

# Space4SDGs: The ESA SDG Catalogue

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

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Partnerships and Global Challenges

ESA UNCLASSIFIED – For ESA Official Use Only



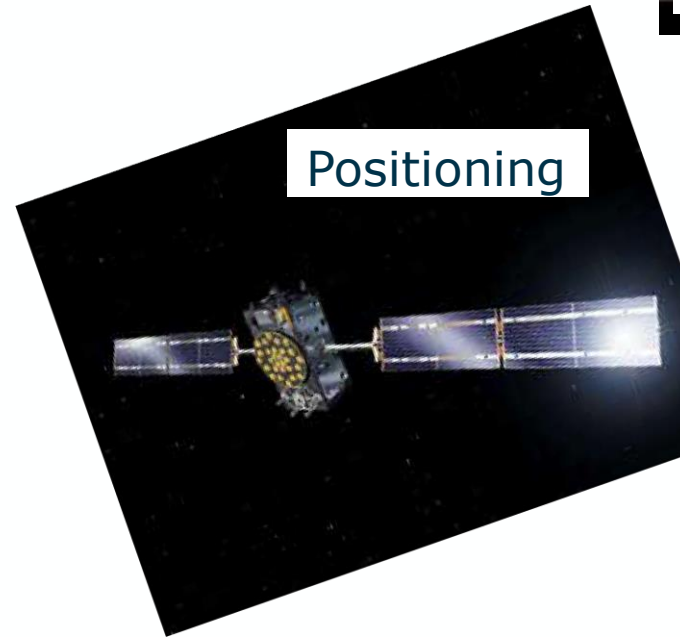
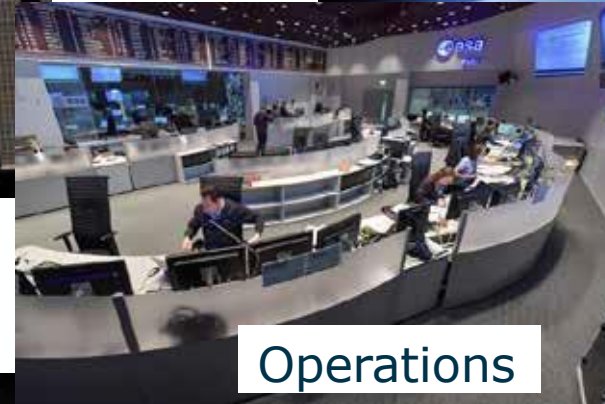



# SUSTAINABLE DEVELOPMENT GOALS





## All means → socio economic benefits






ACTIVITY

### Concordia

Thu, 03/09/2018 - 19:40

Because of its seclusion, the polar bases on Antarctica, namely Concordia station, offer scientists a unique location to conduct research in many disciplines...

People
SDG6 Clean Water and sanitation
Prosperity
SDG9 Industry, Innovation and Infrastructure
SDG12 Responsible consumption and production




ACTIVITY

### CULTIVATING MICROALGAE USING MADE-FOR-SPACE FORMULAS

Thu, 03/09/2018 - 19:40

A new facility is offering researchers and industry an opportunity to experiment with microalgae on larger scales than before. Based in Saint-Nazaire, France, the AlgaeSolis site is a stepping stone to industrial production of algae-based products...

People
SDG2 Zero Hunger
SDG3 Good Health and Well-being
SDG6 Clean Water and sanitation
Prosperity
SDG11 Sustainable cities and communities
Planet
SDG7 Affordable and Clean Energy




ACTIVITY

### CymonS

Thu, 03/09/2018 - 19:40

CyMonS provides water management organisations with data of several water quality parameters at a large spatial and temporal scale. This data is used to initialise models for providing short term forecasts. CyMonS especially provides information on the presence of cyanobacteria...

People
SDG6 Clean Water and sanitation
Planet
SDG14 Life below water



ACTIVITY

### EPAS wastewater treatment

Thu, 03/09/2018 - 19:40

EPAS (Eco Process Assistance) was founded as a spin-off from the Laboratory for Microbial Ecology of Ghent University and is now part of Veolia Water...

People
SDG6 Clean Water and sanitation
Prosperity
SDG12 Responsible consumption and production

**Status**

Choose some options

**Target**

Choose some options

**Keywords**


Choose some options

**Apply**

Advanced filter and download

For more information about the SDG targets, please visit this link.

