

# SATELLITE MONITORING

safeguarding people, environment & infrastructures

A satellite with two large solar panel arrays is shown in orbit above the Earth. The Earth's surface is illuminated by city lights at night, with a prominent view of the Italian peninsula. The satellite is positioned on the left side of the frame, angled towards the right.

planetek  
italia

# SATELLITE DATA AND SERVICES FOR O&G

providing critical information throughout the entire project lifecycle

## FEASIBILITY



## EXPLORATION



## DEVELOPMENT



## OPERATIONS



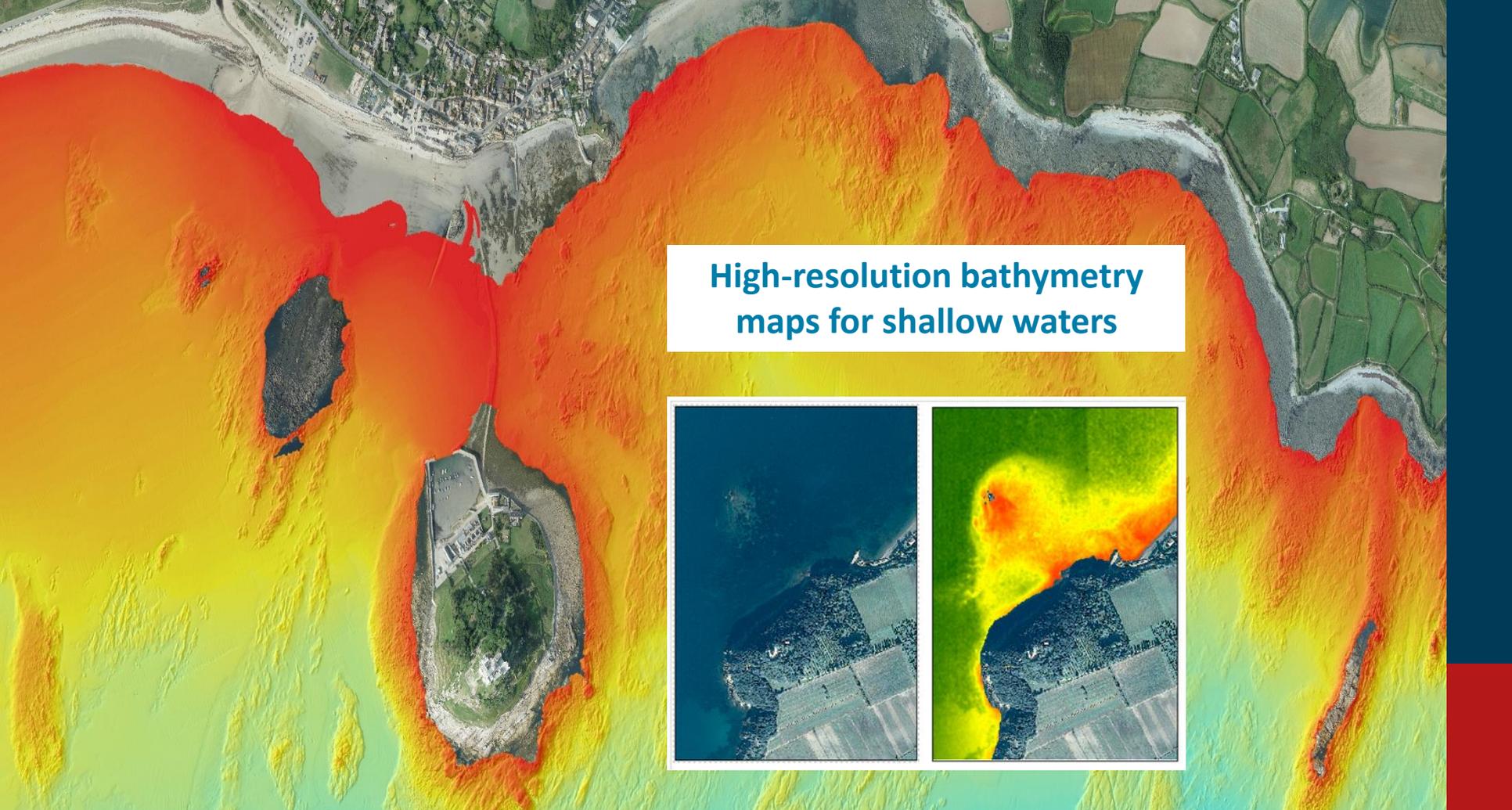
A photograph of an offshore oil rig at sunset. The sun is a large, bright orange circle in the center, partially obscured by a vertical structure of the rig. The sky is a mix of orange, red, and dark blue. The rig's complex metal framework is silhouetted against the sky. The water in the foreground is dark and calm.

