# HOW TO MAKE SURVEY PLANNING EFFICIENT ONLINE (FAST)

EOMAP for Hydro 25

Oct 2025

EOMAP
a Fugro company

# EOMAP, A FUGRO COMPANY

+ Establised 2006, part of Fugro since 2025
+ Center of **Expertise for Earth Observation**
+ 100+/year projects related to mapping and monitoring seabed
+ Core services in **Remote Hydrography services**
+ Headquarter close to Munich

### Service

**Best team**
:-)

### ★★★ User rating

**Rated 8.9 of 10**
user satisfaction

### Awards

**7 int. awards** for
SDB tech & apps

# CHALLENGES OF SHALLOW WATERS SURVEYS

**Managing budget and priorities**
Best value for money surveys

**Managing risks**
Schedule, budget, HSE, expectation management.

**Smart planning**
Efficient line planning, reducing reflights / resurveys, reducing time on site

**Understanding dynamics**
Update frequencies of surveys and sediment movements

# THE TOOLBOX

## ARCHIVES, DATA, APPS, INSIGHTS

+ **Shallow water grids** for optically shallow waters (#Satellite-Derived Bathymetry)

+ **Integrated shallow water surveys**

+ **Water Clarity** Baselines and NRT monitoring

+ **eoapp™** online solutions for on-the fly creation of bathymetry and water clarity + accessing 3rd party information (tides, metocean, weather)

+ Smart **service team**

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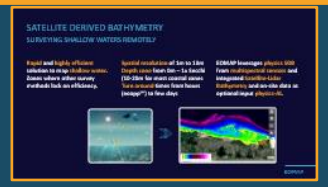
## Surveying and mapping with optical sensors


## Shallow bathy




## Monitoring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# eoapp™ AQUA

## MAKING OPTICAL SENSORS (ALB, AUV) MORE EFFECTIVE

**Improving on-site operations with optical sensors – e.g. Airborne LIDAR Bathymetry and optical sensors - more effective by reducing re-survey, increasing mapping area and improving planning.**

