



**IH cantabria**  
INSTITUTO DE HIDRÁULICA AMBIENTAL  
UNIVERSIDAD DE CANTABRIA

IH cantabria

**Copernicus Tools for Monitoring Global Change  
Effects in Rivers and Riparian Zones**

**(Cop.RIVER)**

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**Deliverable 9: National Copernicus user uptake  
session (Spain)**

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## 1 BACKGROUND

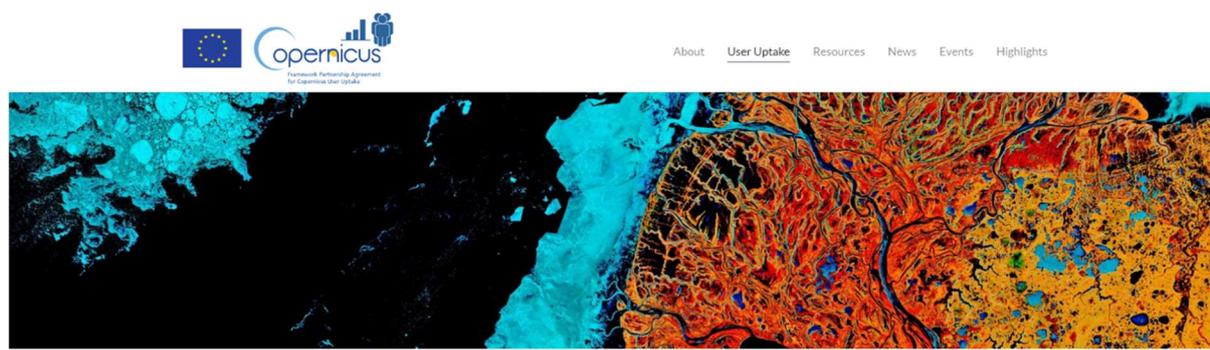
*Cop.RIVER* aims to promote the use of Earth Observation (EO) in applications and services related to the ecological status of riverscapes (*i.e.*, rivers and their associated alluvial plains, floodplains and riparian forests). The action will strengthen the Copernicus user uptake by supporting regional and national authorities in the implementation of the EU Biodiversity Strategy to 2020, the Habitats and Birds Directives and the Water Framework Directive by applying GAP analysis, to complement available Copernicus information on the state and characteristics of rivers and riparian zones.

## 2 NATIONAL COPERNICUS USER UPTAKE SESSION

### 2.1 Presentation of Copernicus data and services in the EU-level expert workshop

The Cop.RIVER expert workshop “Needs and methodologies for riparian vegetation characterisation” was held in mid-September this year. The workshop aimed at evaluating the applicability of remote sensing techniques and the tools provided by the COPERNICUS program (European Space Agency) for monitoring the effects of global change in rivers and riparian zones. For this purpose, key actors in the implementation of regulations such as the Habitats Directive, the Water Framework Directive and the Biodiversity Strategy 2030 were identified, as well as experts in river landscape characterization in other European countries (*e.g.*, identification of riparian species, remote sensing experts). This event brought together more than 25 experts and professionals in environmental management, public administration and scientific organizations.

The aims and scope of the Framework Partnership Agreement on Copernicus User Uptake were presented.