# SATELLITE MONITORING

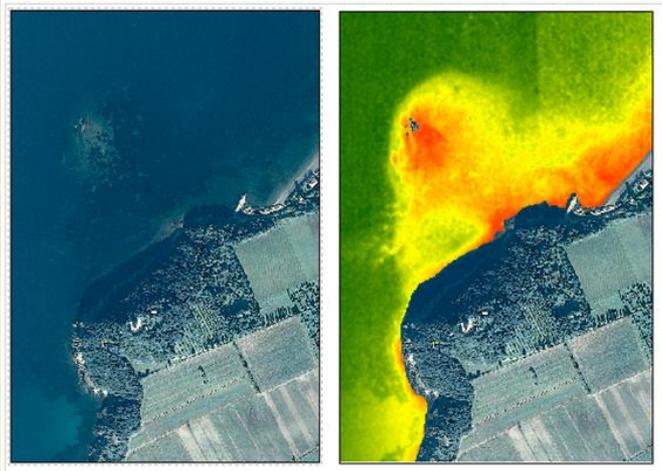
## SAFEGUARDING PEOPLE, ENVIRONMENT & INFRASTRUCTURES

- Bathymetry
- Posidonia Mapping
- Coastal Monitoring

# FEASIBILITY



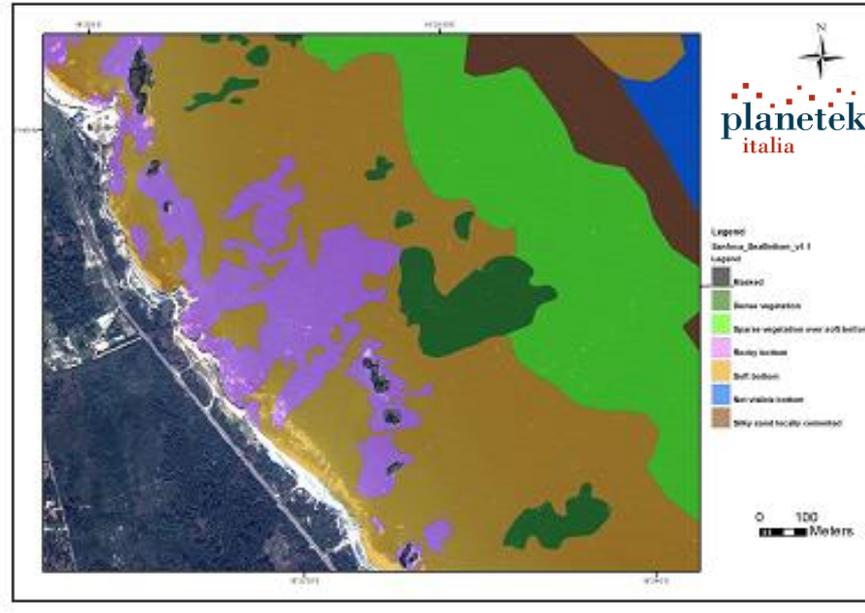
**High-resolution bathymetry maps for shallow waters**



