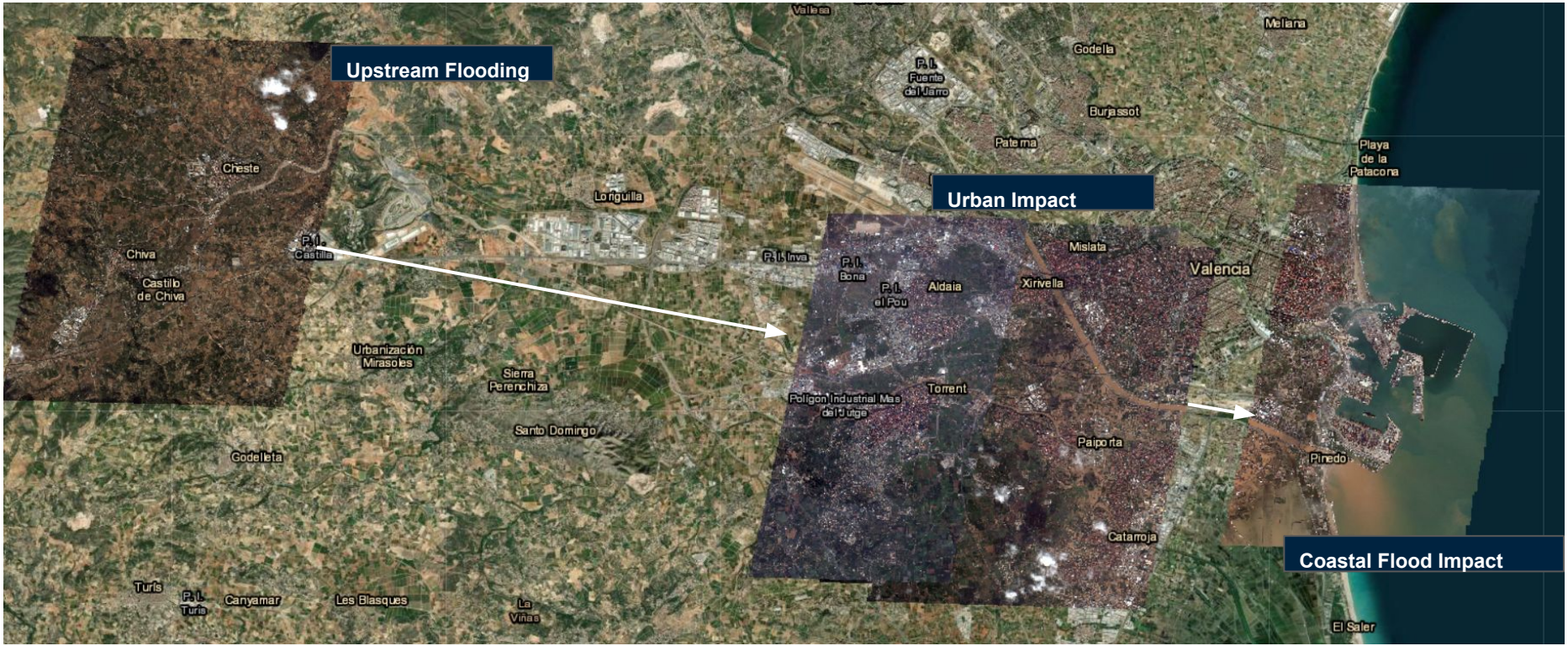






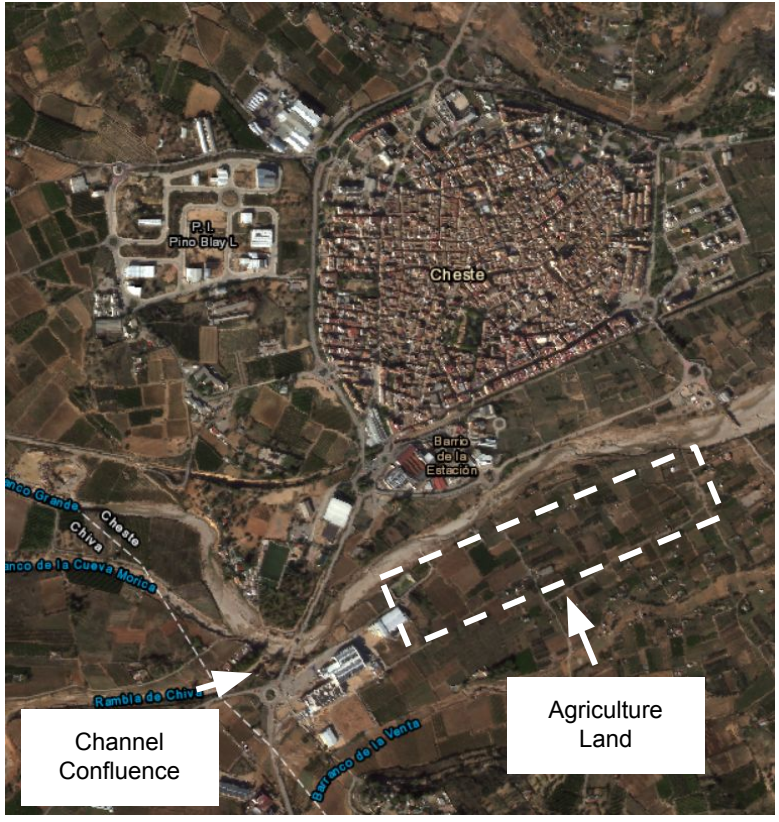


FLOOD IMPACT MONITORING - VALENCIA SPAIN (2024)