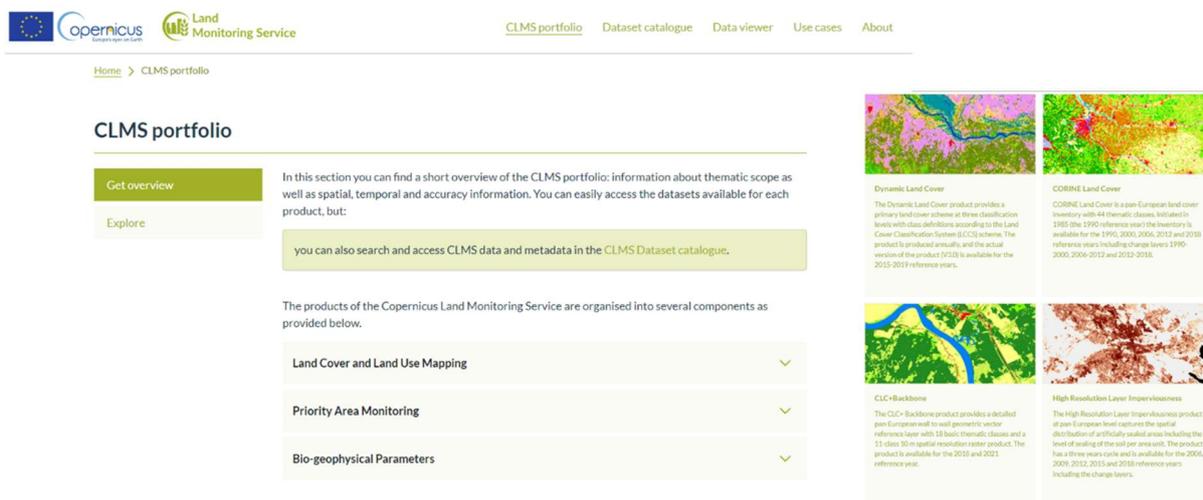


Framework Partnership Agreement on Copernicus User Uptake

|   |   |   |  |
|---|---|---|--|
| <p><b>Information &amp; Training Events</b><br/>National and multi-national information and training events<br/><a href="#">Read more</a></p> | <p><b>Building User Dialogue</b><br/>Building an active user dialogue<br/><a href="#">Read more</a></p> | <p><b>Applications</b><br/>Developing and piloting downstream applications and services<br/><a href="#">Read more</a></p> | <p><b>Innovations</b><br/>Promoting national and multi-national innovative actions<br/><a href="#">Read more</a></p> |
| <p><b>Resources</b><br/>Materials for download and links<br/><a href="#">Read more</a></p>  | <p><b>News</b><br/>Stay up to date<br/><a href="#">Read more</a></p>                                    | <p><b>Highlights</b><br/>Highlights and Success Stories<br/><a href="#">Read more</a></p>                                 | <p><b>Consortium</b><br/>50 entities from 23 European countries<br/><a href="#">Read more</a></p>                    |

COP.RIVER: NATIONAL COPERNICUS USER UPTAKE SESSION

The Copernicus Land Monitoring Service (CLMS) Portfolio was presented and we depicted the role of these data and products in the development of the selected monitoring indicators and the Cop.RIVER toolkit.

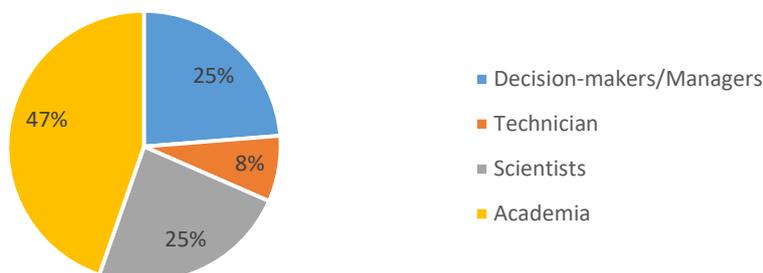


## 2.2 Survey of methodological approaches and awareness of Copernicus data and services

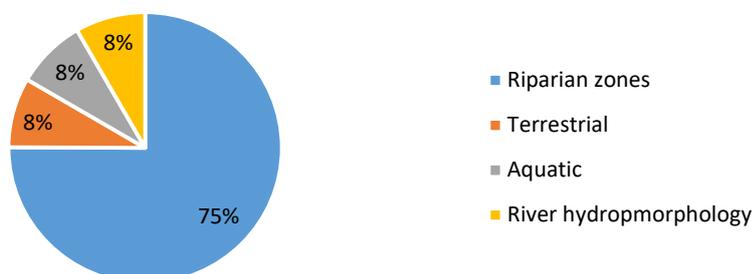
During the workshop, we shared a questionnaire to better understand how familiar scientists, the environmental authorities and practitioners are with remote sensing tools, including Copernicus data and services. We obtained a total of 12 responses.