# **BATHYMETRY FROM SATELLITE**

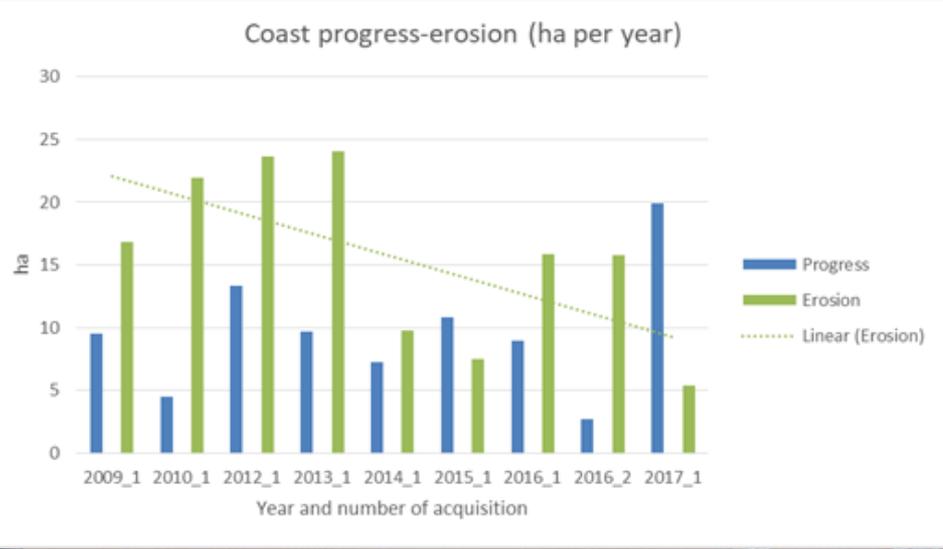
**SAFEGUARDING PEOPLE, ENVIRONMENT & INFRASTRUCTURES**

## Mapping of Posidonia Oceanica from high-resolution satellite data



**POSIDONIA MAPPING FROM SATELLITE**

**SAFEGUARDING PEOPLE, ENVIRONMENT & INFRASTRUCTURES**



# COASTAL