**Download Listed Activities:**


 **Download file**


**Additional information**

- ESA: Space for Sustainable Development
- UNODS
- SDGs: Sustainable Development Knowledge Platform

**Social networks activity**

**Tweets** by @space4earth

 Space for Earth Relevance

 Eurisy

**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](#)

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 providers 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.

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

Directorate:  
TIA

Keywords:  
Africa  
Agriculture  
Crops  
Rural development  
Water  
Water Management

Regions:  
Africa

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

Type:  
Demonstration Project

Status:  
Completed

Organisation

ESA Organisation

Keywords

Regions

Official web

Type and Status

Short description

Relevant targets



Advanced filter and download

[Home](#)

## Advanced filter and download

### Filter activities

#### Search in text

#### Description

#### Target

#### Directorate

#### Status

#### Title

#### Goals

#### Organization

#### Type

#### Keywords

### Advanced Filters:

Select the filter criteria and click the apply button. The list of activities matching all criteria will be shown. To download the information in a file use the "Download file" button.

Search in text will match if the text is contained in the content of the title or description fields.

The rest of criteria are applied after the result of the search in text.

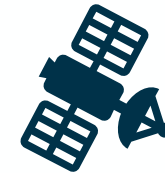
All other search criteria require exact match, except title and description which will match if contained (not necessary to have exact match)

For more information about the SDG targets, please visit [this link](#).

### Download Listed Activities:

# 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?



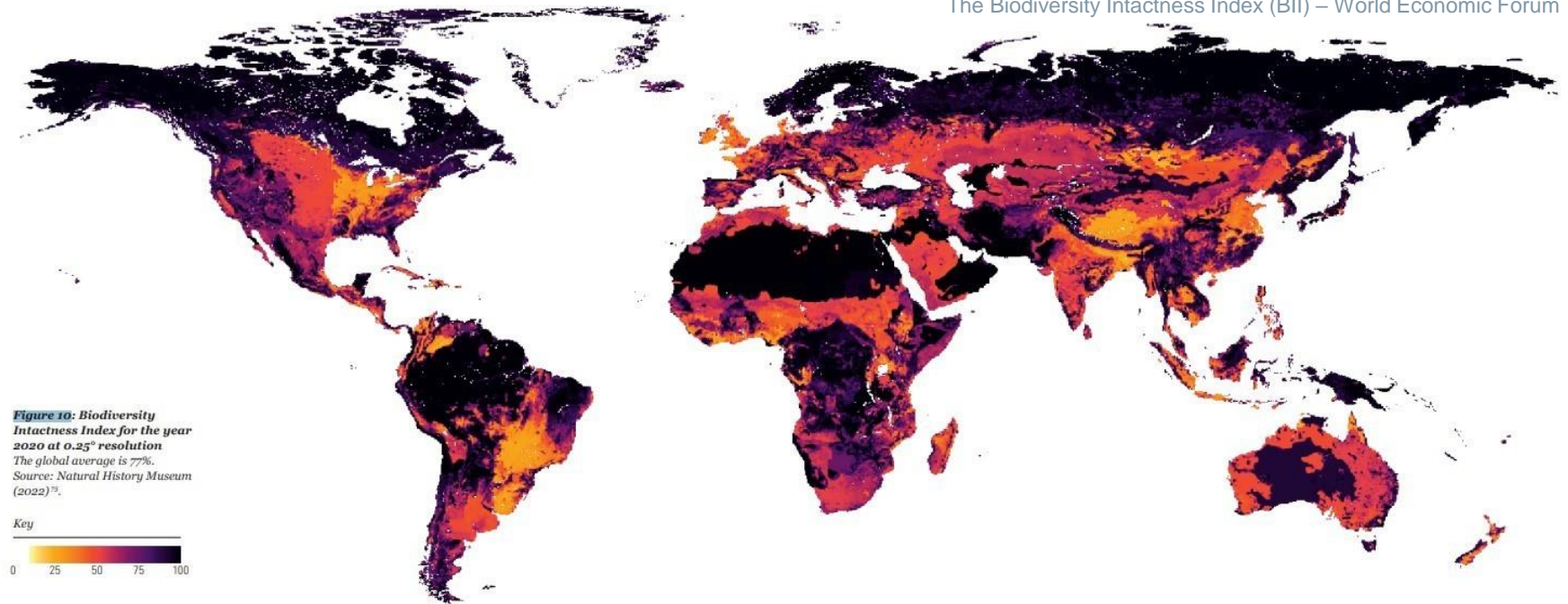
**Space4SDGs can support the achievement of the UN SDGs!**

