

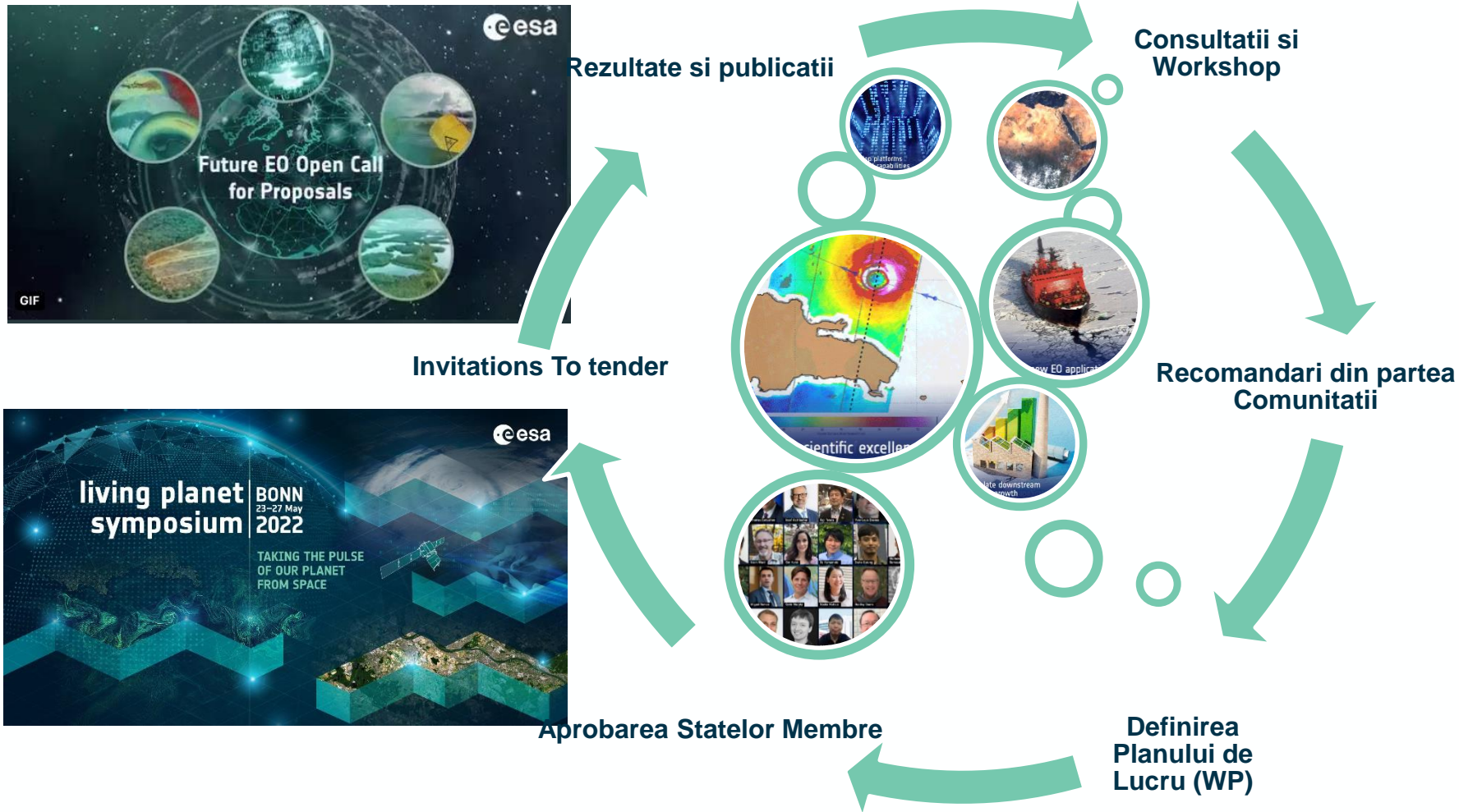
Open Science in Programele ESA

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Science Section, EOP-SDS

Smart Diaspora 2023 Promostiinta: de la citizen science la accesul liber
in infrastructurile de cercetare europene
11/04/2023

Cum este construit WP

Interactiv, impreuna cu comunitatea



ESA Unclassified - For ESA Official Use Only

ESA/PB-EO(2023)9
 Att.: Annex 1
 Paris, 30 January 2023
 (Original: English)

EUROPEAN SPACE AGENCY
EARTH OBSERVATION PROGRAMME BOARD

Earth Observation Envelope Programme
FutureEO-1 Segment 2 – Development and Exploitation Component
Work Plan for 2023

Summary

In accordance with the procedure outlined in the Programme Implementing Rules, the Executive is tabling for approval a draft work plan for the activities to be carried out in 2023 under the Development and Exploitation (D&E) component of FutureEO-1 Segment 2.