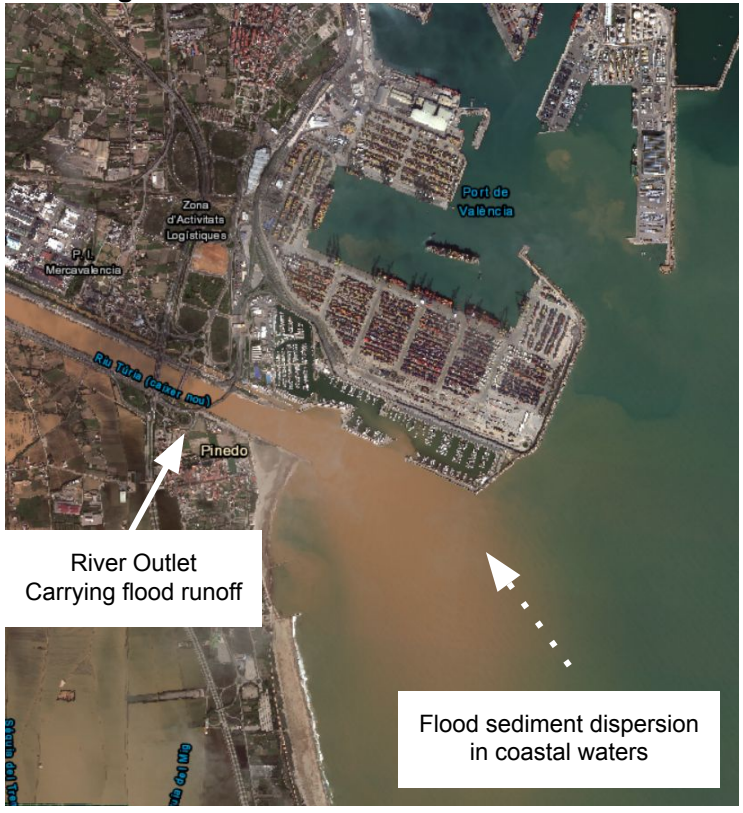


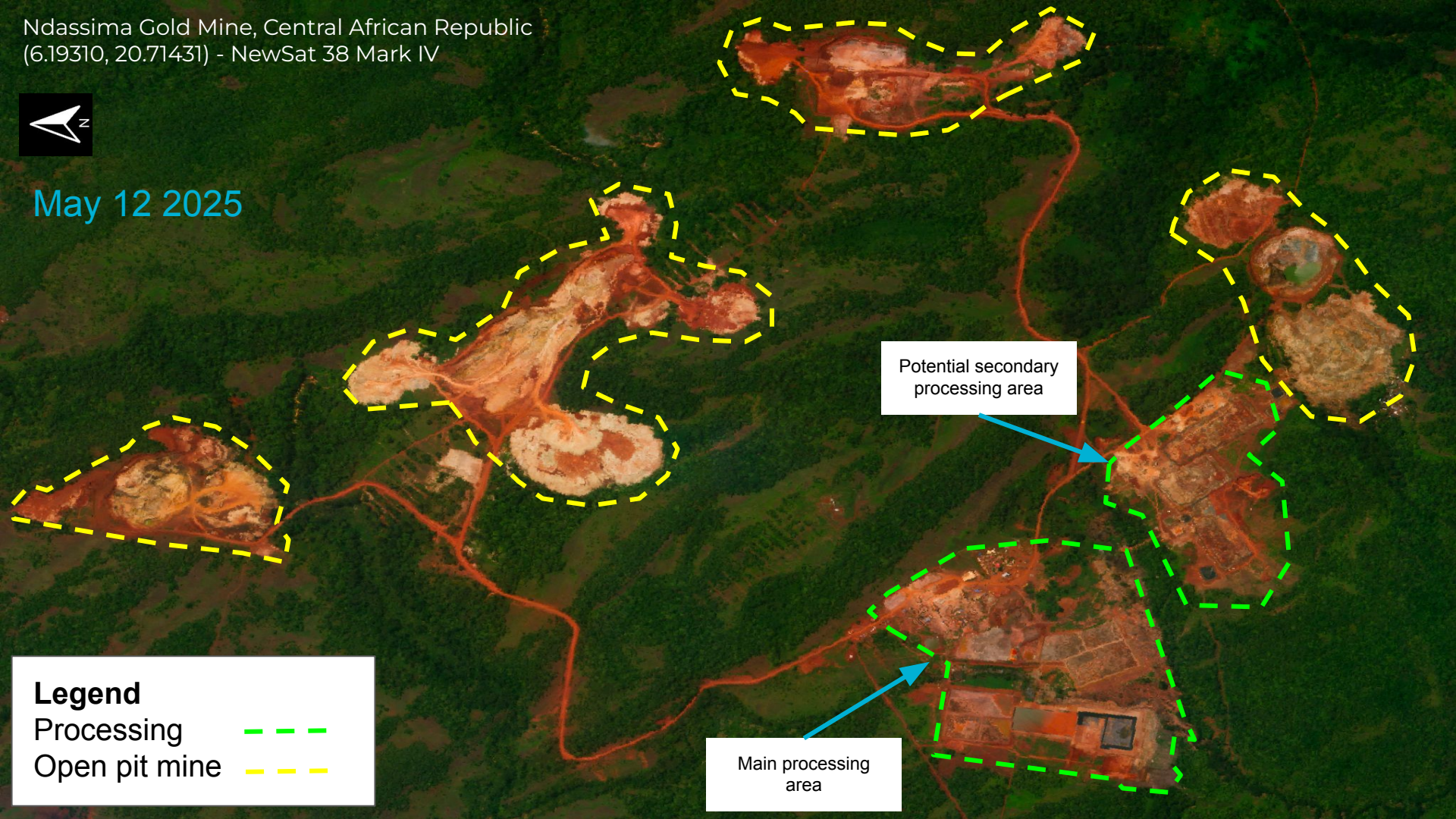
FLOOD IMPACT MONITORING - BEFORE/AFTER

Upstream Flood Channel: Rambla de Chiva

