

KNOWLEDGE BROKERS ARE KEY TO CLIMATE SERVICES, INFORMING EVIDENCE-BASED IMPLEMENTATION OF EU CLIMATE AND WATER POLICIES

Key Messages

A well-functioning system of climate services is necessary to reach the goals of the European Climate Adaptation Strategy, notably the mainstreaming of climate adaptation in EU sector policies including the Water Framework and Floods Directives.

Climate knowledge brokers such as consultants and other intermediary actors between science, policy and practice, are key to successful development and implementation of EU policies at regional and local level. Policy makers can support growth of this knowledge brokerage market, simultaneously boosting climate resilience, jobs and economy, by helping to sustain the emerging knowledge sharing and learning network.

The Proof of Concept Sectoral Information Service for Water Management in the Copernicus Climate Change Service (C3S-SIS) has built a potent tool to help these knowledge brokers in water management to work with stakeholders to co-create climate-resilient solutions to regional and local water challenges. It makes their work more efficient and effective.

The tool provides access to climate impact indicators in tailor-made maps and graphs, accompanied by tutorials on how to use them. Climate service providers in general and climate knowledge brokers in particular are the main target group, but also European and national policy and decision makers can effectively use the tool.

The tool has been developed in practice through 15 case studies in 7 countries. In addition, its learning network and outreach are reaching many water and climate knowledge brokers beyond the project, helping them to increase the quality, relevance and agility of their work. In this way, this C3S contract helps to speed up the implementation of key European Adaptation Strategy goals.

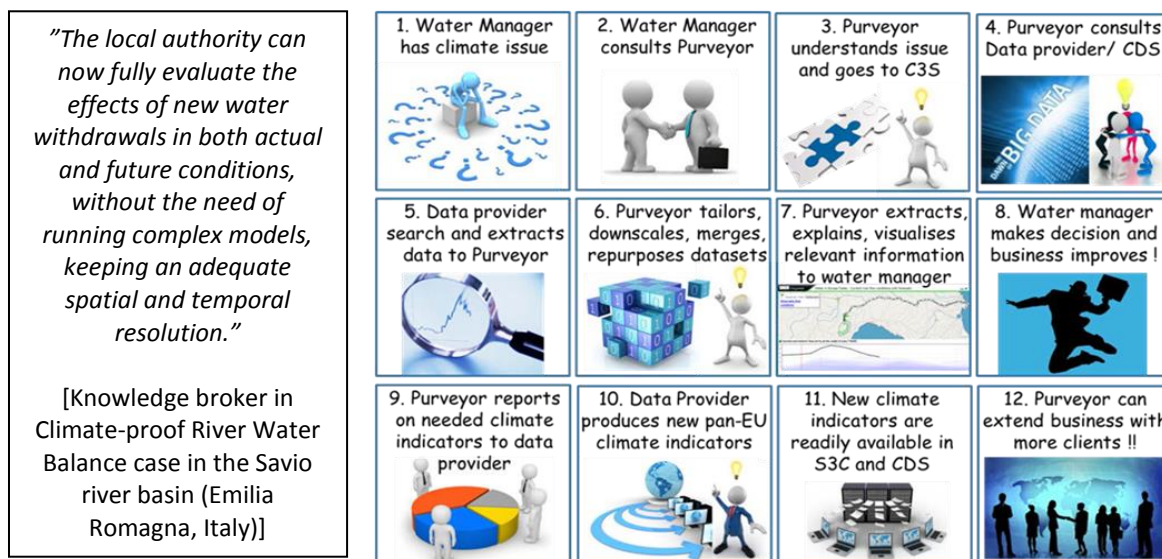
Recommendations

1) Use knowledge purveyors to promote better informed decision-making.

This C3S contract not only developed a reliable and fit-for-purpose service, but also built a learning network to help purveyors to bridge the knowledge gap and translate climate impact analysis results for easy use by their clients. Training activities and an interactive Forum help knowledge brokers to support water managers and other decision makers across Europe in using pan-European data, hydrological methods and indicators in support of the European Adaptation Strategy's 4th Action (Bridging the Knowledge Gap) and the implementation of the EU Climate Services Roadmap.

2) Use knowledge purveyors to climate-proof EU action by promoting adaptation in key vulnerable sectors.

This C3S contract enables regional and local stakeholders (clients of knowledge purveyors) to integrate climate change into their local policies and strategies. Decisions taken in many practice cases in which the tool has been used differ in scope or emphasis from what they would have been without using the tool. Wider usage of the tool and participation in the learning network can upscale this development, inform policy development, improve climate response planning and promote new climate service development.