**+ Coupled with satellite archives (ESA, Planet, NASA)**

**+ Spatial multi-year baseline statistics**

**+ NRT spatial data and forecasts**

**+ Integration of third party data (buoys, weather, charts)**

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# SHOWCASES

## *Operations*

**e.g. ISPRA MER mapping project for ALB all of Italy**

**+ Reduction of re-flight**

**+ Client expectation management**

**+ Evaluation of ALB sensor performance**

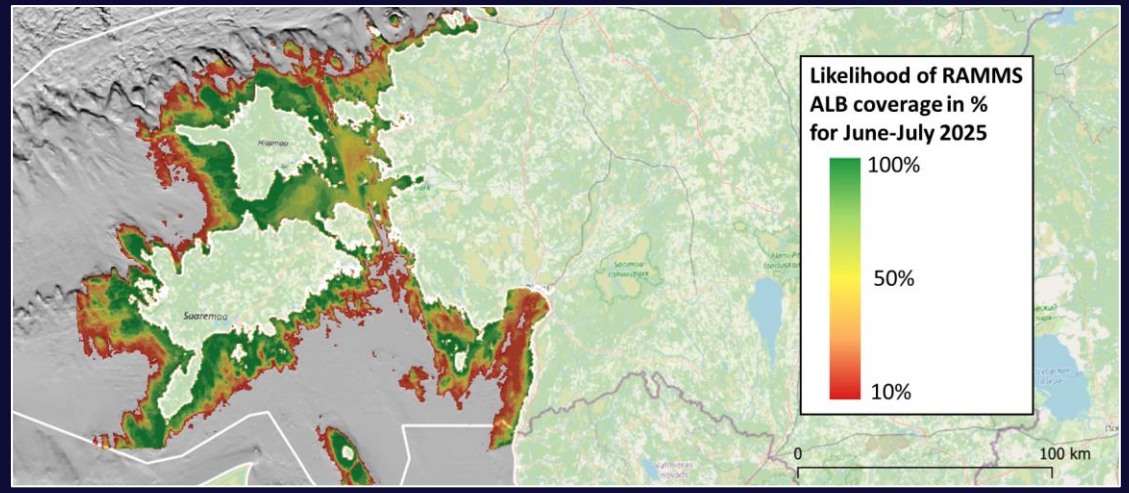

## *Planning*

**Applied on national to local scale**

**+ Understanding mapping potential for ALB**

**+ Understanding mapping potential for monitoring with SDB**

**+ Understanding visibility for underwater cameras**

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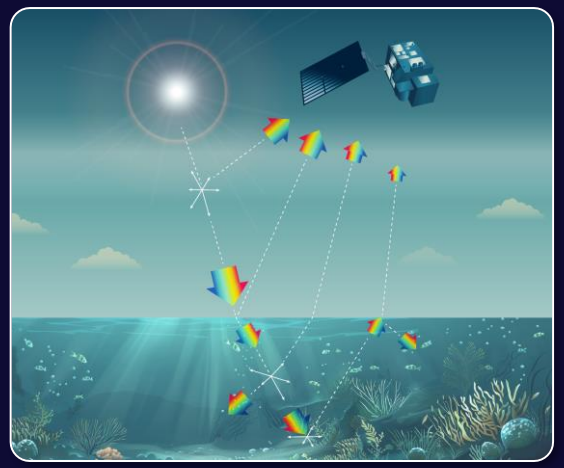
# SATELLITE DERIVED BATHYMETRY

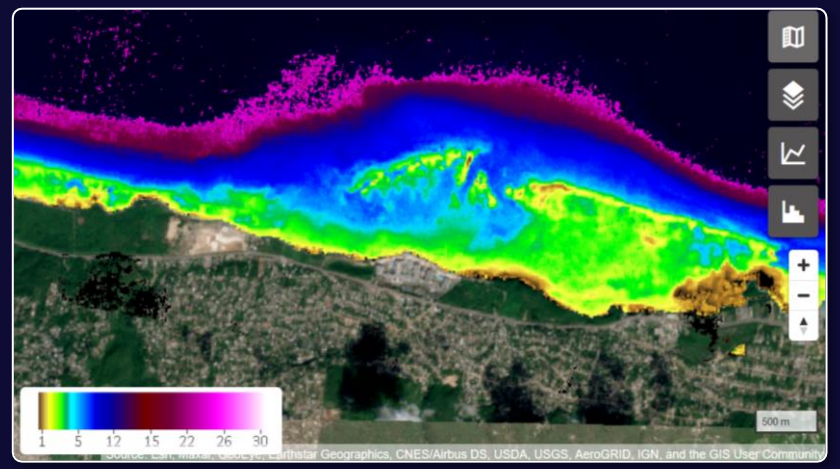
## SURVEYING SHALLOW WATERS REMOTELY

**Rapid** and **highly efficient** solution to map **shallow water**. Zones where other survey methods lack on efficiency.

**Spatial resolution** of 1m to 10m
**Depth zone** from 0m – 1x Secchi (10-20m for most coastal zones
**Turn around** times from hours (eoapp™) to few days

EOMAP leverages **physics SDB** from **multispectral sensors** and integrated **Satellite-Lidar Bathymetry** and on-site data as optional input **physics-AI**.



