

# Geo intelligence for real-world **water** answers

Ils Reusen

[ils.reusen@vito.be](mailto:ils.reusen@vito.be)

▶ Sentinel Benefits Study Workshop, 6 June 2024, online



## WaterMonitor - Flanders

- VITO Remote Sensing: Developing Earth Observation (EO) instruments, technologies and services turning EO data into real-world answers for agriculture, climate, environment, **water**, infrastructure and security
- Flanders Environment Agency (VMM): The Water Monitor Department has, among other tasks, the task of measuring, modelling and reporting surface water quality and water soil quality
- VMM user needs: Sentinel-2 for temporal and spatial monitoring of Chl-a in Flemish rivers and lakes; HABs; WFD reporting
- An operational NRT WaterMonitor viewer based on time series of Sentinel-2 and VMM in situ data for Chl-a is developed with indication of exceedance of Chl-a threshold for Flemish rivers and lakes
- Validation with VMM in situ data and other (including high frequency) Flemish in situ data (to be presented at IGARSS2024)
- VMM-VITO joint in situ data acquisition 2023 and 2024

User-defined classes

VMM waterkwaliteitsmonitor

Home Meer info

Satellietbeeld Chlorofyl-a NDAVI

14/09/2020 0% CHL: 112.22 MAX: klasse N/A ZGEM: **Ontoereikend**

**SCHULENSMEER**

OWL-code: VL05\_200  
 Type: Groot diep alkalisch meer - eutroof (Awe)  
 Statuut: Kunstmatig  
 Stroombekken: Demer

Gemiddelde CHL-waarden doorheen de tijd.  
 Filter de beschikbare data met behulp van onderstaande sliders.  
 Opgepast, niet voor elke satellietvlucht is er data beschikbaar (door bewolking of andere beperkingen van de instrumenten).

Bewolking (%) 50 0 435  
 Gemiddelde CHL-waarde (µg/l)

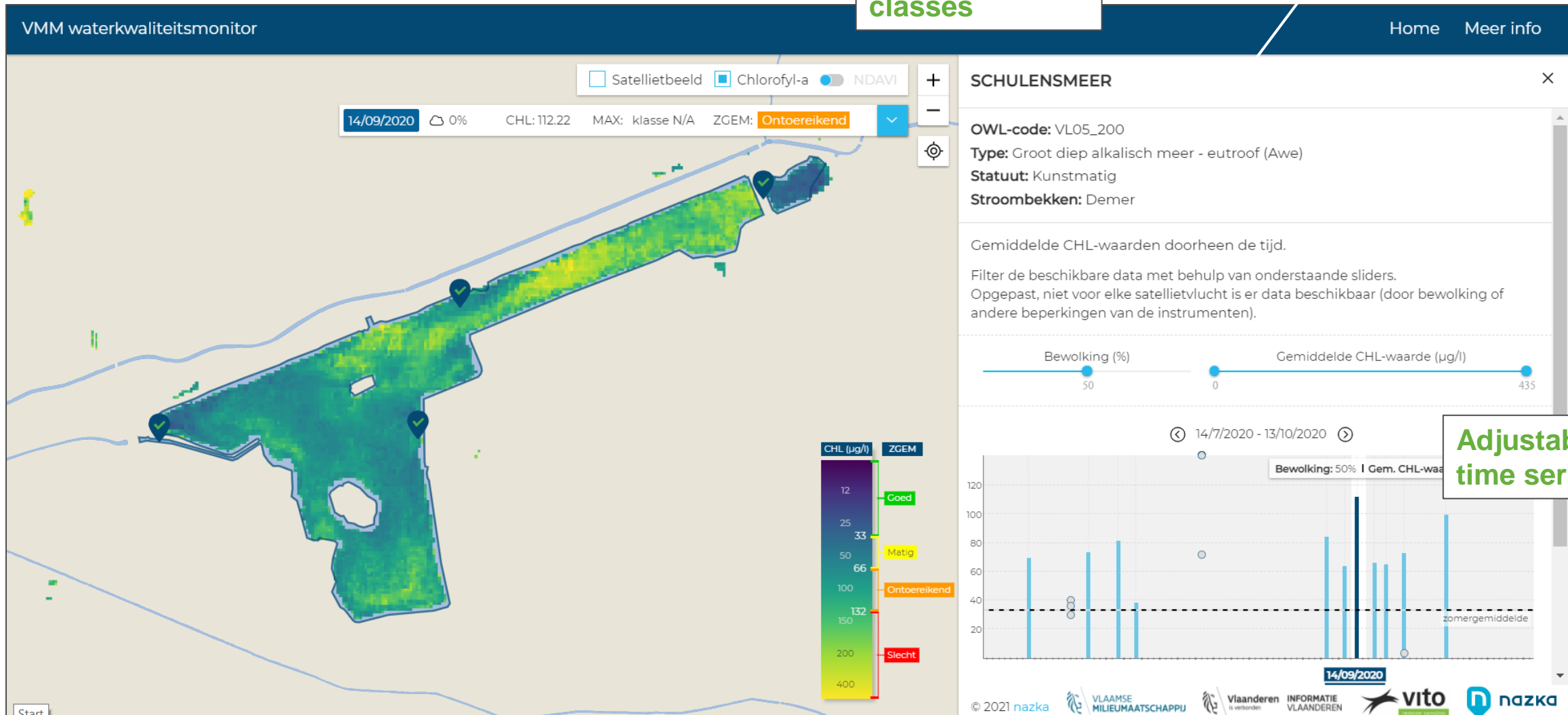
14/7/2020 - 13/10/2020

Bewolking: 50% | Gem. CHL-waarde

zomergemiddelde

14/09/2020

© 2021 nazka VLAAMSE MILIEUJAATSCHAPPIJ Vlaanderen INFORMATIE VLAANDEREN vito nazka



The interface displays a map of Schuylensmeer with a chlorophyll-a heatmap. A legend on the right shows quality classes: Goed (12-33 µg/l), Matig (33-66 µg/l), **Ontoereikend** (66-150 µg/l), and Slecht (150-400 µg/l). The current value is 112.22 µg/l, categorized as 'Ontoereikend'. A time series chart shows data from July 14, 2020, to October 13, 2020, with a summer average (zomergemiddelde) indicated by a dashed line at approximately 35 µg/l. The current date is 14/09/2020.

Adjustable time series