EROSION MONITORING FROM SATELLITE

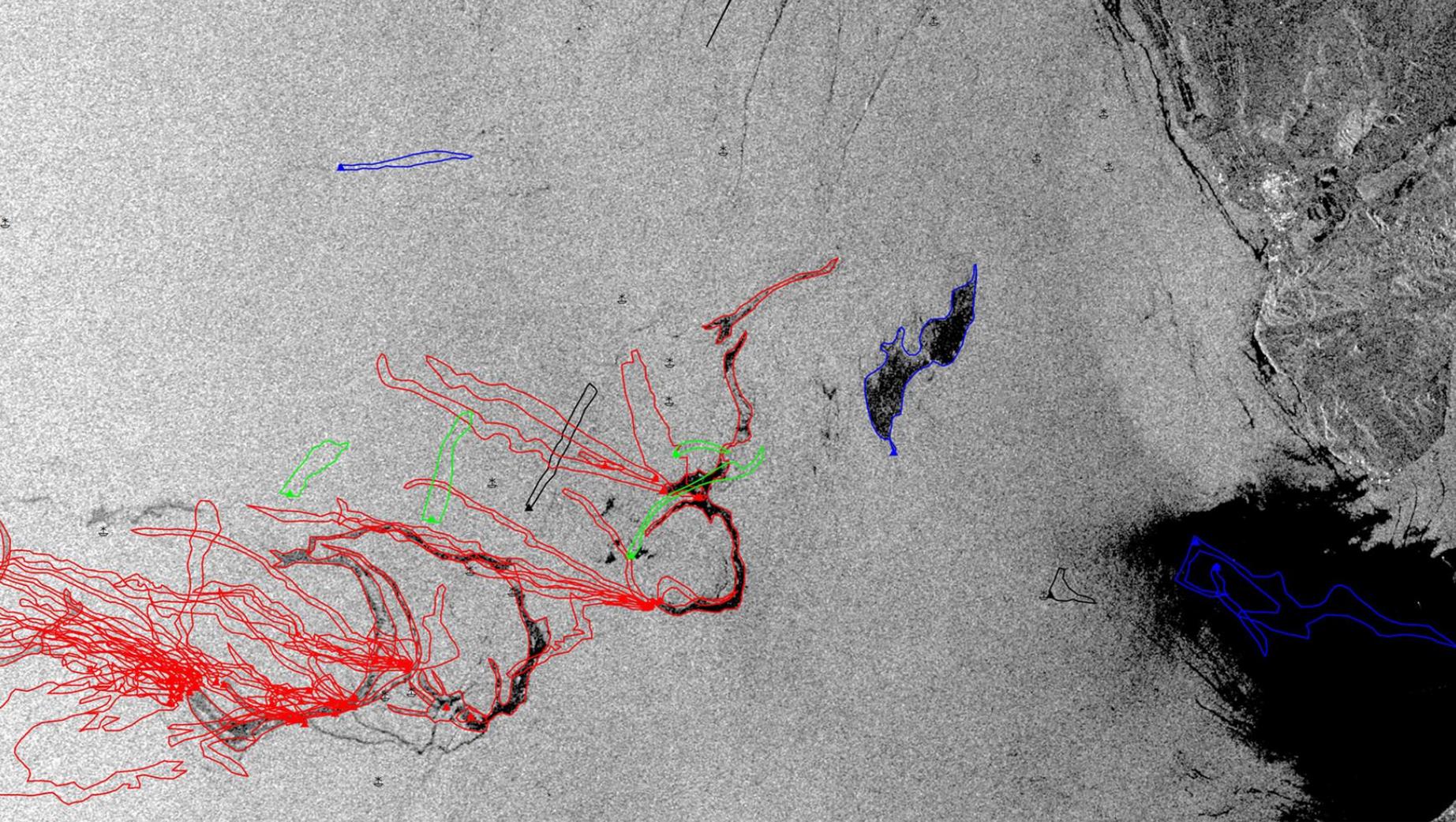
**SAFEGUARDING PEOPLE, ENVIRONMENT & INFRASTRUCTURES**

# SATELLITE MONITORING

## SAFEGUARDING PEOPLE, ENVIRONMENT & INFRASTRUCTURES

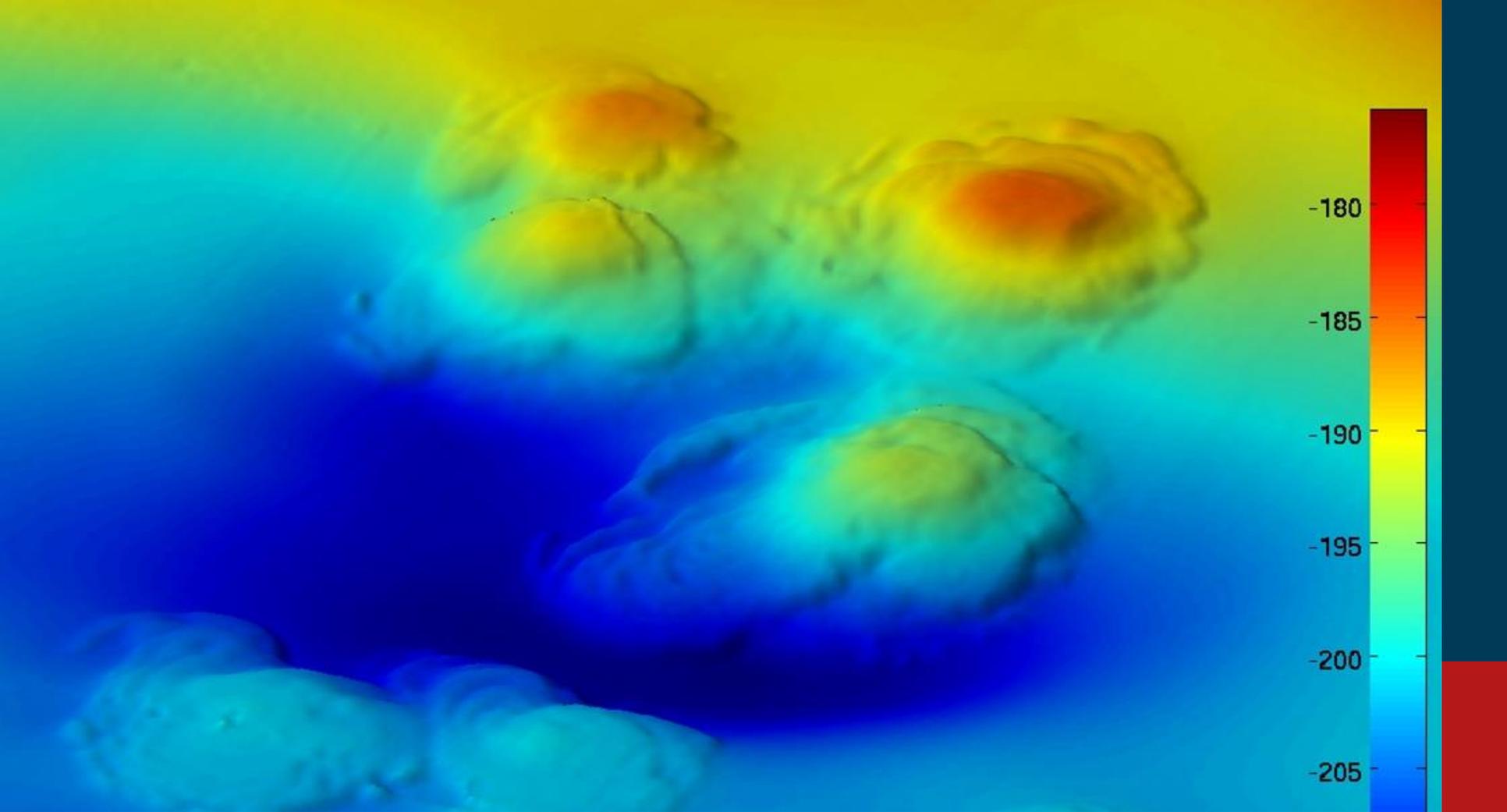
- Global seeps
- 3D Models
- Satellite Monitoring