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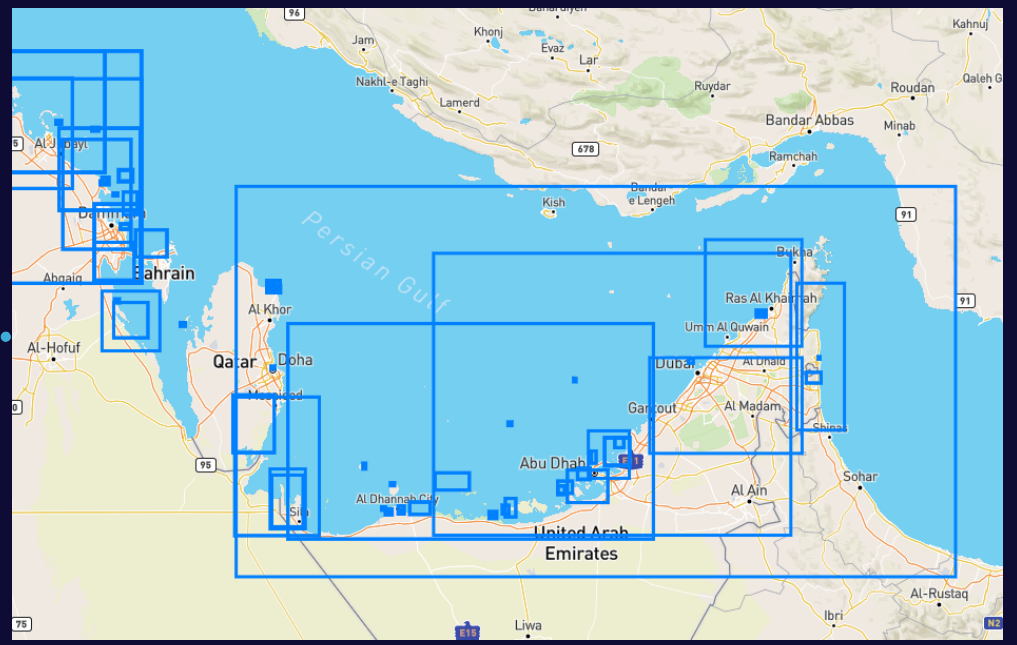
# BATHYMETRIC AND SEABED DATA ARCHVIES

## IMMEDIATE ACCESS

**Metadata and data management of bathymetric and other geospatial data within the eoapp™ cloud environment.**

***#24/7 #secure #anytime #anywhere #user_authentifiation***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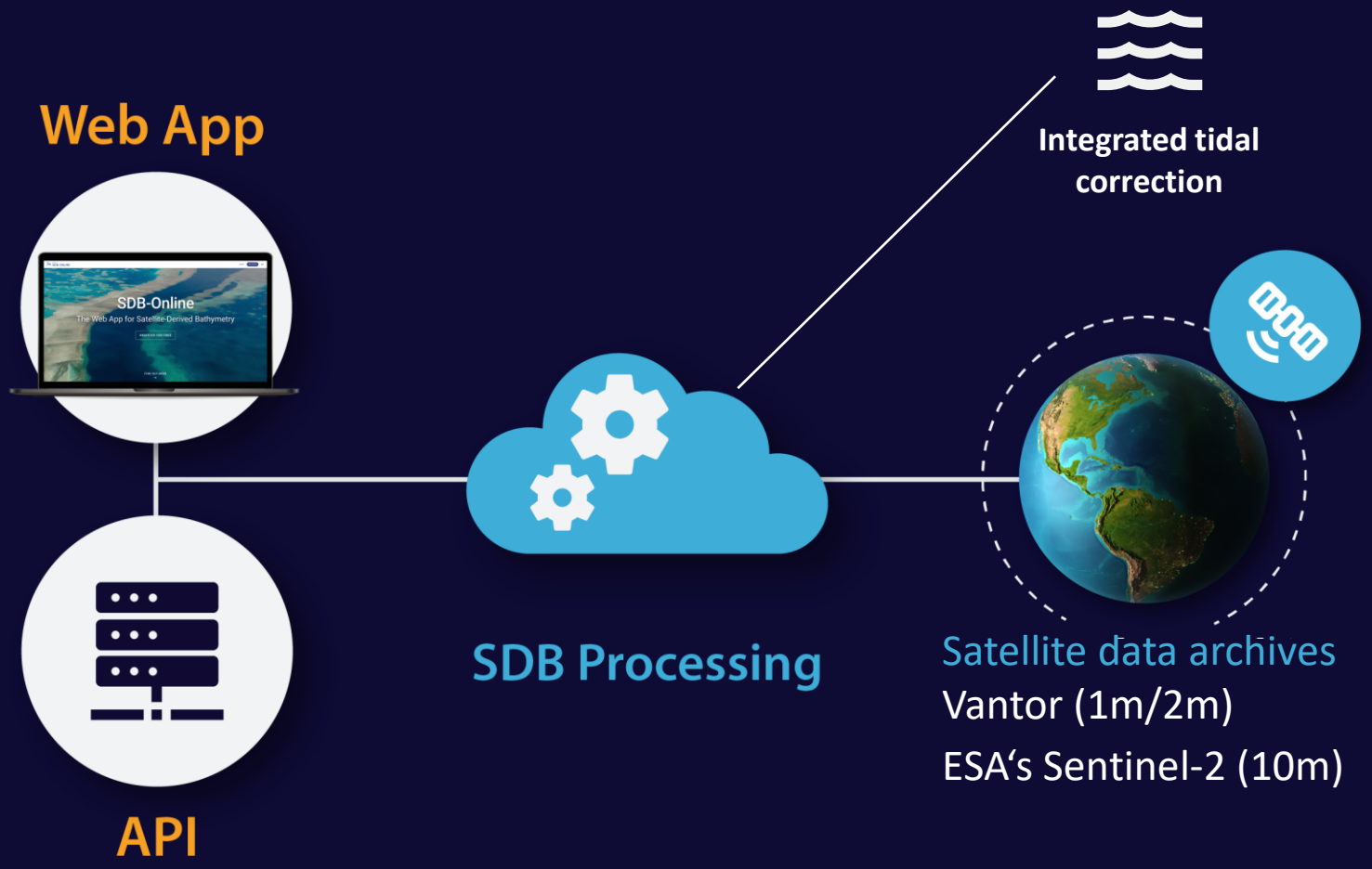
# eoapp™ SDB-ONLINE

