



PROGRAMME OF THE  
EUROPEAN UNION



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# Copernicus4regionsmagazine

2024

# News from the Copernicus4regions initiative



*“This magazine is designed to serve as a vital resource for keeping the Copernicus4regions community informed and up-to-date. Each yearly edition will deliver comprehensive updates and insights tailored to the community’s needs.”*

Since 2012, the Copernicus4regions initiative raises awareness on how various regions across Europe have tackled common challenges in their public administration through the use of Copernicus satellite data. Quoting the situation in Catalonia as an example illustrates the challenges of water management almost all regions across Europe face. Following over 1,000 days of drought, the Catalan government has officially declared a state of emergency, expanding water limitations to encompass Barcelona and its neighboring areas<sup>1</sup>. 239 Catalan municipalities are in a state of emergency<sup>2</sup>.

The mission of Copernicus4regions is linked with the objectives of the Network of European Regions Using Space Technologies (NEREUS), which are mainly to promote/advocate for the use of space for the benefit of the citizens and regions. For the past 12 years, NEREUS has witnessed the benefits that Copernicus can bring to regions in providing pertinent information for public domains, such as agriculture, regional development, and environmental management, facilitating informed decision-making. In this respect, the Network continues to collaborate with the European Commission (EC), and the European Space Agency (ESA) to further enhance the adoption of Copernicus.

Given the impact of climate change and the EU's policy ambitions of the Green and Climate Transition, more and more regions acknowledge the strategic importance of Copernicus as a problem-solver. The policy aspect is fundamental in the Copernicus4regions activities because politicians due to their elected mandate can raise significant awareness about Copernicus in their

regions and take tangible measures to implement space-based solutions in the administration. They are often at the start of the process that takes some years to really integrate the use-case in the workflows of the administration. In this vein, another added value of the initiative is that it addresses policy goals mobilising the interaction between non-specialist audiences: the Public Administration and politicians.

The release of two publications -in 2012 and 2018- and a follow-on activity in 2023 showcased model cases of public administration using Copernicus. This new edition covering the period 2023-2027 seeks to integrate new user experiences into the current policy landscape, and offers users, service providers and political decision makers a joint platform to meet and discuss these challenges. The increasing use of Copernicus in regions comes with the need to better connect relevant stakeholders and strengthen the user community.

This is why Copernicus4regions emphasizes continuous community building to ensure close links between public users of Copernicus and politicians on the one hand and service providers on the other hand. Therefore, Copernicus4regions should be viewed as an overarching initiative with a long-term perspective. It builds on a volunteering effort from the partnership organisations and all regional stakeholders and representatives.

**Roya Ayazi**  
NEREUS General Secretary

<sup>1</sup> Catalonia declares drought emergency, extending restrictions to Barcelona, published at the Guardian ([link](#)).

<sup>2</sup> Catalonia declares a drought emergency and activates measures to address it, published at GenCat ([link](#)).



# C4R meets the European Parliament



A key objective of the Copernicus4regions initiative is to enhance community building amongst Copernicus users, service providers, politicians and staff of the European Parliament and regional/local administrations. Particularly, the initiative aims at raising awareness among European and regional politicians about the regional/local uses of Copernicus but also, on the other side, to make users aware about the often complex work of the regulators that may also look at Copernicus as a tool in support to better policy making. Outreach and awareness efforts toward the European Parliament are significant to integrate Copernicus into policy debates beyond the space sector. Bringing illustrative and tangible user experiences to the Parliament showcased regional empowerment through the use of Copernicus, a joint European infrastructure allowing data access to all European citizens and companies.

Since its inception, the European Parliament has stood as the prime arena for policymaking, where vital European issues with an impact on citizens are brought to the attention of its Members. The Parliament shares legislative power with the

Council, acting as a co-legislator to adopt and amend legislative proposals and determine the EU budget on matters related to the green and digital transition, and Copernicus. Topic such as the implementation of the Green Deal Agenda, carbon neutrality, environmental protection, and digital transition hold a prominent position in the agenda of the Members of the European Parliament. This is why the Copernicus4regions Follow-On initiative started its work with an event at the European Parliament, continuing the series of successful events since 2018 [\(link\)](#).

The Copernicus4regions lunch debate of October 25, 2023 at the European Parliament [\(link\)](#) represented yet another step to explore new dynamics at the policy level and sensitize European and regional politicians to the public policy dimension of the system and so facilitate the path for increased uptake at the level of public administrations across Europe.