# EXPLORATION



# GLOBAL SEEPS FROM SATELLITE

SAFEGUARDING PEOPLE, ENVIRONMENT & INFRASTRUCTURES



# DIGITAL ELEVATION MODEL FROM SATELLITE

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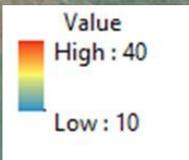
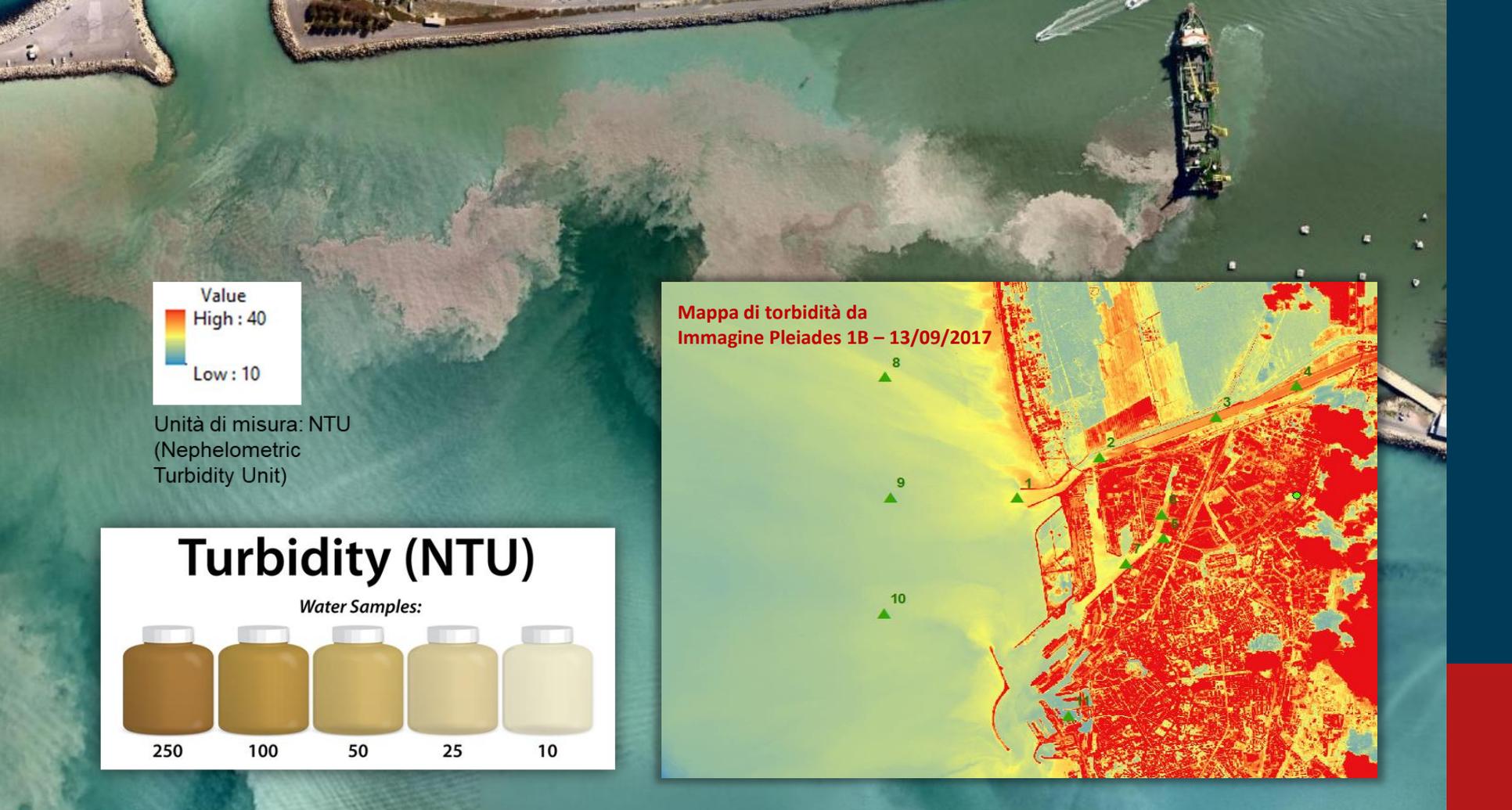
# SATELLITE MONITORING

