Space4SDGs: The ESA SDG Catalogue

Committee for Peaceful Use of Outer Space
Vienna, 27 June 2024

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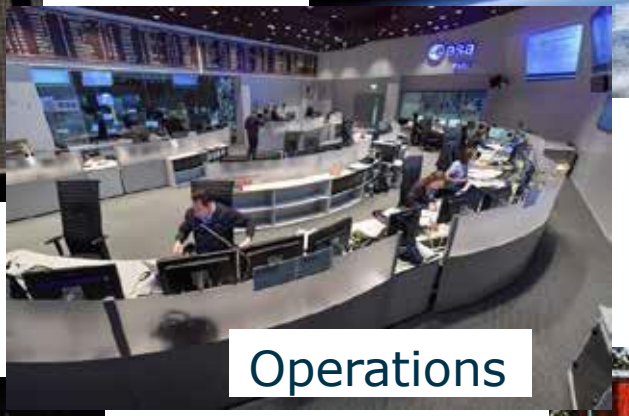
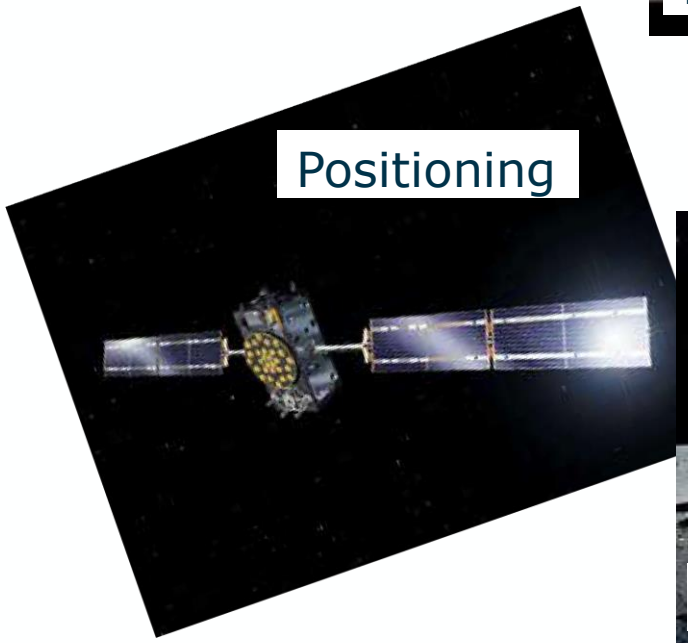
Partnerships and Global Challenges