The present version takes into account the FutureEO-1 Segment 2 Implementation Plan (ESA/PB-EO(2023)7).

Required Action

1. DOSTAG is invited to review the attached FutureEO-1 Segment 2 D&E work plan for 2023, specifically its scientific, technical and operational aspects.
2. In PB-EO, Participating States to the second segment of FutureEO-1 are invited to approve the draft FutureEO-1 Segment 2 D&E work plan for 2023.

Majority required and Voting Rights

Simple majority of the Participants to FutureEO-1 Segment 2 (AT, BE, CZ, DK, EE, FI, FR, DE, GR, HU, IE, IT, LU, NL, NO, PL, PT, RO, ES, SE, CH, UK, CA, LT, SK and SI), representing at least half of the contributions to the segment.

Legal Basis

- Article 2 c) of the Implementing rules (ESA/C/CXL/Rules 1, rev. 5)
- DOSTAG ToR, bullet a), ESA/PB-EO(2010)129
- PB-EO ToR, bullet 1, ESA/C(98)41
- Act in Council on the Introduction of Weighted Vote in Agency's Optional Programmes" (ESA/C/CCXXIX/Act 1 (Final), attached to ESA/C(2012)102)





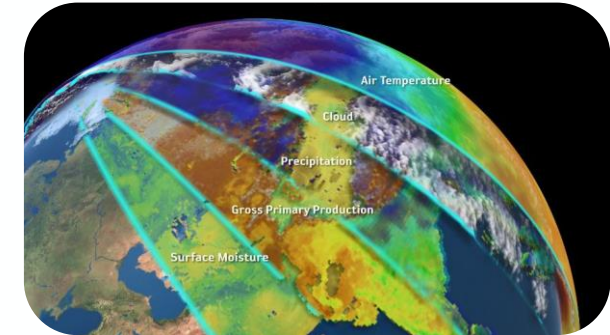
Clustere Stiintifice ESA ([ESA Science Clusters](#)), o initiative a comunitatii stiintifice pentru dezvoltarea de noi produse, metodologii in anumite domenii



Initiativa comuna ESA-CE ([Earth System Science Initiative](#)) menita sa aduca impreuna resursele Horizon Europe si Future EO in proiectele pentru cercetarea pamantului sub forma unor directii punctuale, flagship



Hub Stiintific ESA Science Hub o noua facilitate in ESRIN pentru promovarea parteneriatelor si colaborarii cu ESA sau alte institutii

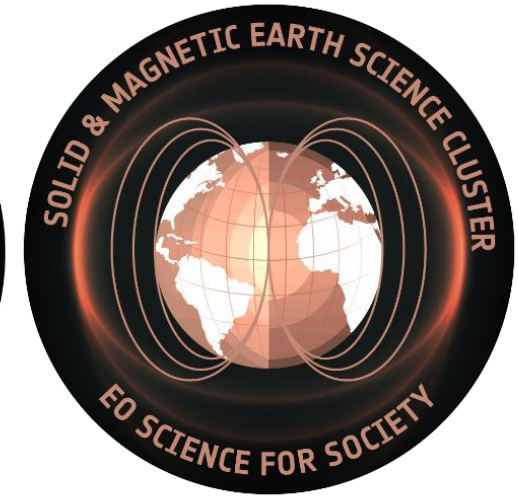


Devoltarea Digital Twin Earth si [Destination Earth](#); reconstructia digitala a sistemului Pamant si o mai buna intelegere a fenomenelor climatice dar nu numai

