

living planet symposium

BONN
23–27 May
2022

TAKING THE PULSE
OF OUR PLANET FROM SPACE



Earth Observation in the Netherlands

Dr. Raymond Sluiter

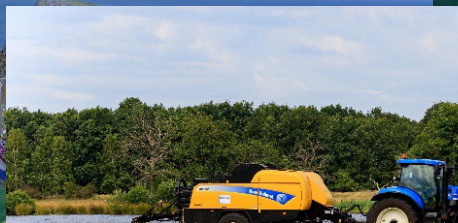
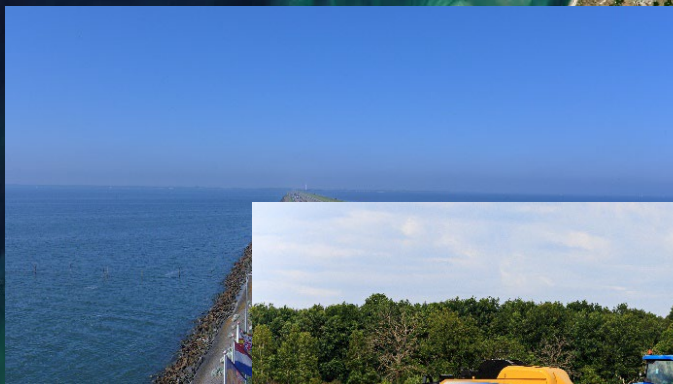
26/05/2022

MEASURING SEA-LEVEL CHANGE

Since the early 1990s, satellite altimeters have revolutionised our understanding of sea-level change

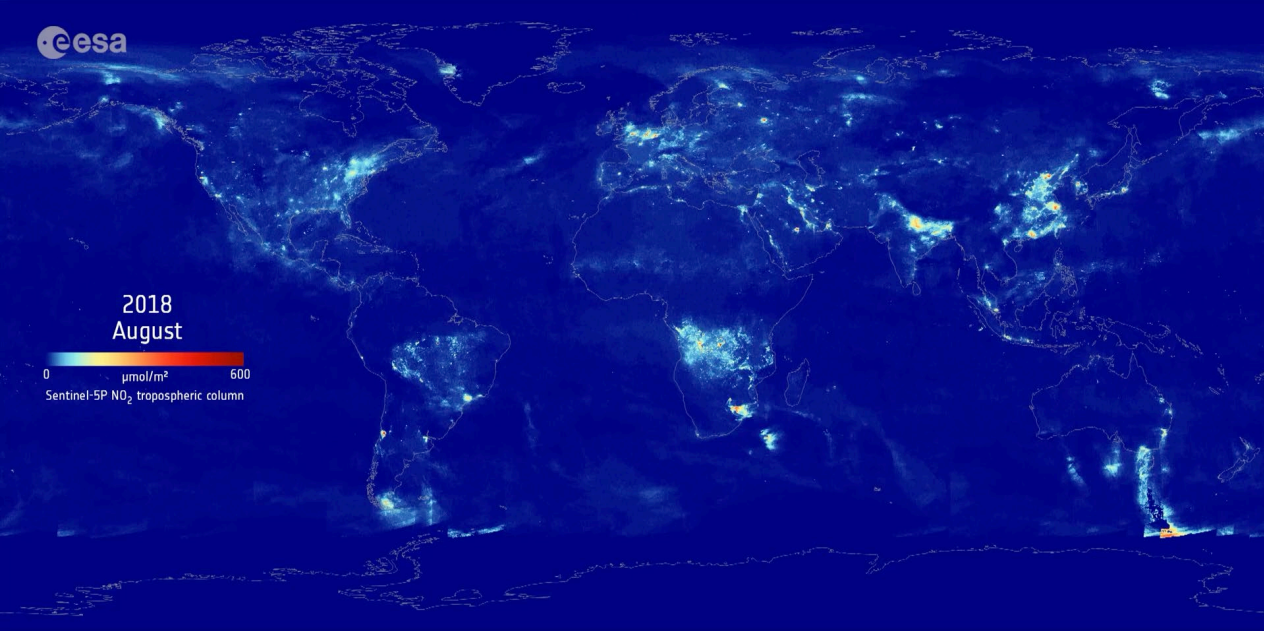


Data source: ESA, JPL and CMEMS



2018
August

0 $\mu\text{mol}/\text{m}^2$ 600
Sentinel-5P NO_2 tropospheric column



Space Infrastructure (Upstream)		Space Data and Applications (Downstream)		Other Space Industry Services	
Launchers 	Satellites 	Earth Observation Applications 		Space Consultancy 	
Propulsion 	IoT 	Data Analytics & Insights 		Space Education 	
Satellite Operations 	Mission Operations 	Location-based Services 		Research, Innovation and Incubation 	
Engineering & Test Services 		Drone/UAV Mapping 		Industry and Professional Associations 	
Subsystems & Components 		Other Space Data Applications 		Space Museums 	
Satellite Communication 				Space Recruitment 	
				Space Creative Services 	
				Government 	