## SAFEGUARDING PEOPLE, ENVIRONMENT & INFRASTRUCTURES

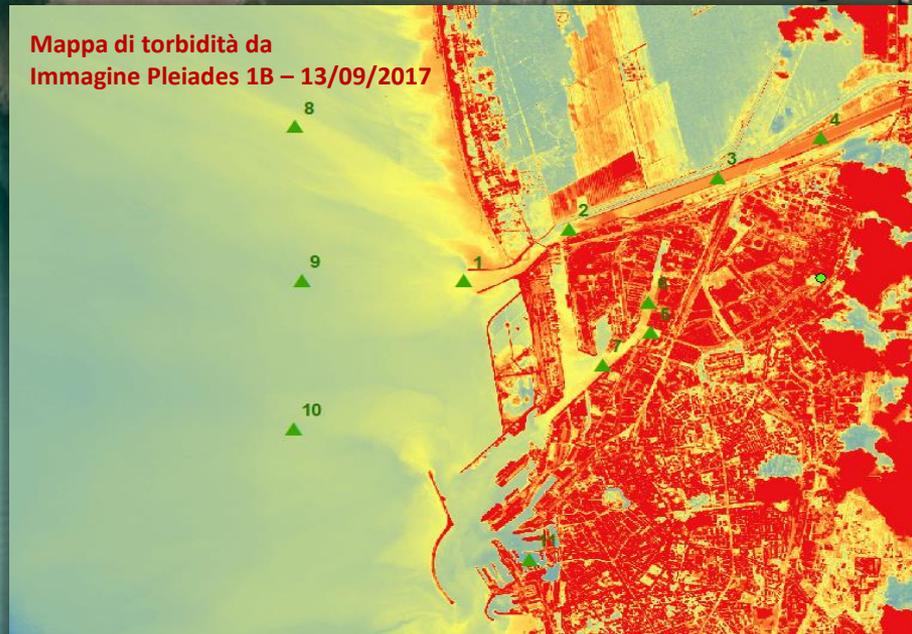
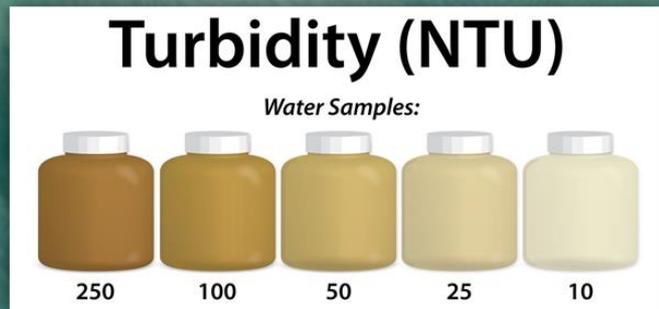


- Turbidity Monitoring
- Change Detection
- Coastal Monitoring

# DEVELOPMENT



Unità di misura: NTU  
(Nephelometric  
Turbidity Unit)



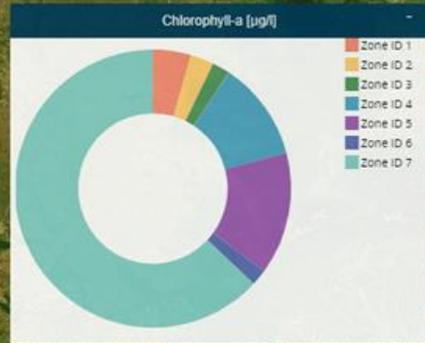
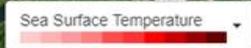
# TURBIDITY MAPPING FROM SATELLITE

**SAFEGUARDING PEOPLE, ENVIRONMENT & INFRASTRUCTURES**

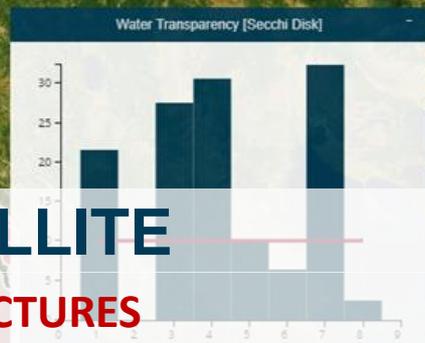
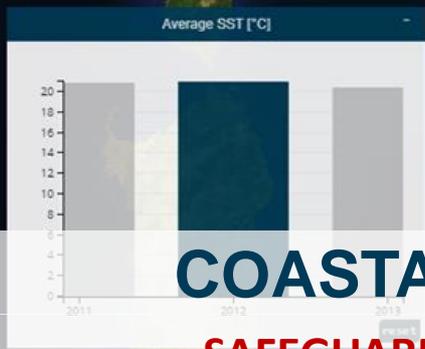
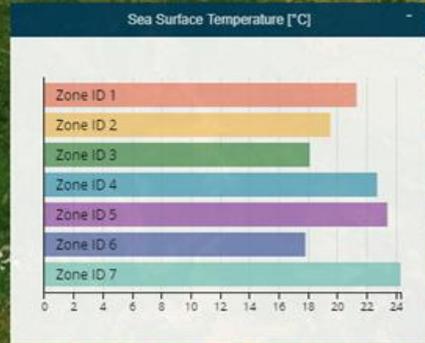


# CHANGE DETECTION FROM SATELLITE

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Zone ID: 1  
Chlorophyll-a:  
0.3  $\mu\text{l}$   
Water  
Transparency:  
21.61  
Sea Surface  
Temperature:  
21.3  $^{\circ}\text{C}$



# COASTAL MONITORING FROM SATELLITE

**SAFEGUARDING PEOPLE, ENVIRONMENT & INFRASTRUCTURES**

A photograph of an offshore oil rig at sunset. The rig's structure, including several large cranes, is silhouetted against a bright, low sun. The sun's light reflects on the calm water surface. In the foreground, a large, dark, cylindrical structure, likely a storage tank or part of the rig's infrastructure, is visible on the left side. The sky is a clear, pale blue, and the overall scene is peaceful yet industrial.

