AquaPalette Analyst

Satellites

Mission name: Sentinel-3

Expert in measuring ocean colour, including subtle shades, and can observe algal blooms in all their colourful details.

Credit: ESA/ATG Medialab

What do they do?

Satellites continuously monitor rapid changes, tracking the growth and spread of algae blooms to provide early warnings and mitigate impacts on tourism and aquaculture.

They also unveil long-term effects, such as climate change, over decades.

Sentinel-3 monitors large-scale ocean algae blooms and can assess their impact on neighbouring islands.

This image shows the sea before the algae bloom from Sentinel-3's space perspective.

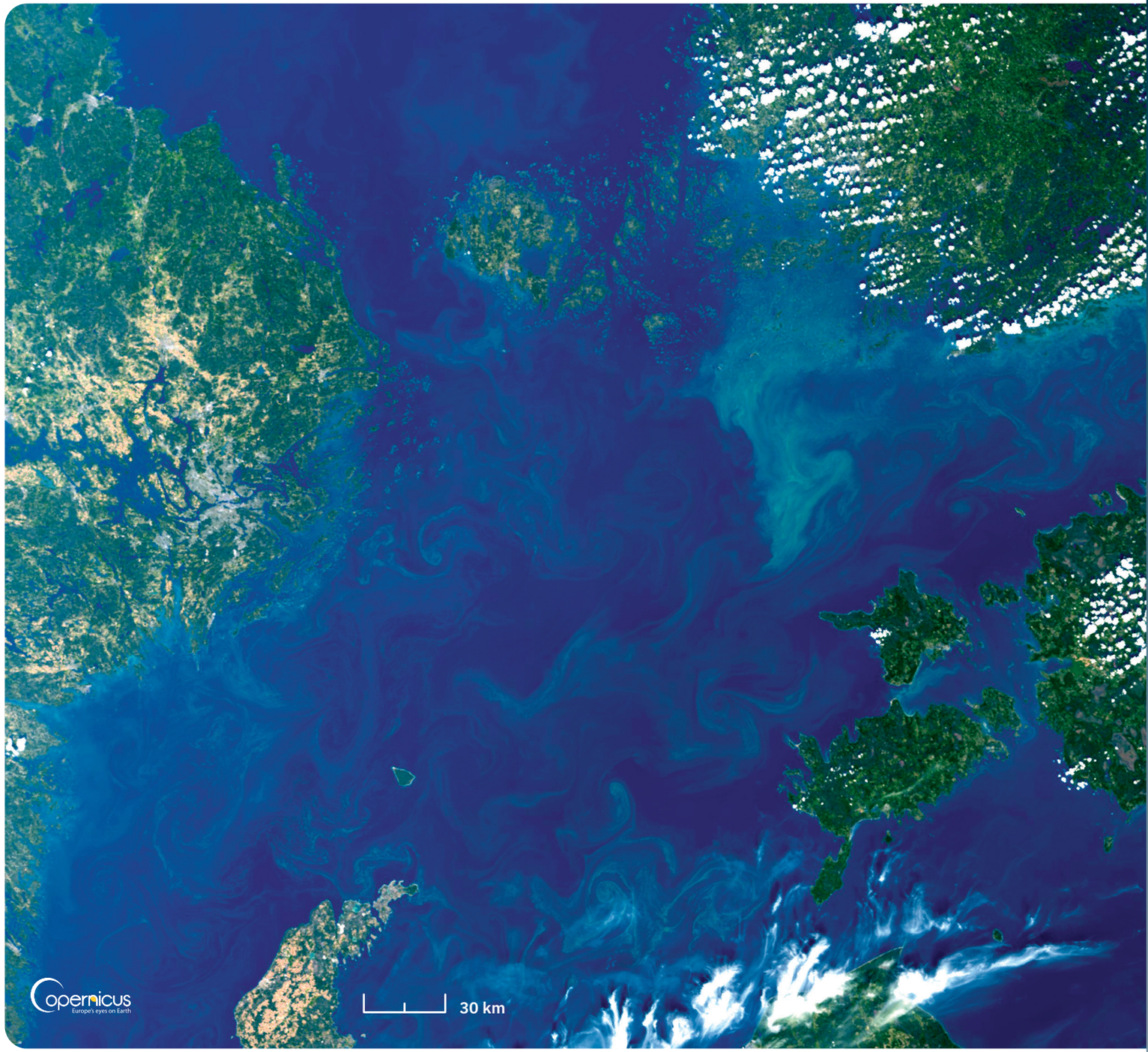
Currents and winds move emerald-green algae to form swirls which are beginning to spread from Nexus Island.

Flip the card to see the impact of the algae bloom!

Copernicus Europe's eyes on Earth

30 km

Credit: European Union. Contains modified Copernicus Sentinel data 2024. Note: This is an enhanced image to allow better visualization.



Credit: European Union. Contains modified Copernicus Sentinel data 2024. Note: This is an enhanced image to allow better visualization.

Which algae may have caused the bloom?

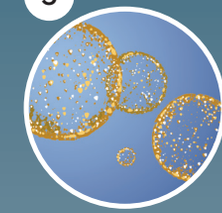
1

2

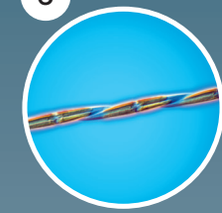
3

4

5



6



This image shows the sea during the algae bloom from Sentinel-3's space perspective.