Water managers, working with knowledge purveyors, use the tool to improve water basin and flood risk mapping and management, which also helps **implementation of the Framework Water and Flood Directive**. In this way, both the tool and the knowledge purveyor network also contribute indirectly to enhancing resilience, adaptation and reduced vulnerability in the context of UNFCCC Paris Agreement.

This C3S contract provides data and guidance for climate impact assessments in the water sector in Europe for knowledge purveyors **also in your country or region**. It helps to find climate impact and hydrological data and indicators of the highest available quality at the European level, **to support water management decisions and implement adaptation policies**.

15 Show Cases

Assessing risks of floods, droughts and water quality in support of national and European water basin management and floods managements policies

Resource allocation (multiple use)

- Emilia-Romagna, Italy: [Climate-proof Irrigation Strategies](#)
- Guadalfeo River Basin, Spain: [Snow Effects on Water Availability](#)
- Jucar River Basin, Spain: [Extensive Drought Operations](#)

Risk management

- Upper Austria, Austria: [Climate Change and Flash-Floods](#)
- Danube River Basin, Slovakia: [Warnings for Extreme River Floods](#)
- Jönköping county, Sweden: [Risk for river flooding in lake-rich regions](#)



"The Proof of Concept Sectoral Information Service for Water Management in the Copernicus Climate Change Service helps us to realise the potential of climate impact analysis, involve the client more vividly, better understand and consolidate the client's needs, and provides incentives for the client to think about what's next."
[Knowledge Broker in Greek water / metallurgy case]

Ecological status

- Asopos River Basin, Greece: [Environmental flows and point source emissions](#)
- Emilia-Romagna, Italy: [Climate-proof River Water Balance](#)
- Jönköping county, Sweden: [Predicting Change in Lake Ecosystems](#)
- Östergötland, Sweden: [Climate Change Effects on Water Quality](#)

Water related industry

- South-Holland, The Netherlands: [Future proof region and brewery chain](#)
- Rhine River basin, Germany: [Inland Navigation \(Rhine River\)](#)
- Asopos River Basin, Greece: [Water demand and supply of metallurgy sector](#)
- Norrköping, county Sweden: [Drinking water in a future climate](#)
- Luleälven River Basin, Sweden: [Hydro Power production in a future climate](#)

"The Proof of Concept Sectoral Information Service for Water Management in the Copernicus Climate Change Service approach and climate data, provide a valuable tool and support to the decision-making process, helping it to take steps towards sustainability and climate change resilience."
[Water irrigation manager in the Emilia-Romagna climate-proof irrigation strategies case]

The Proof of Concept Sectoral Information Service for Water Management in the Copernicus Climate Change Service is intended to be integrated into the operational [Copernicus Climate Change Service](#). New indicators and seasonal and decadal forecasts are planned to be added in the near future.

C3S needs your help in optimizing the Service for Water Indicators in Climate Change Adaptation

You can send your feedback to the contact below or join the [Water and Climate Knowledge Brokers Forum](#).

"We now have access to local indicators shaped for specific conditions and much more feasible to use than global climate indicators. Data can be downloaded and viewed with one-click at any location in the European space with sound explanation."
 [A knowledge broker in Spanish Guadalfeo River Basin case]

Proof of Concept Sectoral Information Service for Water Management in the Copernicus Climate Change Service (C3S-SIS)

The aim of this C3S contract is to provide data and guidance for climate impact assessments in the water sector to support water and climate policies. The main target group are consultants and other knowledge purveyors working with climate change adaptation in the water sector, but also researchers and policy makers can benefit from the tools. By using indicators, climate impact assessments can be done without having to run a full production chain from raw climate model results – instead the indicators can be included in the local workflow with local methods applied, to facilitate decision-making and strategies to meet future climate challenges.

Website: <http://swicca.climate.copernicus.eu/>

For more information contact the Project Office, by email: berit.arheimer@smhi.se

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Contractor

Swedish Meteorological and Hydrological Institute (SMHI), Sweden

Sub-contractors

- Wageningen Environmental Research, the Netherlands
- EMVIS, Greece
- GECOsistema, Italy
- Dipl.- Ing. Günter Humer GmbH, Austria
- isardSAT S.L., Spain
- MicroStep-MIS, Slovakia
- TU Dortmund University, Germany
- University of Córdoba, Spain
- Universitat Politècnica de València, Spain
- Wageningen University, the Netherlands

In kind

- BfG, Germany
- Climate Partnership, Princeton, USA
- JRC, Joint Research Center, EU