Cluster Stiintific ESA: O abordare bottom-up



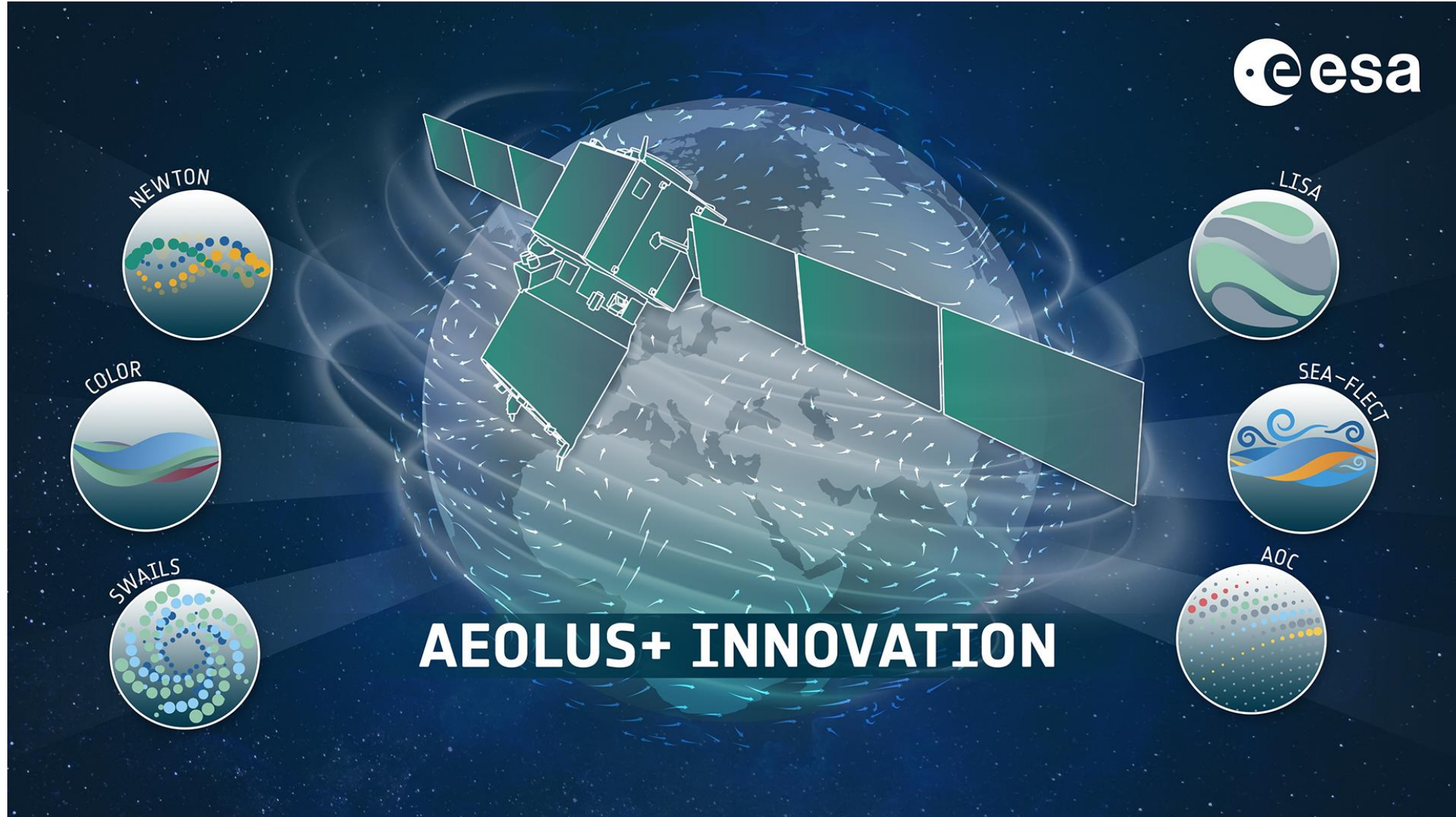
- *Agenda dezvoltata pe baza comunicarii continue cu comunitatea stiintifica;*
- *Promovarea activitatilor comunitatilor pentru definirea unui scop comun si unui tel ambitios;*
- *Promovarea parteneriatelor interdisciplinare intre diferite proiecte si tematici;*
- *Exploatarea pe deplin a misiunilor satelitare;*



AOD/BRDF
Glyoxal
Ocean Color
SIF
Chlorine Dioxide
Water Vapor
Sulfur Dioxide Layer Height