## APP TO CREATE SATELLITE-DERIVED BATHYMETRY 2M AND 10M GRIDS ONLINE (FAST)

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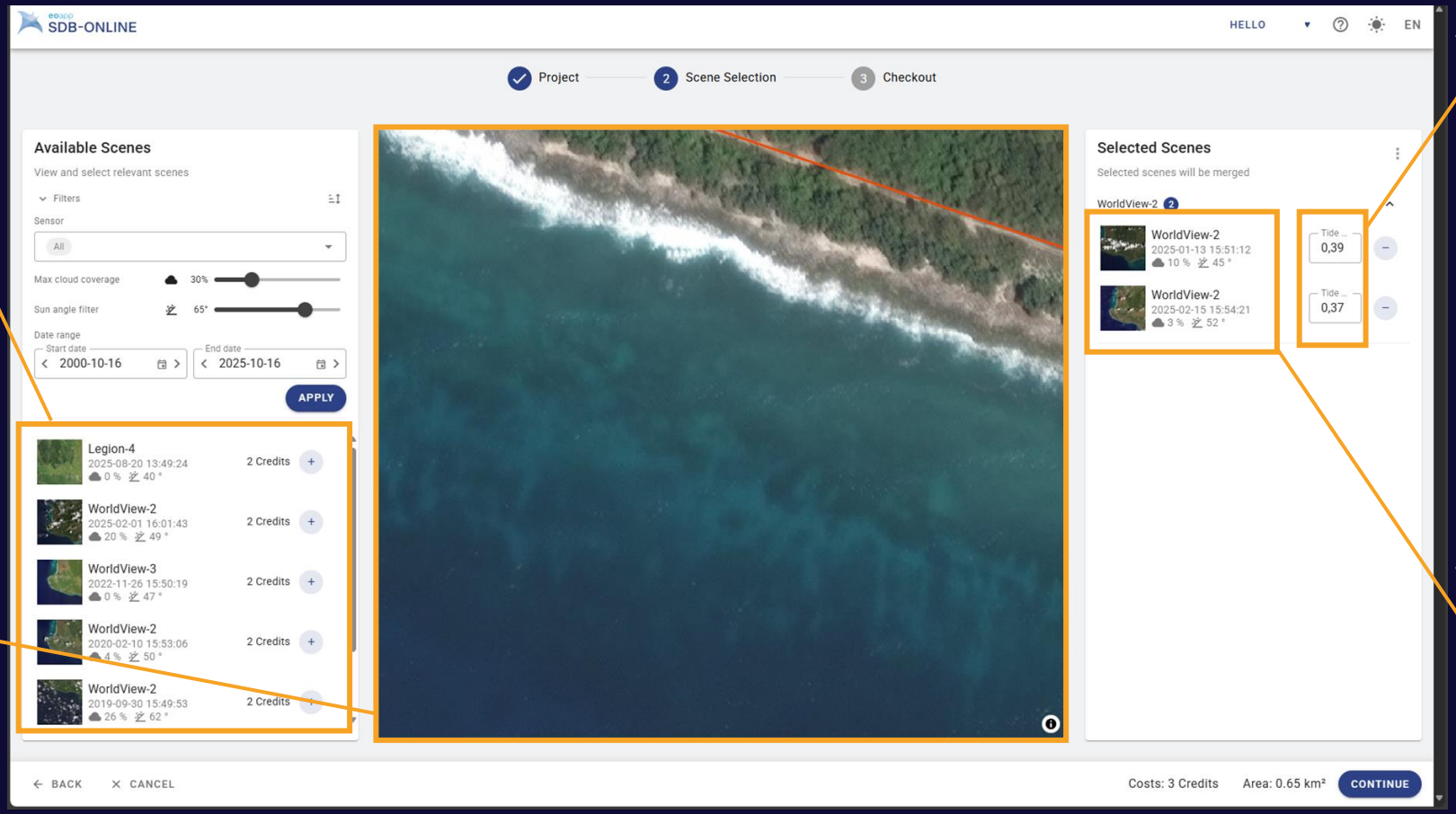
# 1 – DEFINE SITE AND SELECT IMAGERY AND DATE