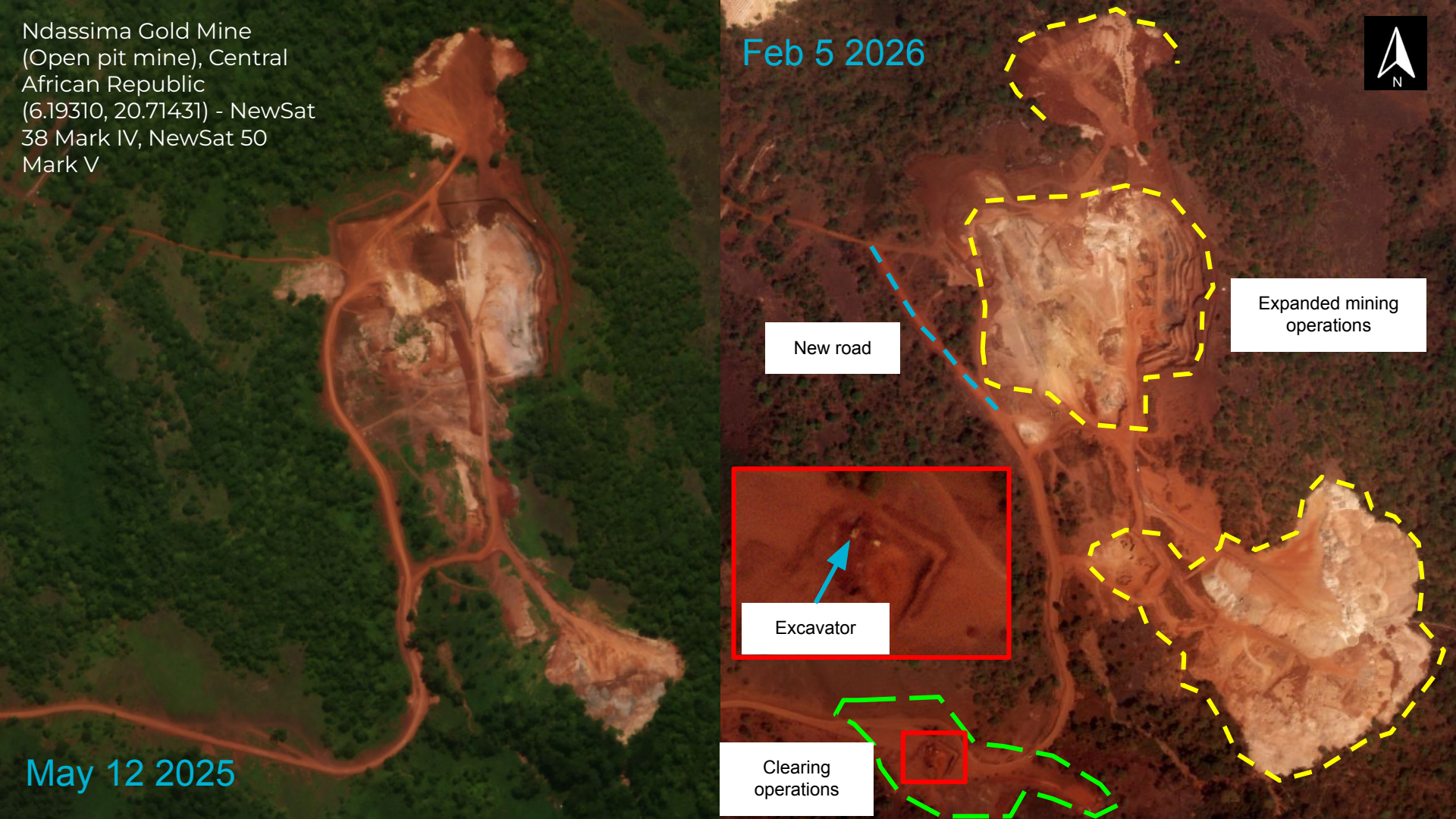


Downstream Impact: Coastal Flood and Sediment Discharge




Ndassima Gold Mine, Central African Republic
(6.19310, 20.71431) - NewSat 38 Mark IV
May 12 2025
Potential secondary processing area
Main processing area
Legend
Processing
Open pit mine