S5P+ INNOVATION

<https://eo4society.esa.int/tag/sentinel-5p-innovation+atmosphere-science-cluster/>
<https://data-portal.s5p-pal.com/>



<https://eo4society.esa.int/tag/aeolus-innovation+atmosphere-science-cluster/>

Definitie

- Program de finantare la initiativa SM pentru promovarea noilor idei din partea comunitatii;

Obiective

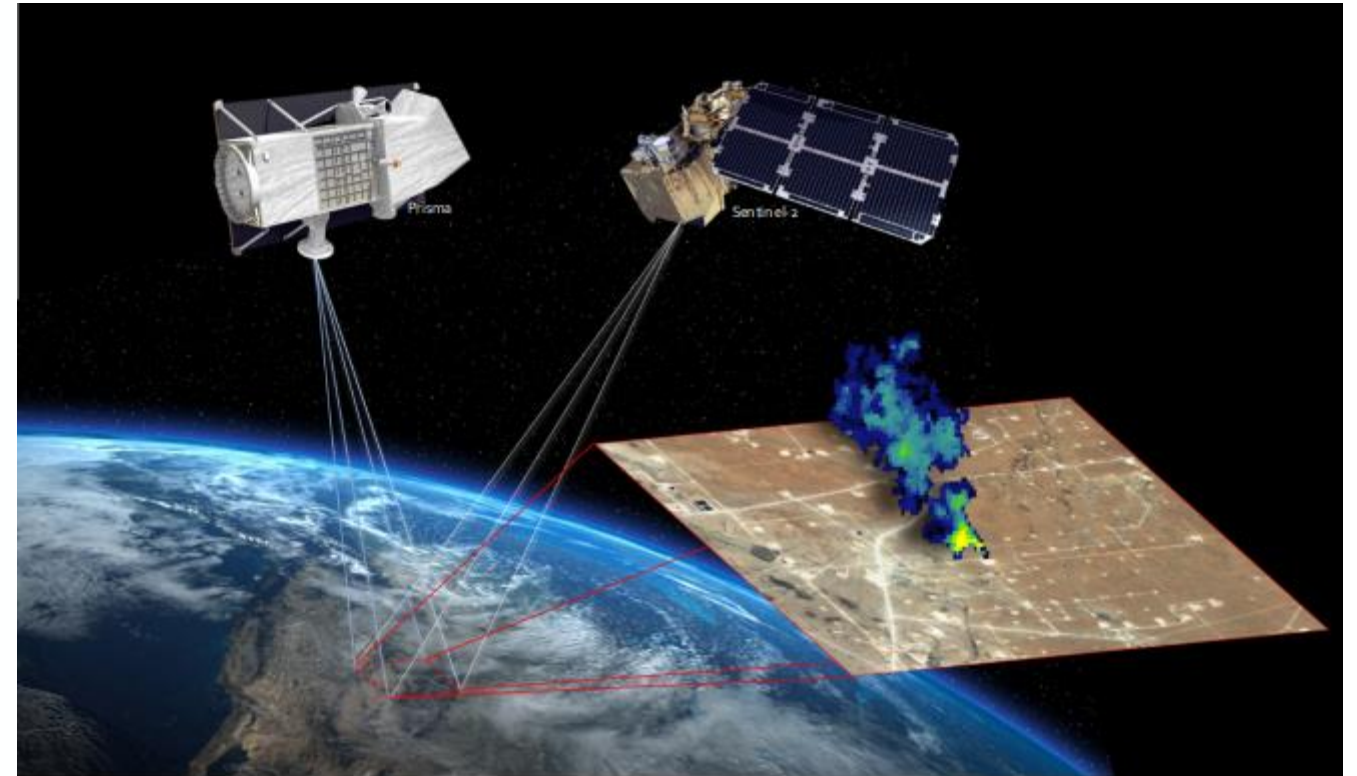
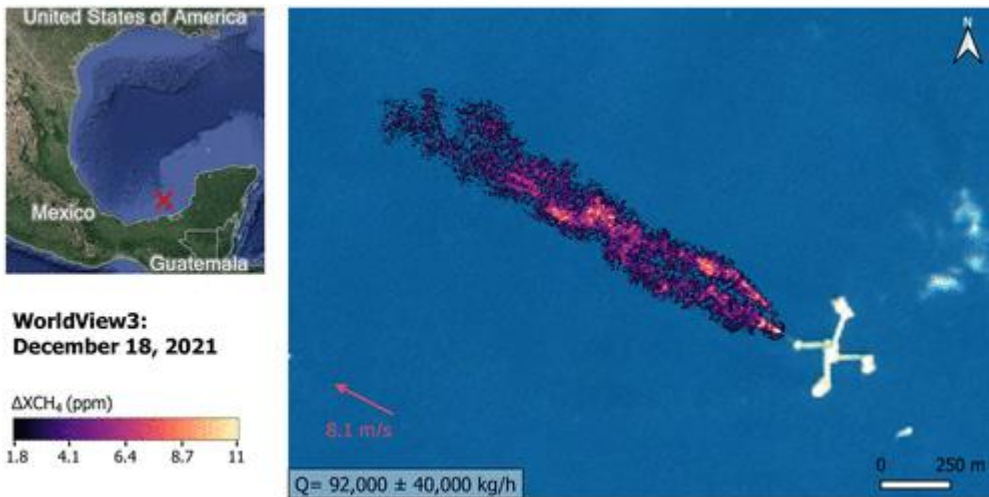
- Verificarea rapida a unui concept nou folosind date EO;
- Exploatarea la maximum a datelor satelitare;
- Toate elementele din FutureEO (stiinta, aplicatii, competitivitate industrială, inovare digitală, initiative regionale)