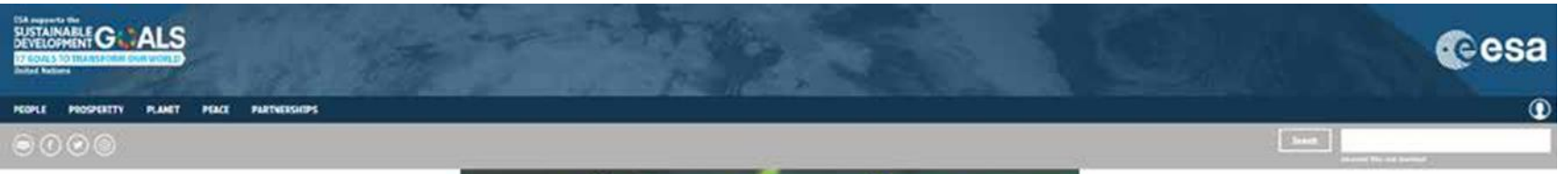
SUSTAINABLE DEVELOPMENT GOALS

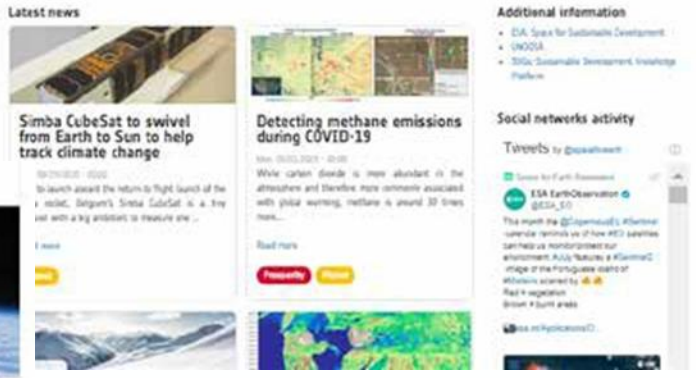
SPACE4SDGS

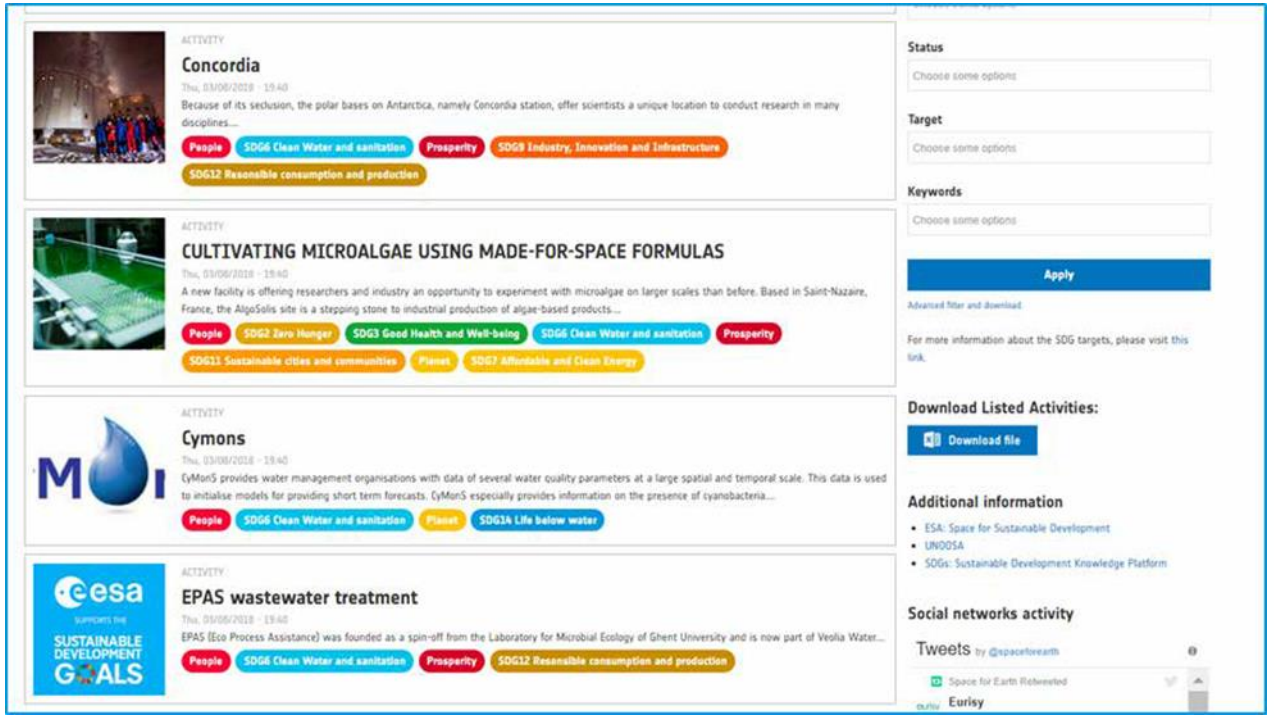
All means →socio economic benefits











ESA online catalogue: https://sdg.esa.int

3.Existing solutions

360 BLUE

Relevant SDGs

SDG6 Clean Water and sanitation

SDG12 Responsible consumption and production

SDG13 Climate action

ACTIVITY - THU, 07/05/2020 - 15:05

Space-related services for water management

Around 700 million people worldwide could be displaced due to intense water scarcity by 2030. ESA-coordinated 360blue uses data from EO and communication satellites to provide local public authorities with information on water quality and water-related risks, facilitating sustainable water management.

Source: UN Water

Short description

The 360blue service is an information and software suite aiming at determining water related risks, supporting optimization of water management, and assessing water footprints. It uses Internet of Things (IoT) sensor data, satellite imagery, and open access data sources to deliver insights into water usage, water availability, water quality, and water footprints. Main users are private companies in the food and beverage, mining, construction and agricultural industries, as well as hydro engineering consultancy companies, telecom and IoT service provides and local governments, environmental agencies, waterboards and utilities. It uses several space assets such as Earth observation satellites enabling frequent monitoring of global areas and communication satellites enabling sensors connection in remote places. The 360blue service integrates satellite Earth observation, Internet of Things data and other geo-information sources into meaningful water risk indicators.