Map version 1.1 - 25 January 2022 - Author: Renico Timmermans for Groundstation.Space ©

This map aims to show all space industry and space related commercial, government and NGO organisations in the Netherlands. This map includes both native Dutch companies and foreign companies with presence in the Netherlands. All logos are copyright of the subsequent organisations. This map has been created to the best knowledge of the authors, reflecting the situation as analysed in January 2022. It does not claim to be complete or accurate. No rights can be derived from this information. Feedback for additions or corrections for future editions is appreciated.

Public sources used to create this map include:

- NL Space Directory (<https://www.nl-space.nl/en/space-directory/>)
- SpaceNed Member List (<https://www.spacen.nl/en/>)
- NL Space Campus Community List (<https://www.nl-spacecampus.eu/discover-our-community/community/>)
- ESA D.C. Non-Dirigible, Incoastables and Akamai (<https://www.esa.int/ESA/Incoastables/Akamai>)
- Aerospace Innovation Hub Community (<https://aerospaceinnovationhub.nl/>)
- EARSOC Members based in the Netherlands (<https://earsoc.org/all-members-2/>)
- Dialogic Vereniging Nederlandse Filmmakers (<https://www.dialogic.nl/projecten/brade-vereniging-toegevoegde-waarde-in-televisie-voor-nederland/>)

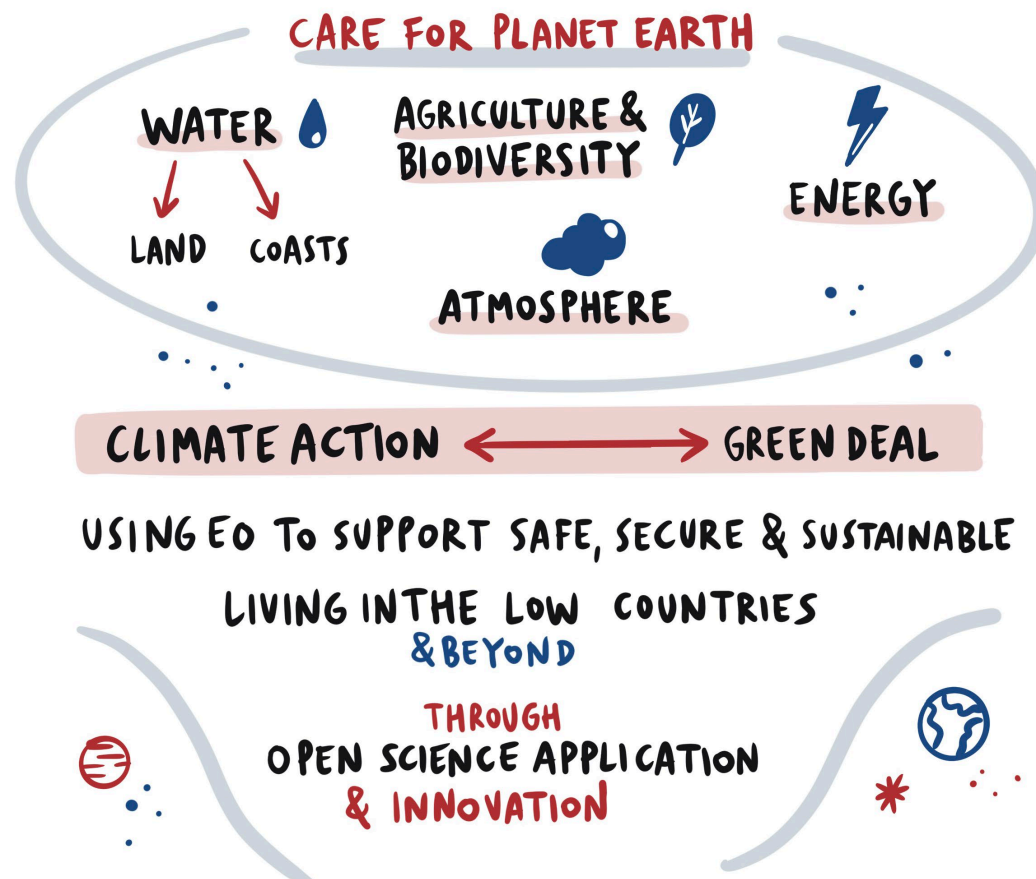
Space Industry Map of the Netherlands 2022



