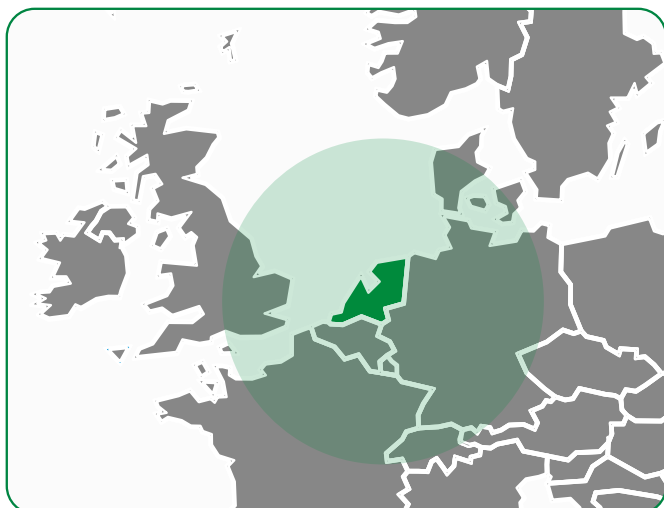


WATER QUALITY MANAGEMENT IN THE NETHERLANDS

What it is about

Sentinel-2 and Sentinel-3 data are being used to monitor water bodies in the Netherlands. These measurements allow the regional water boards, especially the Noorderzijlvest water board, to monitor the quality of water in lakes throughout their region to a degree that is not possible using traditional in-situ water sampling and testing.

Using satellite data is especially helpful in a country like the Netherlands where intensive agricultural practices combined with high population density and shallow lakes are critically affecting water quality. Sentinel data therefore helps authorities to improve water quality at a lower cost, which in turn improves the quality of life for citizens, aids in the protection of biodiversity and helps to ensure environmental sustainability.



What we found

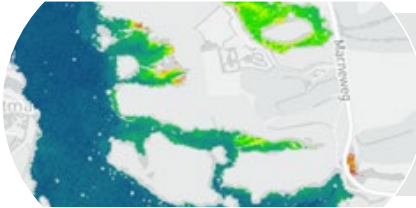
- In this case we saw how Sentinel data is used by a regional water board to monitor lakes more effectively, more frequently and more comprehensively.
- Lakes in The Netherlands are at an elevated risk of pollution due to high population density and intensive agriculture practices. Moreover, because they tend to be shallow, they can heat quickly and support excessive algae growth.
- The utilization of Sentinel satellite data in the Netherlands not only produces beneficial outcomes within the country but also highlights its significance in addressing regulatory aspects of water monitoring throughout Europe.

WATER QUALITY MANAGEMENT IN THE NETHERLANDS



The Satellite Data

Copernicus Sentinel-2 provides free-of-charge frequent wide-swath, high-resolution multispectral imagery over Finland with 13 spectral bands. Sentinel-3 carries the Ocean and Land Colour Instrument which provides complete, global, surface temperature measurements every 2 days.



The Service Provider

Water Insight, a Dutch SME, leverages Copernicus Sentinel-2 and Sentinel-3 data to offer satellite-based services on water monitoring. These measurements complement their in-situ optical tools and help users to monitor lakes.

✓ €167K pa



The Primary User

The Noordrijnvest Water Board is a public body in charge of water management in a region to the north of the country. They use Water Insight's service as part of their lake quality management responsibilities and for reporting to national/international level entities.

✓ €27m pa



Secondary Beneficiaries

Ministry of Infrastructure and Water Management - and other ministries - have access to better water quality information from Water Boards, upon which they can base policy decisions. Such decisions also allow to improve water quality and consequently avoid EU fine resulting from poor water quality.

✓ €100k - €200k pa



Society & Citizens' Benefits

The local communities benefit from improved environmental conditions while enjoying leisure facilities in clean water.

✓ €6m - €11m pa

Total benefits

Economic



Environmental



Innovation



Regulatory



Science & Tech



Societal



Anticipated benefits: €33m - €38m pa across The Netherlands

About the project

Through a series of case studies, EARSC aims to gather quantitative evidence that the usage of Copernicus Sentinel data provides an effective and convenient support to various market applications. These studies are undertaken in the frame of the project "Showcasing the benefits brought by the usage of Sentinels data to society, environment and

economy: a bottom-up assessment based on traceable impacts along selected value chains", under an assignment from the European Space Agency (ESA) funded by the European Union as part of the Copernicus Programme.

Download the full report from the project website



<http://earsc.org/sebs>