Relevant targets

Target:

6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all

6.4 Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity

6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

12.2 Achieve the sustainable management and efficient use of natural resources

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

Organization:
ESA

Organisation

Directorate:
TIA

ESA Organisation

Keywords:
Africa
Agriculture
Crops
Rural development
Water
Water Management

Keywords

Regions:
Africa

Regions

Website:
https://business.esa.int/projects/fruitlook

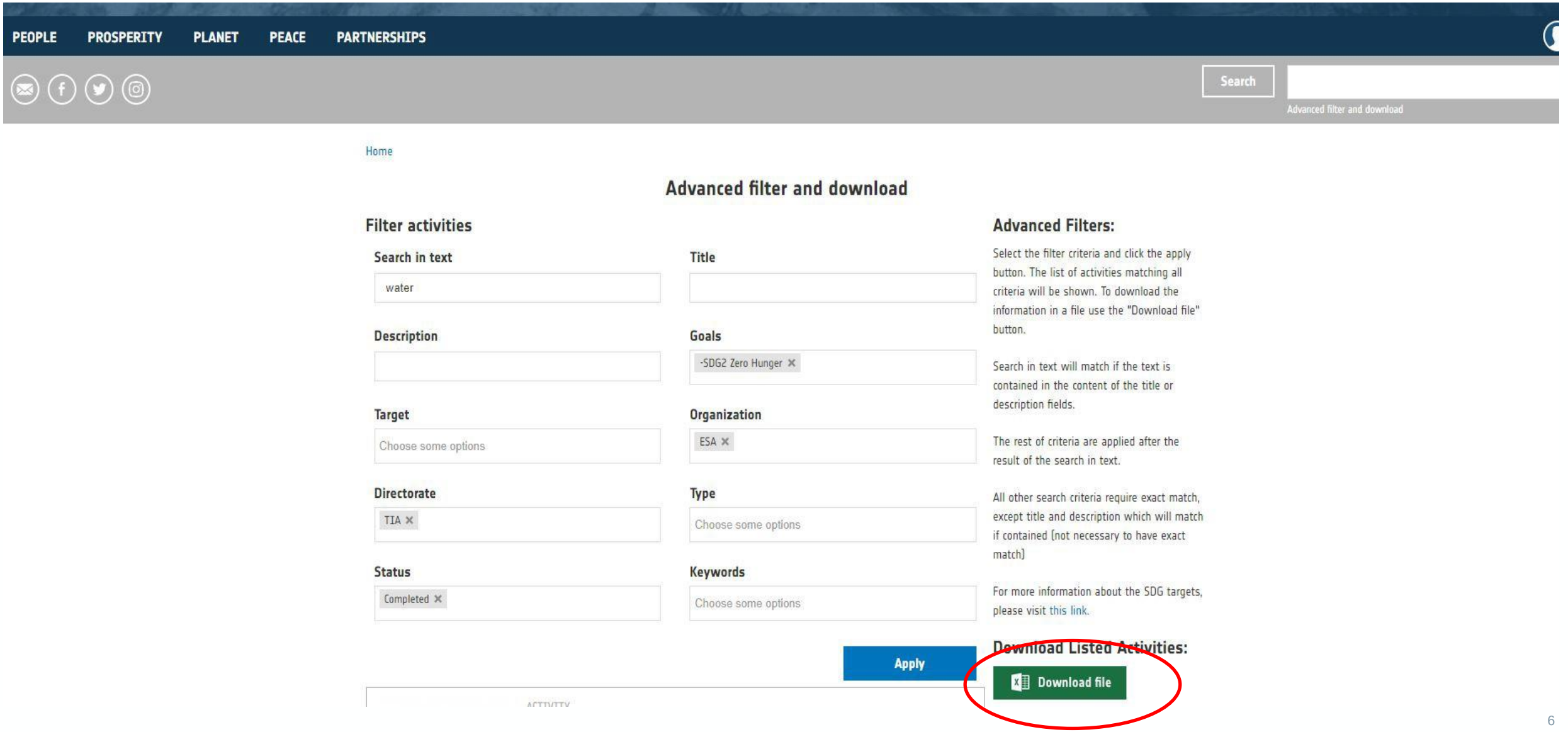
Official web

Type:
Demonstration Project

Status:
Completed

Type and Status

ESA SDG Catalogue Search Engine



Key questions

- **What** kind of **satellite applications** could support decision–makers, industry, citizens and researchers to tackle global challenges in crucial areas such as biodiversity//climate /water management for example?