## COUPLED WITH MAXAR/VANTOR ARCHIVES

+ Directly coupled with satellite data archives from Maxar/Vantor and European Space Agency

+ Visualise imagery in native resolution




+ Image satellite recording coupled with global tidal models

+ Select multiple records for time series

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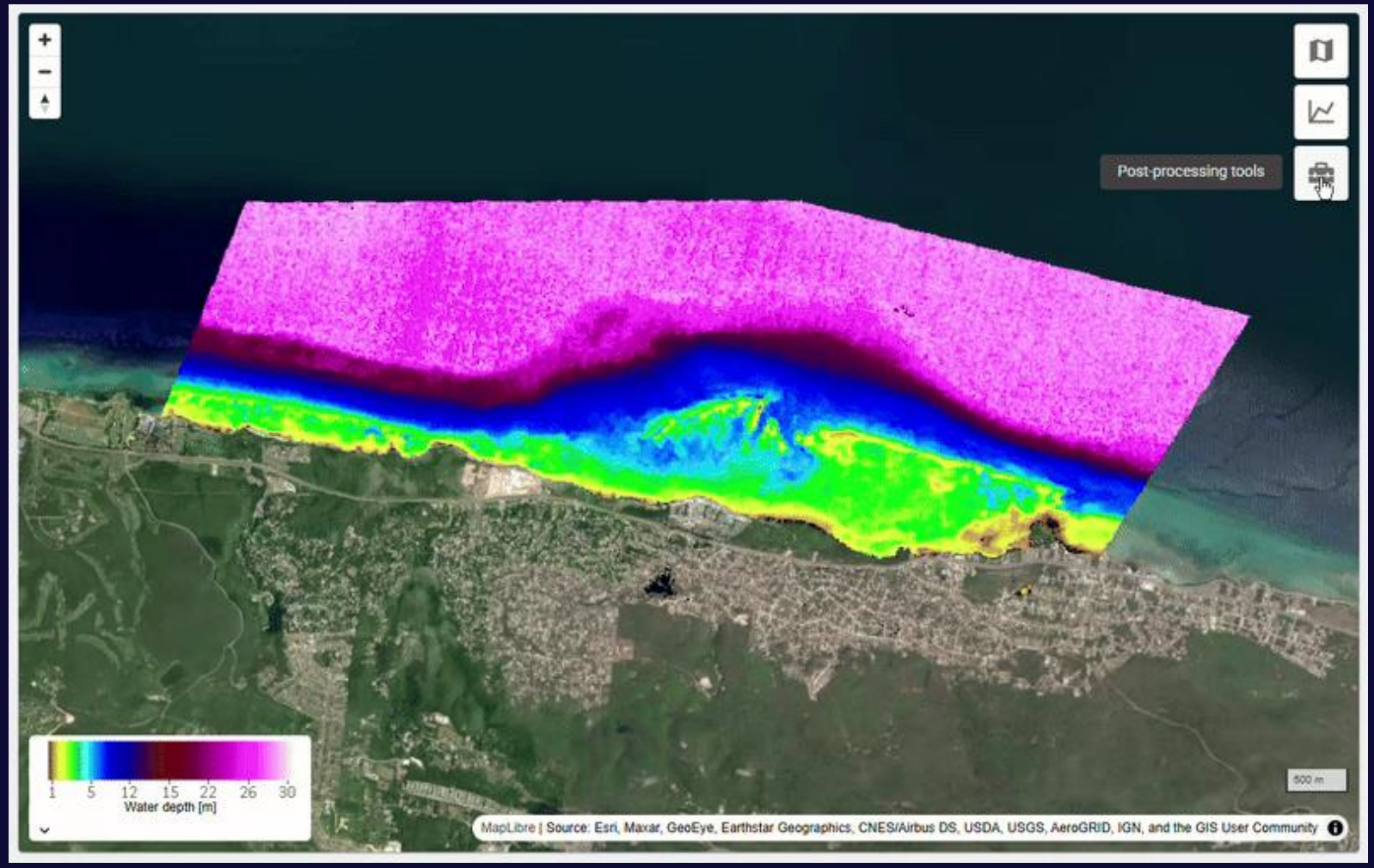
# 2 – ACCESS RESULTS AND ON-THE FLY POST-PROCESSING