Flip the card to see the same area before the algae bloom!

esa

EMBL

SuperSharp Snapper

Satellites

Mission name: Sentinel-2

Investigates Earth's land and coastal areas with great detail. It captures light reflections from algae to identify different types of algae based on their unique colours.

Credit: ESA/ATG Medialab

What do they do?

Satellites collect data from space for observing the Earth, reaching places too remote to visit in person.

They provide a global view of algae blooms and their role in, and response to, climate change.

Sentinel-2 excels in smaller areas and can even see down to the size of 10 meters from space!

Sentinel-2 captured this image before the algae bloom occurred.

Flip the card to see the algae bloom!

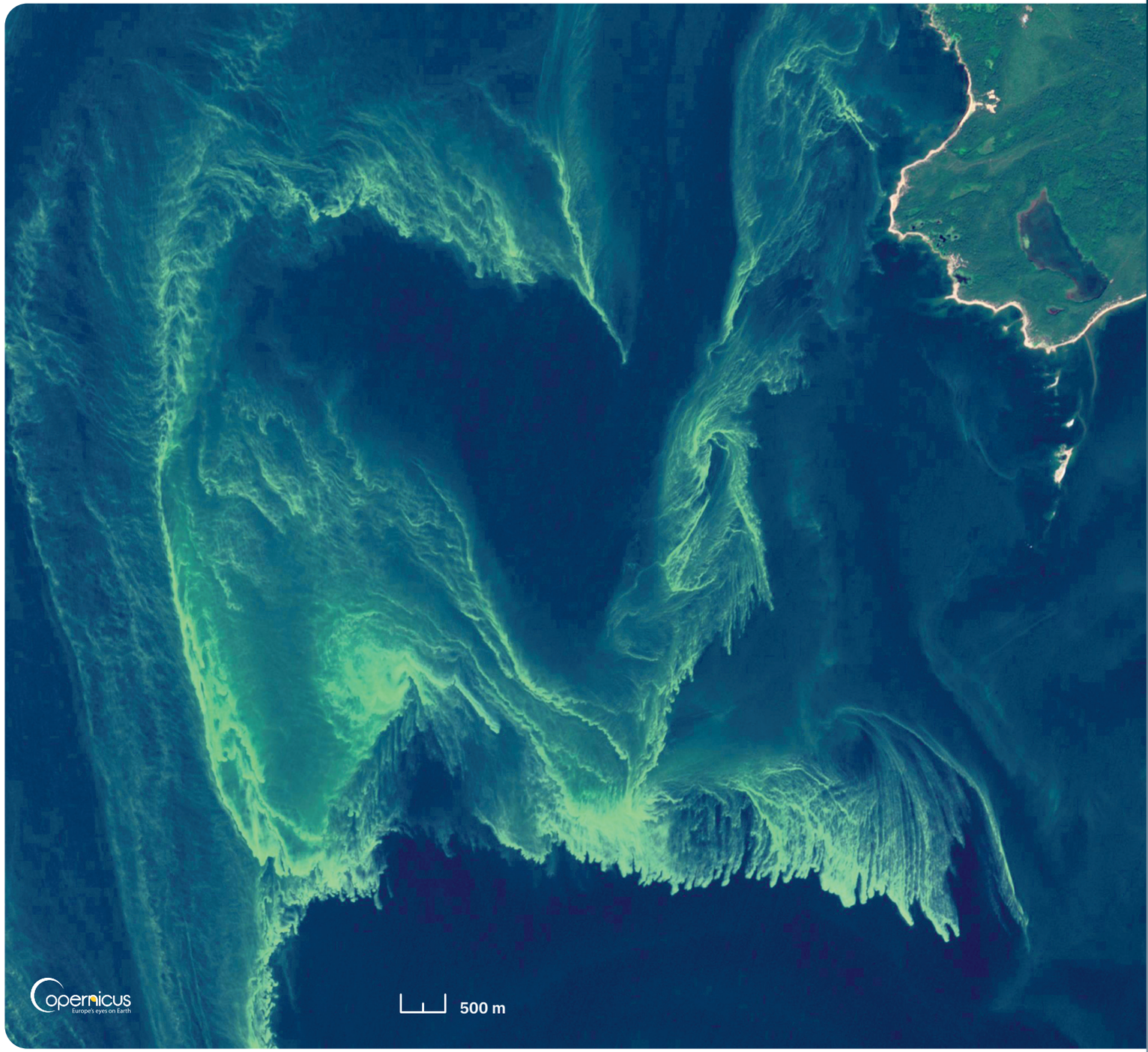
Copernicus
Europe's eyes on Earth

500 m

esa

EMBL

Credit: European Union. Contains modified Copernicus Sentinel data 2024. Note: This is an enhanced image to allow better visualization.



Credit: European Union. Contains modified Copernicus Sentinel data 2024. Note: This is an enhanced image to allow better visualization.

Which algae may have caused the bloom?

Sentinel-2 captured this sharp image during the harmful algae bloom. The bloom appears as green threads or streaks and tints the blue ocean waters with chlorophyll. This makes them measurable for Earth-orbiting satellites.

Flip the card to see the same area before the algae bloom!

esa

EMBL