# SATELLITE MONITORING

## SAFEGUARDING PEOPLE, ENVIRONMENT & INFRASTRUCTURES

- Oil Spill Detection
- Subsidence Mapping
- 24/7 Emergency Imagery

# OPERATIONS



# OIL SPILL DETECTION FROM SATELLITE

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# 50min

From Acquisition  
to Delivery



Sep 12<sup>nd</sup>

Sep 13<sup>rd</sup>

**5:40 PM**  
Order  
placed

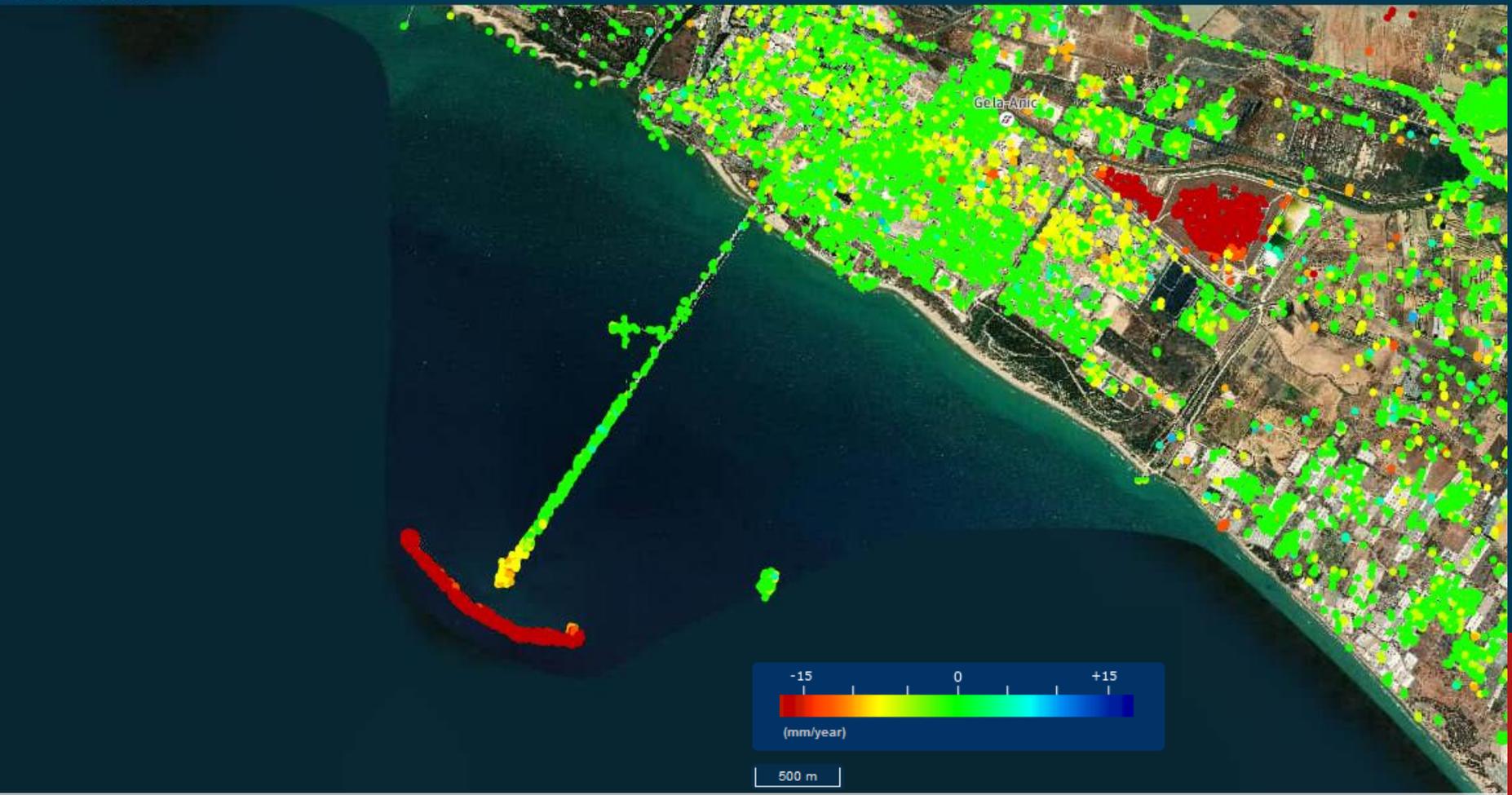
**12:04 AM**  
The satellite  
passes over  
the target

**12:36 AM**  
Acquisition  
Notification

**12:54 AM**  
Product ready  
for download

## 24/7 EMERGENCY IMAGERY FROM SATELLITE

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# SUBSIDENCE MAPPING FROM SATELLITE