The debate underscored Copernicus' contribution to EU policies, particularly the Green Deal's objectives and the sustainability agenda. Hosted by **MEP Adam**



**Jarubas**, the event spotlighted Copernicus' effective use across European regions. MEP Jarubas expressed a substantial interest in Copernicus and the benefits that the system can bring to Polish and European

regions and committed himself to support future activities of Copernicus4regions. The event was strongly supported by regional representatives being part of the NEREUS network who mobilised not just

the hosting MEP but also numerous other MEPs from different political groups with whom they cooperate closely to join and speak at the event. Often these members have their electorate district in the respective regions. Another notable aspect of this event was the heightened participation of the MEPs, who actively engaged in discussions with the representatives of the Public Administrations throughout the whole event<sup>1</sup>.

As always with the Copernicus4regions, the spotlight was on the user stories: first, the **Polish State Forest** and the **Polish Cartographic Institute** illustrated how they are using Sentinel-2 to monitor the national



Agata Hoscilo, Institute of Geodesy and Cartography, Poland

green lungs (read the story at this [link](#)). Then, the **Italian National Fire and Rescue Service** in their uniforms explained how they leverage the CEMS and also Sentinel data to improve their situational awareness during emergencies and after (read the story at this [link](#)). Finally, the Catalanian Cartographic Institute on behalf of the **Catalonian Water Agency** explained the challenging drought situation in the region and how they are using all available tools to face this emergency, including Copernicus Sentinel-1 data that supports a better understanding of the

level of aquifers across the whole region (read the story at this [link](#)).



Italian National Fire and Rescue Service (left), NEREUS President Thierry Cotellet (centre), NEREUS Secretary General Roya Ayazi, NEREUS Comm/Project Officer Margarita Chrysaki, MEP Jarubas Advisor Borys Maria Brzezinski, Head of the Copernicus Space Office, Directorate of Earth Observation Programmes at ESA Pierre Potin, ESA Technical Officer Alessandra Tassa (right)



Miriam Moysset, Julià Talaya and Oscar Mora, Institut Cartogràfic i Geològic de Catalunya, Spain

The popularity of this event was reflected also in the participation of over 100 attendees, including EU organizations like the Commission and ESA, entrusted entities such as Mercator, EUMETSAT, ECMWF, regional and national representatives, and stakeholders from the space industry, all contributing to the debate with their statements and questions.

Prior to the event, NEREUS, supported by its member regions, organized the first **Copernicus Information Session** for MEPs' assistants to prepare them for a Lunch debate at the European Parliament and to integrate Copernicus solutions into political agendas. The first session, led by MEP Jordi Sole, emphasized Copernicus' alignment with EU policies like the Green Deal, focusing on carbon neutrality, climate monitoring, civil protection, and disaster management. These sessions, facilitated by the EC, ESA, and other Entrusted agencies, also aimed to raise awareness among younger generations about Copernicus technologies.

<sup>1</sup> Notable attendees included MEP Jutta Paulus, MEP Niklas Nienass, MEP Sirpa Pietikäinen, MEP Michael Gahler, MEP Joachim Schuster, MEP Carles Puigdemont, and MEP Tomáš Zdechovský.

# Views on Copernicus

## REGIONAL POLITICIANS



**Thierry Cotelle**

*“Copernicus is an indispensable tool for developing green policies, improving decision-making at the regional level, and benefiting citizens”*

### Main interests

Thierry Cotelle is integral to Occitanie's economic policies, driving the Regional Strategy for Employment, Sovereignty, and Ecological Change. This plan aims to boost innovation in key sectors, positioning Occitanie as a leading scientific hub. Cotelle also champions the regional space roadmap, reinforcing the region's leadership and supporting local companies in achieving excellence.

### Core relevant service

- NEREUS President
- Regional Councillor since 2016
- previously President of the regional agency for renewable energies (AREC)
- First Vice President for the Commission “Economy, Employment, Re-industrialisation” since 2021
- Member of the thematic commissions “Climate Emergency” and “Water and Risk Prevention”

**Political Party** Groupe Socialistes et Citoyens d'Occitanie  
**Region/Country** Occitanie/France

## MEMBERS OF PARLIAMENT



**MEP Adam Jarubas**

*“Copernicus offers solutions to enhance and modernize administrative procedures in line with the green and digital transition objectives”*

### Main interests

MEP Jarubas contributions to plenary debates include speeches delivered during the sessions and written declarations pertinent to plenary discussions on the European Health Data Space (debate), the ambient air quality and cleaner air for Europe (debate), and the role of farmers as facilitators of the green transition and the establishment of a resilient agricultural sector. MEP Jarubas will run for the upcoming parliamentary elections.

### Core relevant service

- Chair of the SANT Subcommittee on Public Health
- Member of the CPCO Conference of Committee Chairs
- Member of the ENVI Committee on the Environment, Public Health and Food Safety

**Political Party** Group of the European People's Party  
**Region/Country** Polskie Stronnictwo Ludowe/Poland



## MEP Jutta Paulus

*“Need to ensure that satellite data is readily available to individuals who lack expertise in the field”*

### Main interests

MEP Jutta Paulus's recent activities include participation in debates on civil emergency, water crisis and droughts in the EU due to the global climate crisis, emphasizing the necessity for a sustainable and resilient water strategy for Europe.