Ndassima Gold Mine, Central African Republic
(6.19310, 20.71431) - NewSat 50 Mark V
Feb 5 2026
N
Main processing, ore storage, and housing still active
Expanded tailings storage ponds
Secondary processing and ore storage still active - with viewable rock crushers and processing lines
Newly constructed since 2025 imagery
Expansion underway


Ndassima Gold Mine (Open pit mine), Central African Republic (6.19310, 20.71431) - NewSat 38 Mark IV, NewSat 50 Mark V
May 12 2025
Feb 5 2026
N
New road
Expanded mining operations
Excavator
Clearing operations

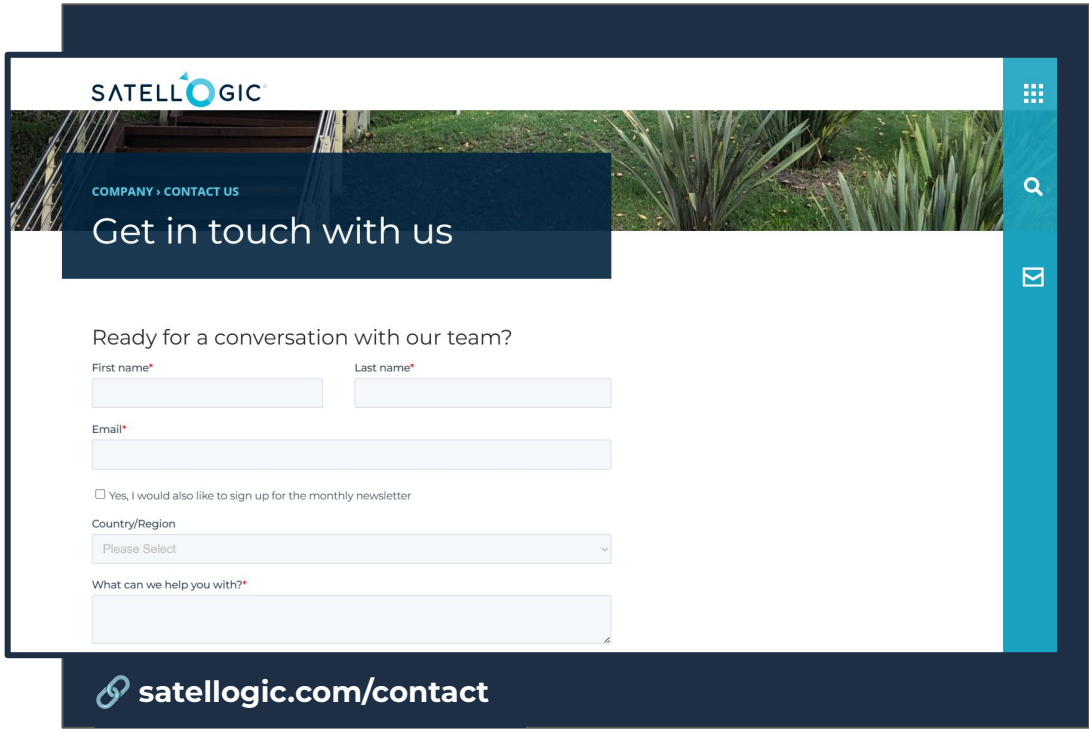
How to Access Data (Non-Authorized Users)

REQUEST DATA ACCESS

If you don't currently have access to Satellogic data through the CSDA program, our team can help explore options.

- Learn about available datasets
- Discuss potential use cases
- Explore access options

Scan to connect with our team




SATELLOGIC®
NOW YOU SEE