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# Rheticus

## continuous monitoring service from satellite

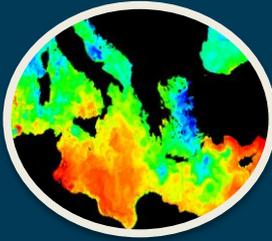


### Displacement

Landslides

Subsidence

Infrastructure Stability



### Marine

Water Quality

Algae Bloom

Aquaculture

Fishing



### Land

Land Cover

Wildfires



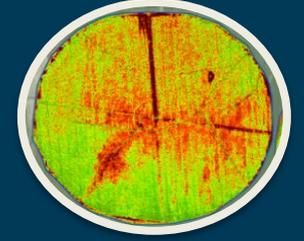
### Urban Dynamics

Urban Changes

Urban Heat Islands

Soil Sealing

Infrastructures



### Agriculture

Crop Monitoring

Vegetation Health

Yield Estimation

Illegal Crops

Rheticus Services

[www.rheticus.eu](http://www.rheticus.eu)

# Rheticus Marine

## Satellite marine water monitoring through web platform



CLIENT LOGIN

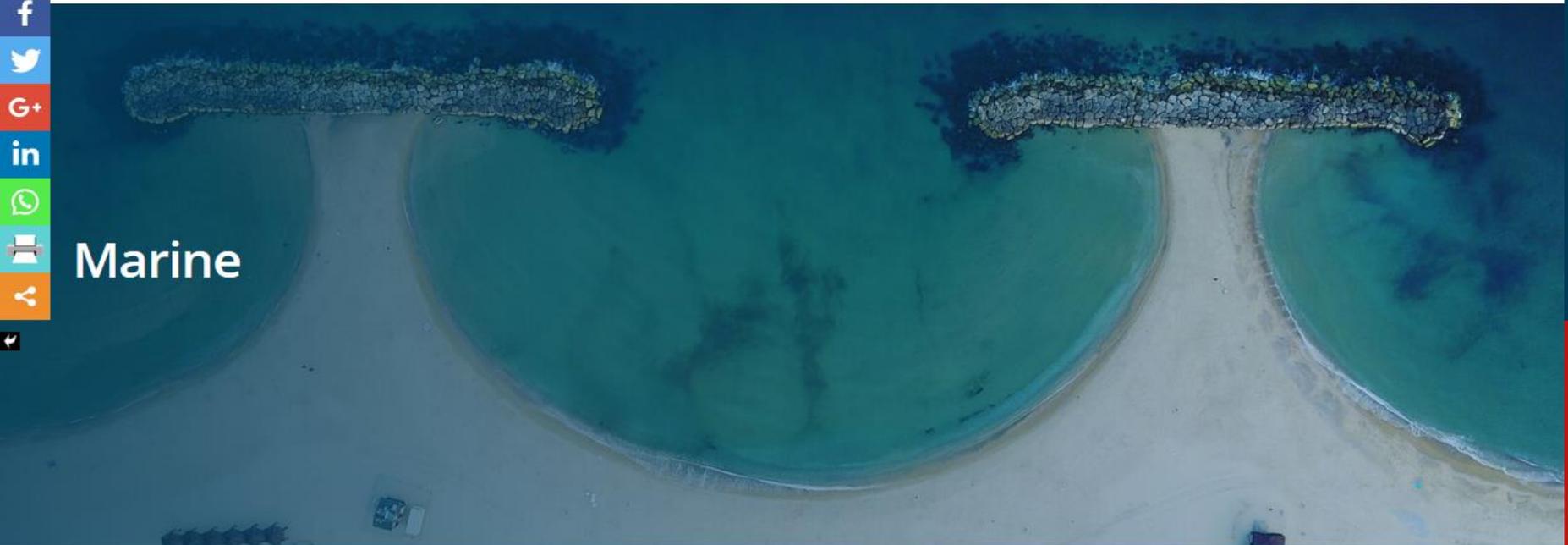


ABOUT ▾ SOLUTIONS ▾ CONTACT ▾ Q

FREE TRIAL ▾



Marine



# Rheticus Marine

## Satellite marine water monitoring through web platform



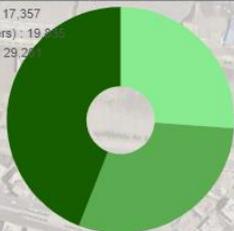
## SURFACE PROGRESSION (SQ M)

2015-2016 : -181,144

2016-2017 : 335,274

## TYPE OF CHANGE (LENGHT)

- Erosion (meters) : 17,357
- Progression (meters) : 19,850
- Stability (meters) : 29,200



## SURFACE PROGRESSION TABLE

Filtered Sections(count)	573
Total Sections(count)	573
Progression Mean (sq m)	268,9878
Progression Sum (sq m)	154,130