### Core relevant service

- Member of the EP-Committee on Environment, Public Health and Food Safety
- Member of the D-JP Delegation for relations with Japan
- Substitute on the ITRE Committee on Industry, Research and Energy
- Substitute on the TRAN Committee on Transport and Tourism

**Political Party** Group of the Alliance 90/The Greens

**Region/Country** Hesse Region/Germany



## MEP Niklas Nienass

*“Huge flow of data available to be exploited to promote economic development and supporting solutions including from start-ups”*

### Main interests

MEP Nienass advocates for the establishment of a new international framework of regulations and the development of a fresh European space strategy. His efforts have been directed towards shaping EU Space Law.

### Core relevant service

- Member of the ITRE Committee on Industry, Research and Energy
- Member of the REGI Committee on Regional Development
- Member of the CULT Committee on Culture and Education

**Political Party** Group of the Alliance 90/The Greens

**Region/Country** Germany



## MEP Sirpa Pietikäinen

*“The value of these data support politicians in implementing their decision-making at regional and local level”*

### Main interests

MEP PIETIKÄINEN has actively contributed to plenary debates through speeches and written declarations on the fight against hate speech and disinformation: responsibility of social platforms within the Digital Services Act (topical debate), the EU priorities for the 68th session of the UN Commission on the Status of Women, among others.

### Core relevant service

- Member of the ECON Committee on Economic and Monetary Affairs
- Member of the FEMM Committee on Women's Rights and Gender Equality
- Substitute for the ENVI Committee on the Environment, Public Health and Food Safety

**Political Party** European People's Party (Christian Democrats)

**Region/Country** Finland

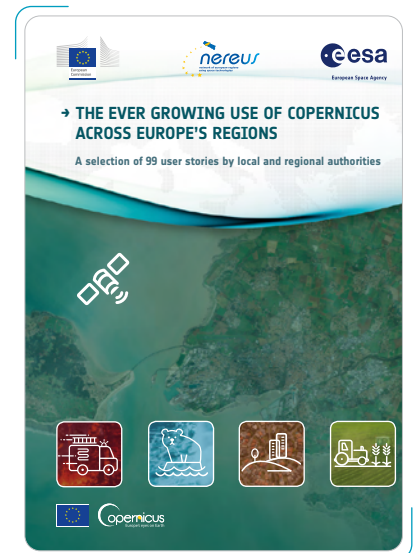
# News from the Copernicus4regions User Stories

In 2023, we looked back at the Copernicus4regions 99 user stories published in 2018 and we wondered: what happened to these stories? Are they still alive? Or did they evaporate? We asked the Authors and, whilst only gathering 55 answers<sup>1</sup>, we learnt that for more than 60% of the respondents the Usage Maturity Level increased or that, anyhow, "the solution was (better) integrated in the workflow of the administration". Here below, some picks from the updates...

→ GO TO THE 99 USER STORIES

→ DOWNLOAD THE FULL PUBLICATION

<sup>1</sup> Update sheets are available in the dedicated "Update" column on the Copernicus4regions User Stories [webengine](#)



## user stories

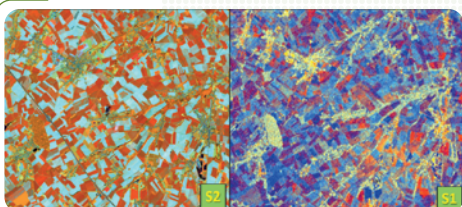
### AGRICULTURE MONITORING USING SENTINEL IMAGES IN WALLONIA

In the past few years, significant technical advances have been implemented. Specifically, performance and automation improvements of Sentinel-1 and Sentinel-2 data pre-processing, crop type mapping and agricultural practices detection. The solution is integrated in administrative workflow and the chain runs continuously along the subsequent crop seasons.

In this solution, both Sentinel-1 and 2 data are used to generate crop maps, to detect changes and to obtain new outputs: urban elements and detection of practices in agricultural parcels. The compilation of each Sentinel-derived product is implemented in the Walloon Paying Agency in the framework of the new Check by Monitoring system.