## ON-THE FLY EDITING AND VISUALISATION

**Visualise and analyse data online**

+ Draw and export transects
+ Visualise in 3D
+ Overlay nautical charts
+ Clip and mask data
+ Adjust tides
+ Access validation statistics
+ Download gridded data

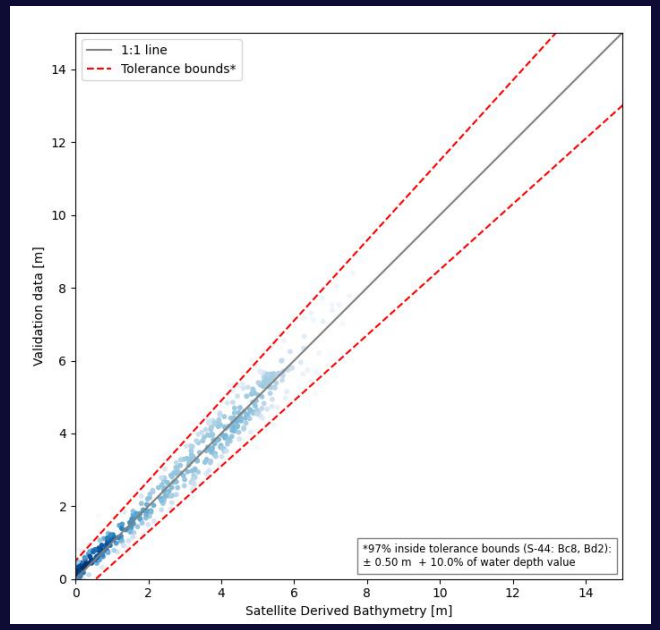


# 3 – ONLINE VALIDATION AND ACCURACY ASSESSMENT

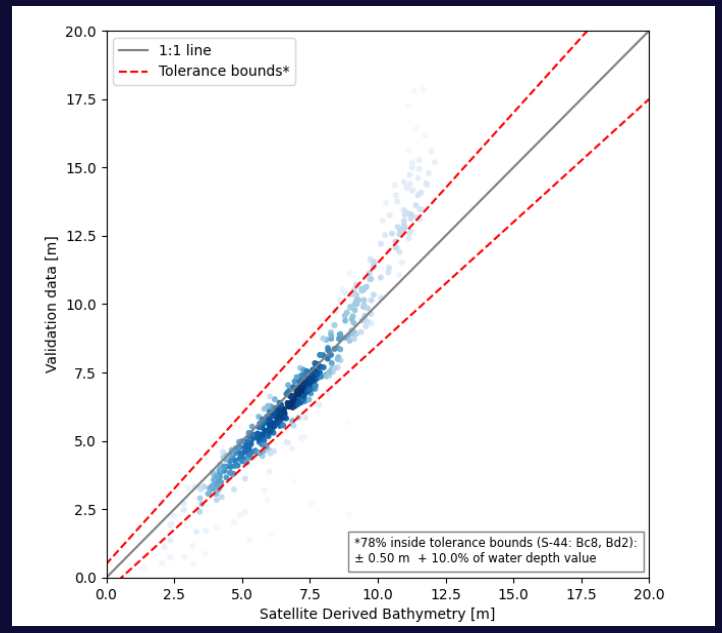
## ON-THE FLY EDITING AND VISUALISATION

**Integration of reference bathymetry as optional feature**

+ User data (e.g. SBES, MBES)
+ Satellite-Lidar data (QA/QC'd by eomap team or as direct download)
+ Composite bathymetry grids from 3rd parties