- **How** could **space applications** represent **an added value to** address the **risks** from environmental degradation of soil, air, water, vegetation, and of assets valuable for human well-being?

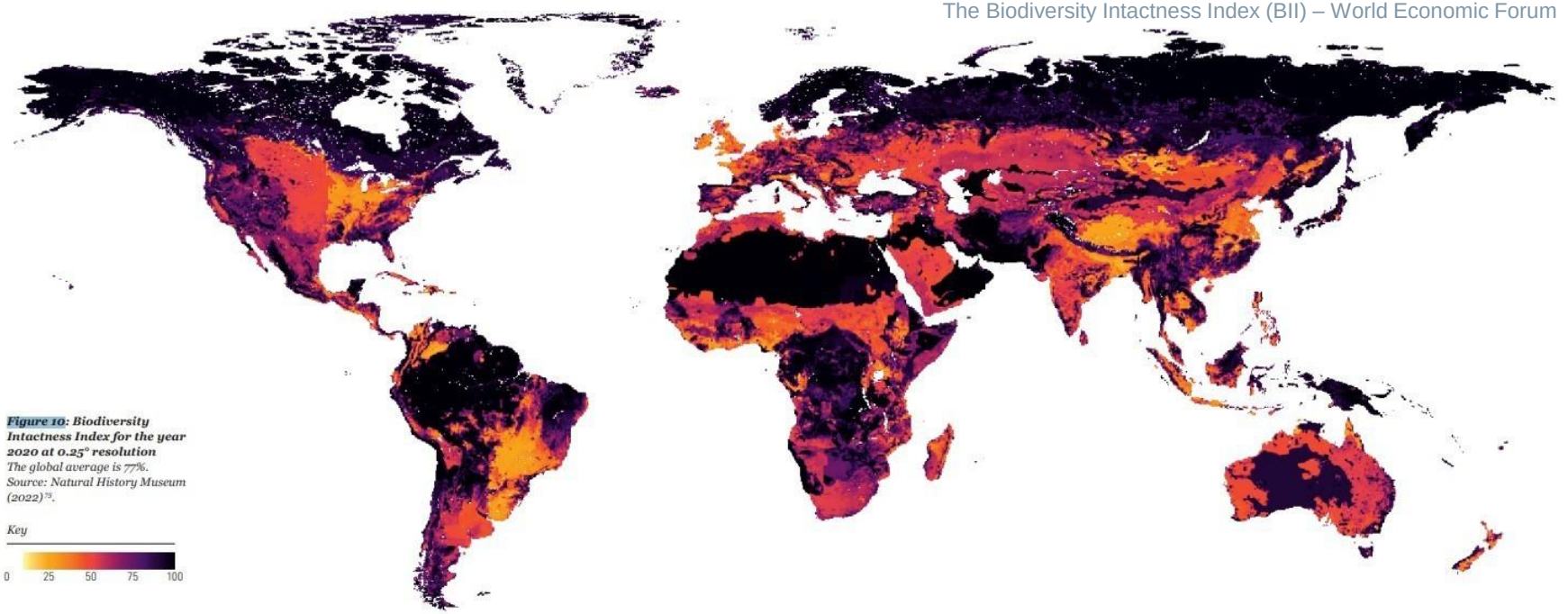
Space4SDGs can support the achievement of the UN SDGs!

Biodiversity
Climate Change
Water Management

RS4EBV

- **Explore**, **develop** and **test** to **track <u>the state of biodiversity</u>**
- **Enabling** the **potential of satellite remote sensing for selected EBVs such as Ecosystem Functional Diversity (FD) ➔ Measure** the **components** that **influence how ecosystems operate and function**