Aspecte financiare

- Proiecte conventionale – max 200k Euro
- Verificare si testare rapida – max 75k Euro

ITT: <https://esastar-publication.sso.esa.int/ESATenderActions/details/6872>

- Detectia si cuantificarea surselor punctiforme de metan
- Dezvoltarea de algoritmi folosind imagini satelitare
- Sentinel – 2, PRISMA, WorldView
- Impact politic si stiintific
- [Rezultate](#)



ESA



FutureEO

ESA Programul de Stiinta si Inovare



EC-R&I

Horizon Europe

Programul cadru pentru Stiinta si Inovare



Prioritati comune



Kick-off in pilot phase (2020-2022)



In preparation full phase 2023+



Cloud-Aerosols Interactions:

Foster enhanced observations and scientific assessment of clouds-aerosols interactions and impacts on the radiation and water cycles based on novel advances in aerosol retrievals, novel data products and data analysis exploiting existing and novel missions including EarthCARE and Multi Angular Polarimeter. This activity shall also seek to establish a large European coordinated action by exploiting synergies with relevant ground-based data and modelling efforts in Europe.

ITT 1-1.5MEuro range

Horizon Europe

- HORIZON-CL5-2023-D1-01-04:
Improved knowledge in cloud-aerosol interaction
 - 2 projects, 16MEuro
- HORIZON-CL5-2024-D1-01-01:
Enhanced quantification and understanding of natural and anthropogenic methane emissions and sinks
 - 1 project, 15MEuro