Lake Michigan, USA




Northern Canada

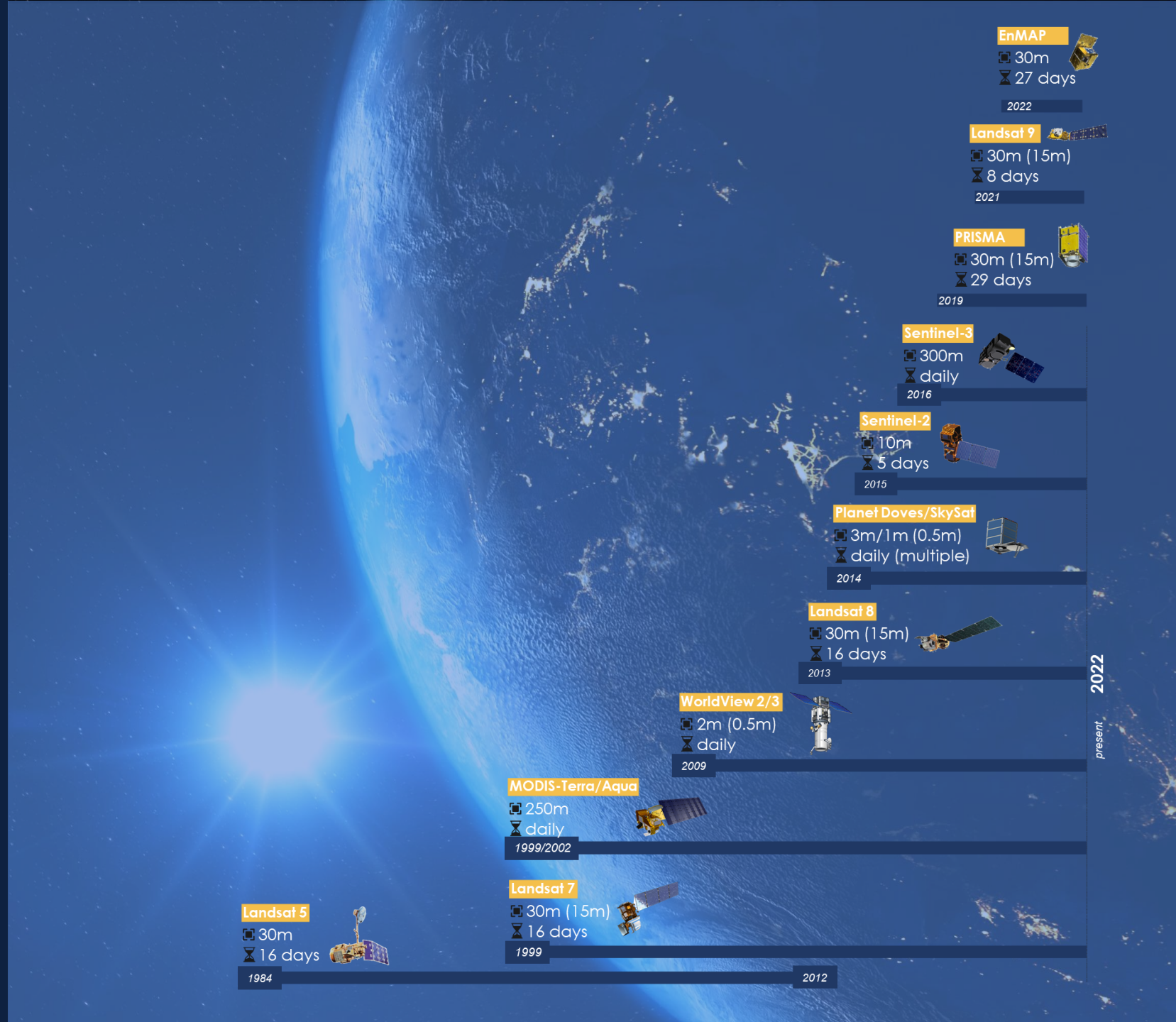
# SATELLITES SOURCES

Back in time over decades

Data archives for up to 40years (moderate res) to 20 years (very high res).

Multiple daily acquisitions in high resolution

EOMAP holds contracts, partnerships and teamings with all relevant satellite providers.

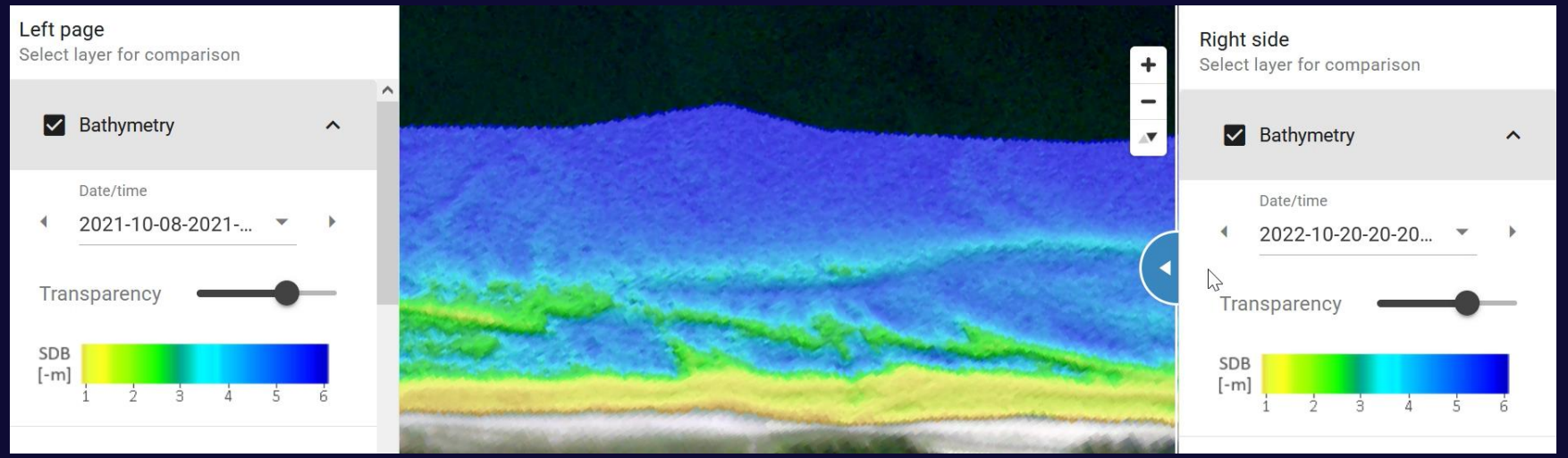


# COASTAL CHANGE

## KEEPING UP TO PACE WITH COASTAL DYNAMICS AND STORM EVENTS

**Coastal zones change continuously because of currents and extreme weather events.**
**Our solution monitors those coastal zones and provides unique monthly to annual nearshore bathymetry and coastal maps and reveals coastal dynamics.**

#storm_imapact
#sediment_balance
#coastal_protection
#safety_of_navigation

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# CONTACT US

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