# Biodiversity Climate Change Water Management

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- The Biodiversity Intactness Index (BII) – World Economic Forum



## 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

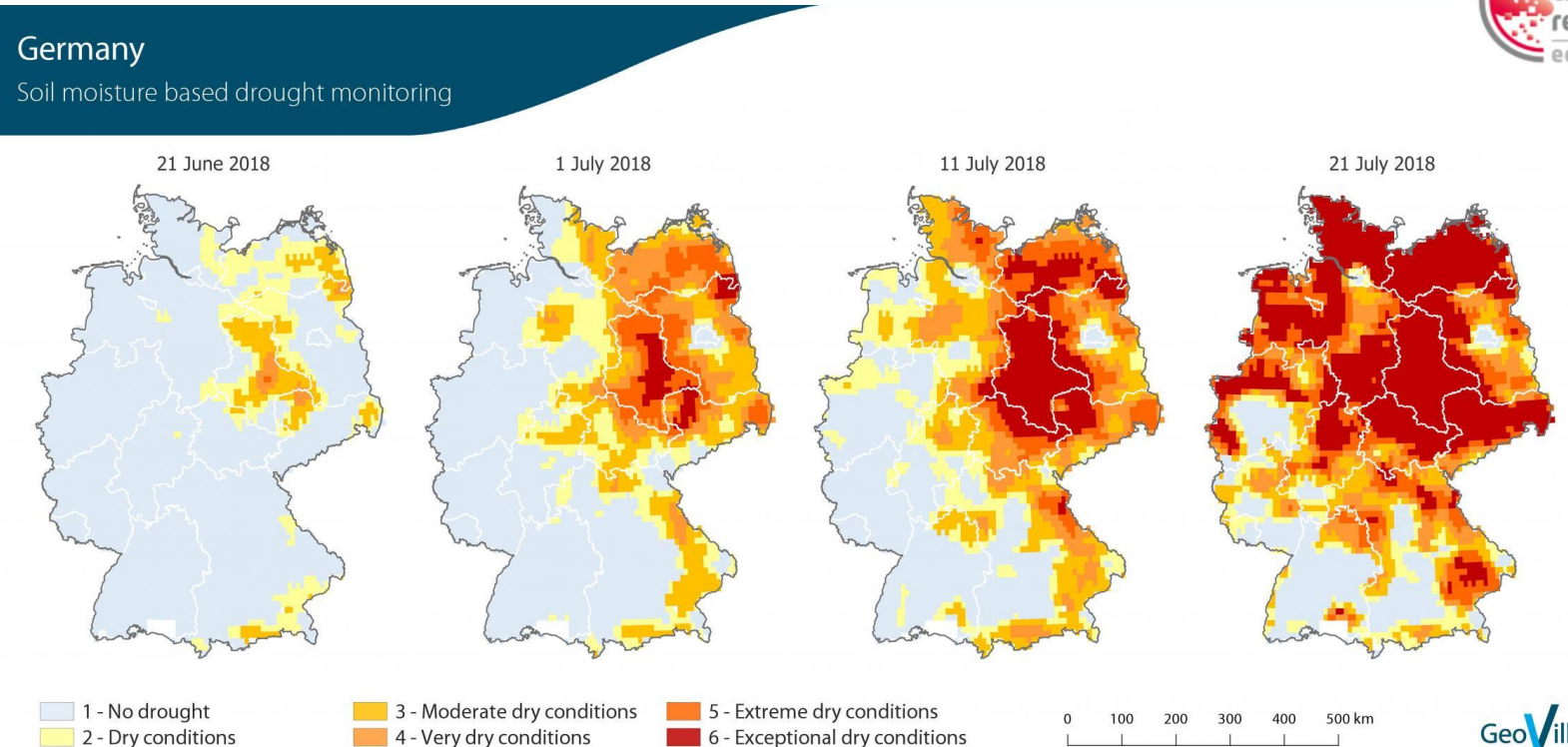


➤ Space added value

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

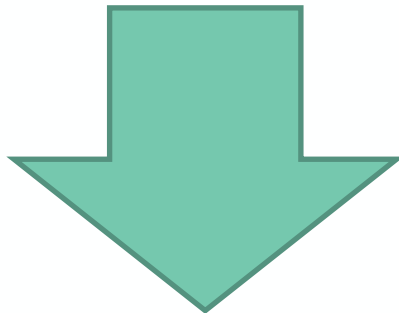
EO satellites, Satcom with IoT

## ➤ Users

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



- 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!

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