The questions and results of the questionnaire are summarized below.

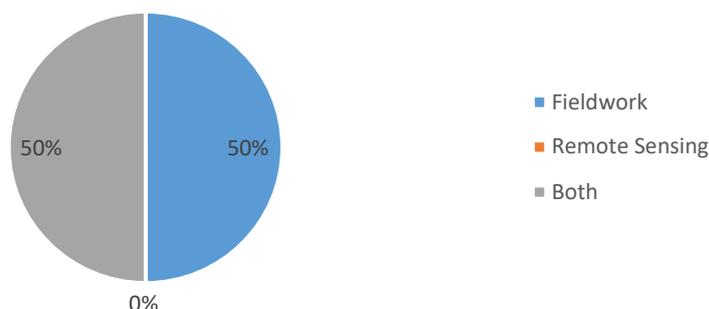
1. What sector do you belong to?



## 2. What type of habitats do you work in?



## 3. What methodological approach do you use to develop your projects?



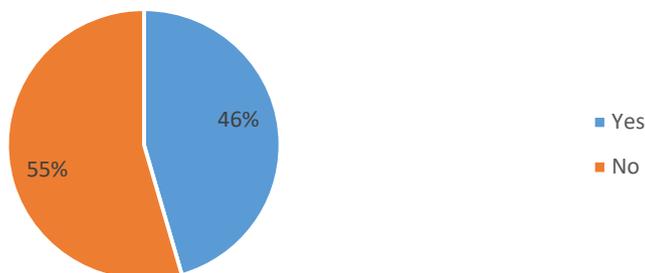
## 4. What attributes of rivers and riparian habitats do you characterize using remote sensing?

- Riparian zone structure and composition and fluvial geomorphology
- Mapping of habitats, connectivity and other impacts
- Habitat coverage, surface heterogeneity, and in some case species classification
- Vegetation species (as a first approximation)
- Vegetation structure (orthophoto)
- Identification of artificial structures, delimitation of the active channel and modifications in the channel

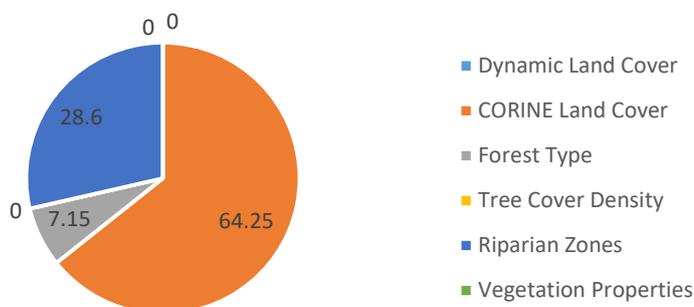
## 5. What other attributes would you be interested in characterizing using remote sensing?

- Invasive species mapping
- Composition of riparian vegetation
- Riparian forest physiological and health status, including early warning indicators
- Vegetation and sediment dynamics (erosion/sedimentation/transport)
- Riparian forest and hydromorphological attributes

6. Are you familiar with the Copernicus Land Monitoring Service (CLMS) products?



7. Have you used any of the following Copernicus (CLMS) products in your work?



### 2.3 Next steps

IHCantabria will organize a second, specific user uptake session in Spain to demonstrate which and how we have used different Copernicus data and services, and the results obtained during the last year of the project.

### 3 ACKNOWLEDGMENTS

This work is supported by the European Union’s Caroline Herschel Framework Partnership Agreement on Copernicus User Uptake under grant agreement No FPA 275/G/GRO/COPE/17/10042, project FPCUP (Framework Partnership Agreement on Copernicus User Uptake), Action 2021-1-2 "Copernicus Tools for Monitoring Global Change Effects in Rivers and Riparian Zones" (SPECIFIC AGREEMENT N°19 - 2022/S12.879177 /19).