NETHERLANDS

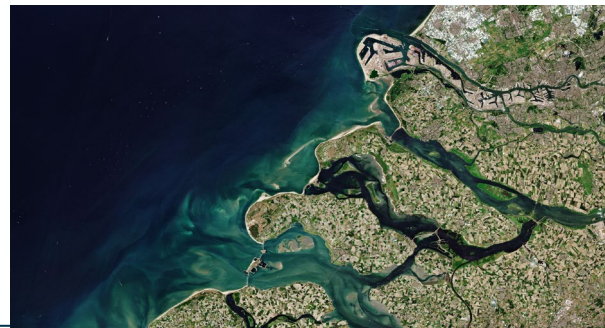


ACTIONABLE INFORMATION ON CLIMATE, WATER MANAGEMENT, SEA LEVELS, AGRICULTURE AND INNOVATION. WE LEVERAGE SPACE FOR 'SOFT POWER' TO CONTRIBUTE TO GLOBAL CHALLENGES.

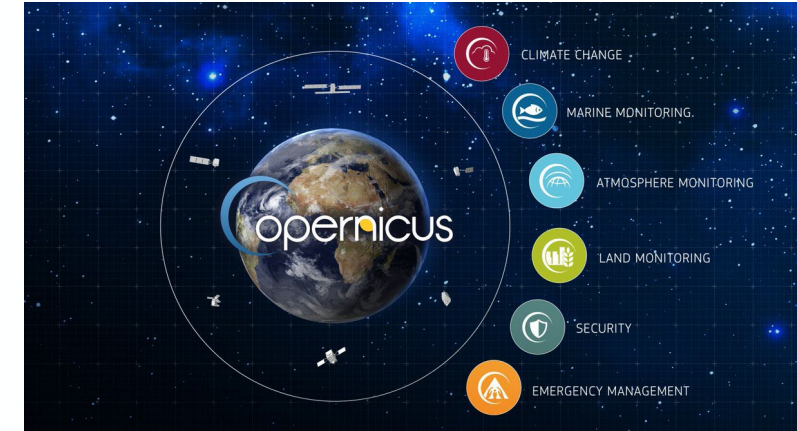


Care for Planet Earth – draft proposal

- Invest in the development of new earth observation missions for high-resolution monitoring of greenhouse gases, particulate matter, air quality and nitrogen.
- Invest in the development of measuring instruments for the management of coastal and inland waters.
- Promote the use of satellite data for challenges related tot climate change and sustainability.
- Support Dutch scientists who contribute to ESA instrumentation.
- Provide the access to a federated data infrastructure for managing, processing and analyzing open earth observation data.
- Connect to the ambitions, programmes and challenges w.r.t. the European Green Deal and national programmes w.r.t. the energy transition, Nitrogen, the rural areas and climate.
- Strengthen the Netherlands' commitment to ESA earth observation programmes.



- ESA:
 - FutureEO
 - CSC
 - CCI / Climate Space
 - Incubed+
 - Bass
- EC:
 - Copernicus Services
 - H-Europe
 - Digital Europe: Data Spaces, Destination Earth



National Programmes

- Satellite Data Portal
 - “Contributing mission”
 - X-monthly VHR-data (at present SuperView)
- GO-Programme: scientific calls for the use of space infrastructure for Earth observation and planetary research (jointly with the Dutch Research Council)
- PIPP - Partnerships for Space Instruments & Applications Preparatory Programme
- SBIR (Small Business Innovation and Research)
- Geo for Agriculture & Water (G4AW: commissioned by foreign affairs)

The image shows a screenshot of the Netherlands Space Office website. The top part features a satellite map of the Netherlands with labels for 'Noordzee' and 'Maastricht'. Below the map is a navigation bar with links: Home, About us, G4AW Projects, Get Inspired, Results, Resources, Contact. A search bar is also present. The main content area has a large banner for G4AW (Geo for Agriculture & Water) with a photo of a farmer in a rice field. The text on the banner reads 'Dutch watermanagement, driver for global foo...' and 'Read more'. The bottom of the banner mentions 'GEO Week 2021'.



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