The Biodiversity Intactness Index (BII) – World Economic Forum



➢ <u>Space added value</u>

Earth Observation data

➢ <u>Users</u>

Industries, Governments, Local communities

EO4SD CLIMATE RESILIENCE

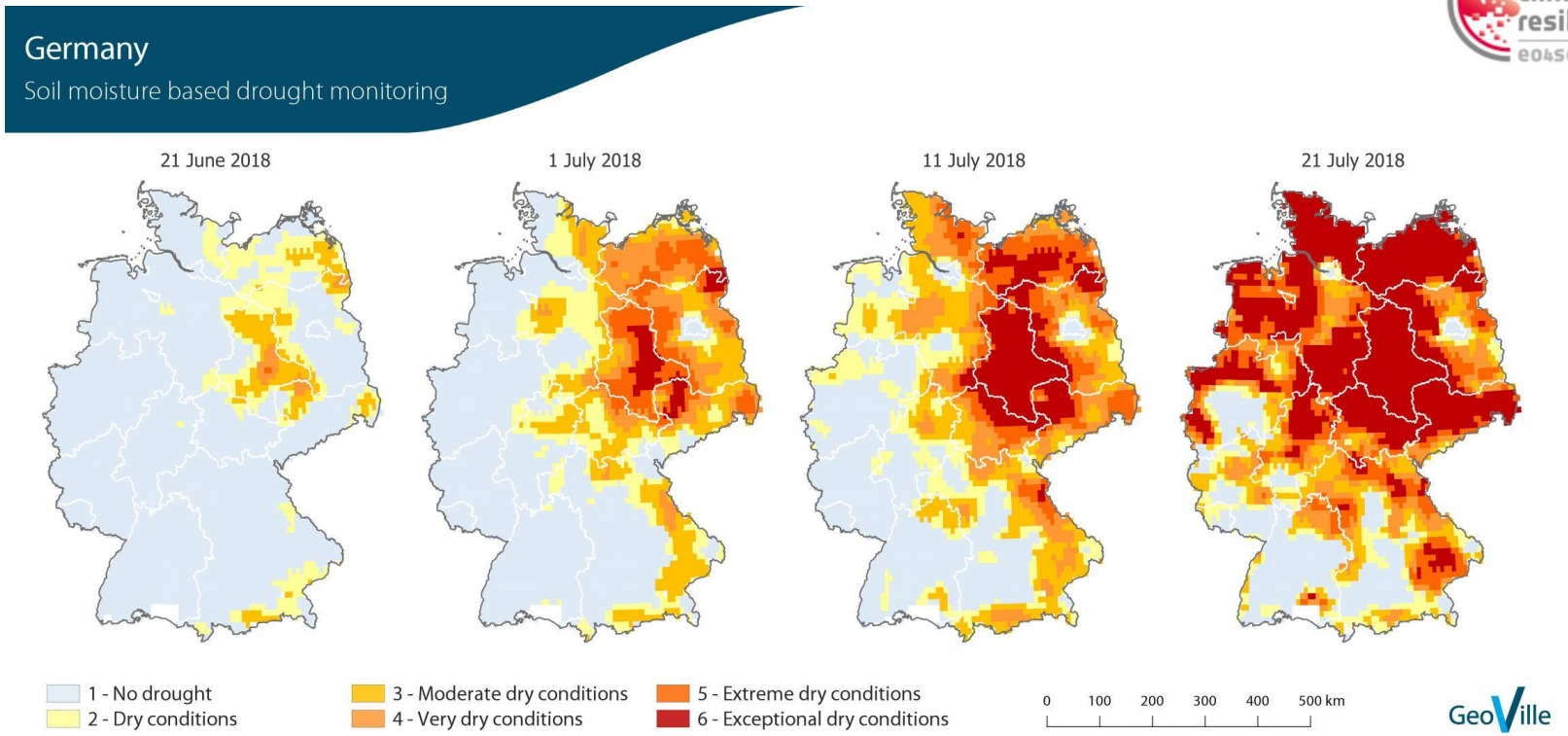
- **Support climate-resilient decision-making** at a regional and national level using **Earth Observation (EO) technology.**
- **Develop** an **EO-based climate screening and risk management service** ➔ **assess climate anomalies and risk indicators, and build capacity in client states**

➢ Space added value

Earth Observation data

➢ Users

Industries, Governments, and IFI's



360 Blue

- Aims to **determining water related risks**, supporting optimization **of water management**, and assessing **water footprints, availability and quality➔ help mitigation measures**
- Uses **satellite images , IoT (Internet of Things)** and **open data sources**

➢ Space added value

EO satellites, Satcom with IoT

➢ Users

Private companies (hydro engineering ,food and beverage), construction & agriculture industries, local governments, environmental agencies

WAY FORWARD

- A **coordinated approach** across ESA programmes
- Ensure **information easily available**
- Making the **link** between **space** (experts) and **ground** (users)

  ➔understanding the needs and “translating” them into space projects

- Support those able to “pass the message”– **Uniting with other actors**

UNOOSA compendium linked to ESA SDG catalogue

Thank you for your attention!