Ms. Beriaux Emilie, WALLOON AGRICULTURAL RESEARCH CENTER

→ GO TO LINK



Example of optical and SAR images used for crop type classifications (S2 image acquired on 26 May 2017 - RGB:4, 3, 2, S1 image acquired on 6th of May 2017 - RGB:VH, VV, VH/VV)

Thematic area



AGRICULTURE, FOOD, FORESTRY AND FISHERIES

Region of Application



WALLONIA

Sentinel mission used



S1  
S2

Copernicus Service used



CLMS

Usage Maturity Level



5



## user stories

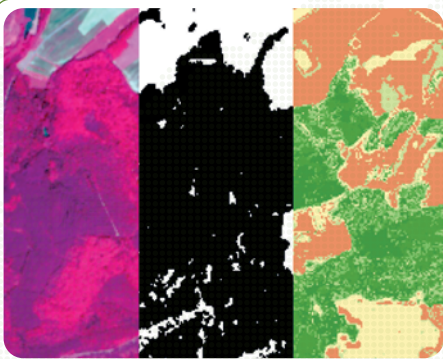
# OPERATIONAL AFFORESTATION MONITORING IN THURINGIA

An operational afforestation monitoring system has been developed in the Free State of Thuringia in Germany using Copernicus and auxiliary GIS data.

In the last few years, the application has been presented to specialist users such as forest administrations of the federal states. The solution is operational and integrated with the workflow of the administration.

*Herbert Sagischewski, ThüringenForst AöR, FORSTLICHES FORSCHUNGS- UND KOMPETENZZENTRUM GOTHA (Forestry Research and Competence Centre Gotha)  
Dr. Martyna A. Stelmaszczuk-Górska, Friedrich Schiller University Jena*

[→ GO TO LINK](#)



Forest mask and tree density generated for a test site in the forest district Heldburg with the use of up-to-date Sentinel data (from the left to the right): Sentinel-2 (false color composite), forest mask and tree density. Copernicus Sentinel Data 2016 / FFK Gotha

Thematic area



AGRICULTURE,  
FOOD, FORESTRY  
AND FISHERIES

Region of Application



FREE STATE  
OF THURINGIA

Sentinel mission used



S2

Copernicus Service used



CLMS

Usage Maturity Level



5

## user stories

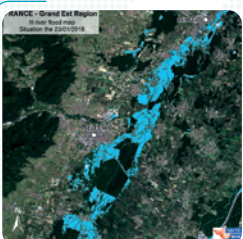
# REGIONAL FLOOD MONITORING WITH SENTINELS DATA IN FRANCE'S GRAND EST

Complementary to the Copernicus Emergency Management Service, a dedicated service for local flood monitoring is also available at regional level for small and mid-size events.

In the past few years, this solution has supported the Public Administration in its tasks. For example, in January 2021, the Regional Flood Service has been solicited for rapid mapping of the flooding event occurring in the Lys river Basin, North of France. The information provided has allowed to monitor the extent and the impact of the event, and hence to further support flood risk management decision making.

*Nadine Tholey | ICube-SERTIT*

[→ GO TO LINK](#)



Ill river flood extent, upstream of Strasbourg city, observed by Sentinel-1A satellite on 23 January 2018

Thematic area



BIODIVERSITY AND  
ENVIRONMENTAL  
PROTECTION

Region of Application



GRAND-EST

Sentinel mission used



S1  
S2

Copernicus Service used



-

Usage Maturity Level



4

# What's more?

The Copernicus providers (ESA, ECMWF, Eumetsat, EEA, Mercator Ocean International, EC) and the JRC EO Knowledge Centre have joined the Copernicus4regions initiative to explain how Copernicus supports the EU Green Deal and other EU policies. A comprehensive presentation has been prepared in which, for five different policy areas, relevant regulations have been mapped with the state-of-the-art products from the different Copernicus components. Notably, also the future contribution from the forthcoming Sentinel Expansion Missions is introduced. The full presentation is available at this [link](#).

## How can Copernicus support the EU Green Deal and other EU policies?

A quick guide through some selected [policy areas](#)



Carbon neutrality and net zero emissions



Climate change monitoring and adaptation



Civil protection



Sustainable agriculture, food security and water management

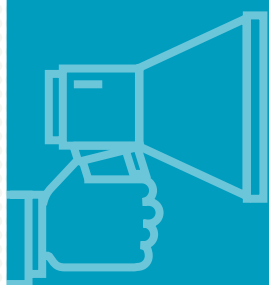


Environmental protection and biodiversity



# Outlook to the future

In the next year, efforts will focus on reviving the community and enriching the collection with new user experiences and on liaising with the Committee of the Regions, to improve awareness with representatives from local and regional administrations.



## Forthcoming: Call for articles

Stay tuned and prepare to share your regional user story!



Copernicus4regions is a joint initiative between the European Commission, the European Space Agency and the Network of European Regions Using Space Technologies (NEREUS): it is managed by NEREUS under a contract from the European Space Agency and funding from the European Union.

[www.copernicus.eu](http://www.copernicus.eu) | <https://sentinels.copernicus.eu>

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