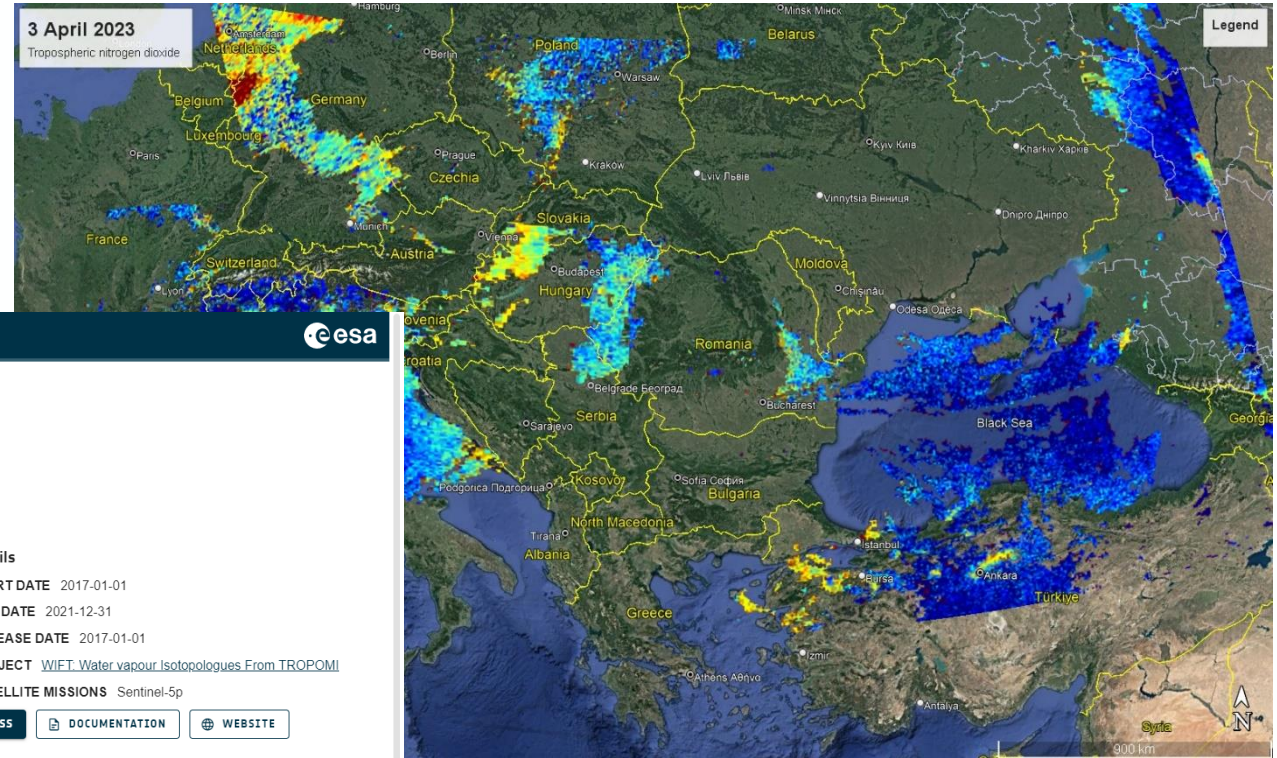
Global Methane Assessment:

Foster a community effort to enhance global CH₄ multi-mission retrievals from space with a major focus on quantifying and explaining recent CH₄ increases. Including development of advanced multi-sensor medium-resolution (e.g., S5P) and HR products addressing regional priority areas and point sources (e.g., landfills, agriculture). This activity shall also seek to establish a European coordinated action in synergy with planned EC and nationally funded projects.

ITT 1-1.5MEuro range

EO Browser

- Copernicus Sentinels
- Third Party Missions
- Posibilitate API



OPEN SCIENCE CATALOG

Home Metrics Search API Access

Catalog / (LPF) WIFT / PRODUCT Extended scientific HDO/H2O total column_TROPOMI

Extended scientific HDO/H2O total column_TROPOMI

ATMOSPHERE HDO (LPF) WIFT

Description

Extended scientific HDO/H2O total column data product from short-wave infrared (SWIR) measurements by the Tropospheric Monitoring Instrument (TROPOMI) including clear-sky and cloudy scenes. The retrieval employs a forward model which accounts for scattering, and the algorithm infers the trace gas column information, surface properties, and effective cloud parameters from the observations. Compared to the previous clear-sky-only data product, coverage is greatly enhanced by including scenes over low clouds, particularly enabling data over oceans as the albedo of water in the SWIR spectral range is too low to retrieve under cloud-free conditions. The new dataset is validated against co-located ground-based Fourier transform infrared (FTIR) observations by the Total Carbon Column Observing Network (TCCON). TCCON data are available from <https://doi.org/10.14291/TCCON.GGG2014> (Total Carbon Column Observing Network Team, 2017). MUSICA data are available from <https://ftp.cpc.ncep.noaa.gov/inco/MUSICA/>, data until 2014 are also available from <https://doi.org/10.5281/zenodo.48902>. Aircraft profiles from the WISPER instrument from the ORACLES 2018 campaign are available from <https://doi.org/10.5281/zenodo.5748368>.

Details

- START DATE 2017-01-01
- END DATE 2021-12-31
- RELEASE DATE 2017-01-01
- PROJECT [WIFT: Water vapour Isotopologues From TROPOMI](#)
- SATELLITE MISSIONS Sentinel-5p

ACCESS DOCUMENTATION WEBSITE

Product Extent

LOG IN

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Open Science Catalog

- Rezultate proiectelor stintifice
- Posibilitate API

