



I-CISK
HUMAN CENTRED CLIMATE SERVICES

I-CISK Newsletter

April 2023 - November 2023 / **ISSUE IV**



*Innovating Climate Services
through Integrating
Scientific and Local Knowledge*

Dear colleagues and friends,

In this newsletter you will find some interesting updates on the EU-funded I-CISK project's latest activities and a series of inspiring events, which we have the pleasure to invite you to keep an eye and get involved. Feel free to share this newsletter and stay tuned for further news!

Sincerely,

The I-CISK project team

About I-CISK

Climate Services (CS) are crucial to empowering citizens, stakeholders and decision-makers in taking climate-smart decisions that are informed by a solid scientific evidence base, that contribute towards a sustainable European economy, lifestyle, environmental protection and resource use, and that are resilient to climate change and compatible with achieving climate neutrality. I-CISK's ambition to innovate how climate information is used, interpreted and acted on through a next-generation of Climate Services that follow a human centred, social and behaviourally informed approach; integrating the knowledges, needs and perceptions of citizens, decision makers and stakeholders with climate information at spatial and temporal scale relevant to them. [Read more](#)

7 Living Labs

Seven Living Labs in Europe and Africa are central to the action-research approach. These are located in climate change hotspot with specific geographical and climatic settings, where climate services are co-produced with end-users from multiple sectors to meet their climate information needs.



In I-CISK we take an action research approach to fast-track research to impacts by co-developing a framework for human centred climate services in and with the users of seven Living Labs in Europe and Africa. Each living lab is located in a climate change hotspot with specific geographical and climatic settings, and with a focus on key socio-economic sectors. [Read more](#)

News and Events from I-CISK

An intense and successful second I-CISK project General Assembly in Madrid



The European project “Innovating Climate Services through Integrating Scientific and Local Knowledge” (I-CISK) held its general assembly on October 5-6 in Madrid, Spain. UNIVERSIDAD COMPLUTENSE DE MADRID (UCM), representatives invited project partners to present their progress and to discuss open questions regarding the project’s implementation and ongoing activities and plan future steps. Approximately 30 consortium members met at the Complutense University of Madrid (UCM) in Madrid for two days of intensive discussions surrounding the I-CISK project. During a morning of updates from the different work packages and the 7 Living Labs (LLs), members reflected on the main research and innovation directions. Read more [here](#).

I-CISK will empower local communities to build and use tailored local Climate Services to adapt to climate change

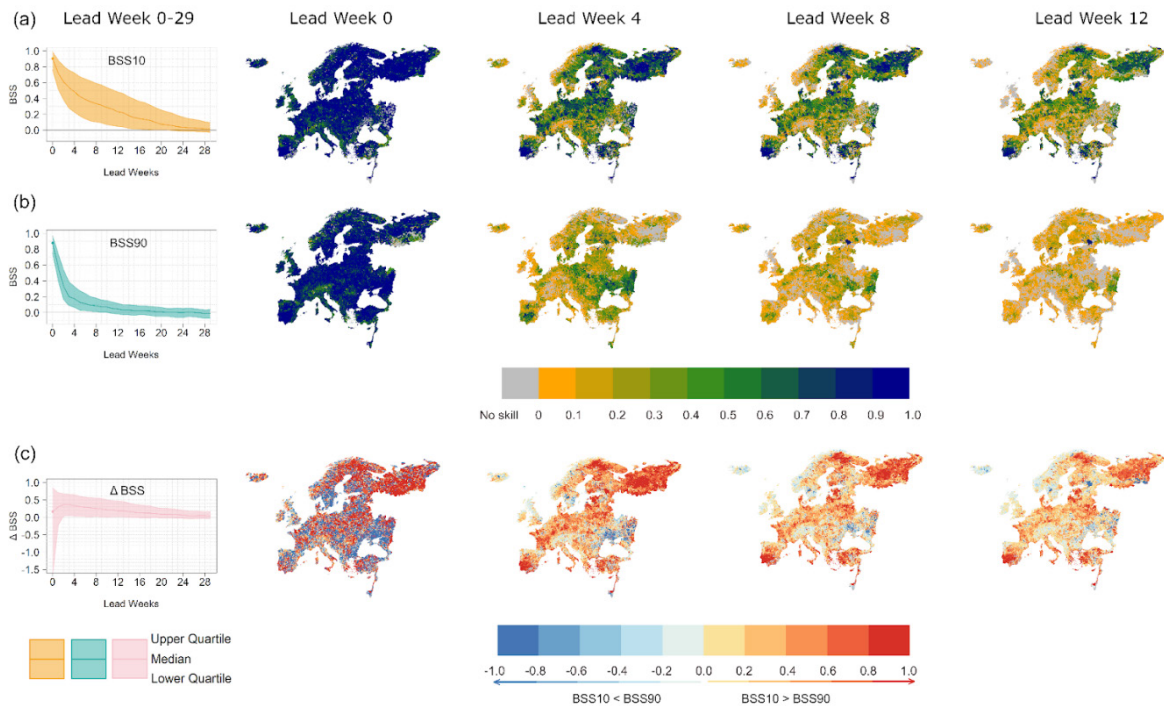


Climate Services (CS) are crucial to empowering citizens, stakeholders, and decision-makers in defining resilient pathways to adapt to climate change and extreme events. Despite advances in scientific data and knowledge (e.g., Copernicus, GEOSS), current CS fail to achieve their full value proposition to end users. Challenges include the incorporation of social and behavioural factors, local needs, knowledge, and the customs of end users. I-CISK develops a next generation of end-user CS, which follows a social and behaviorally informed approach to co-producing services that meet climate information needs at a relevant spatial and temporal scale. It takes a trans-disciplinary approach to developing CS by working with stakehold-

ers in seven Living Labs established in climate hotspots in Europe, its neighbours, and Africa to address climate change and extremes (droughts, floods, and heatwaves) faced by agriculture, forestry, tourism, energy, health, and the humanitarian sectors. Together with end users, I-CISK will co-design, co-create, co-implement, and co-evaluate pre-operational CS that provide a step change in integrating local knowledge, perceptions, and preferences with scientific knowledge. Read more [here](#).

New Study Unlocks the Drivers of Seasonal Forecast Predictability of Hydrological Extremes

The latest research paper led by SMHI is now available in the journal Environmental Research Letters. The study is a part of the I-CISK initiative and aims to tackle one of the most pressing issues of our time, accurate forecasting of streamflow extremes, hence better predicting floods and droughts. Read more [here](#).



Pioneering Hydro-Climate Insights at the HEPEX 2023 Workshop



From September 13 -15, 2023, the global hydrological community turned its eyes toward Norrköping, Sweden, where the highly anticipated HEPEX workshop “Forecasting across spatial scales and time horizons” took place. The event drew a crowd of more than 100 experts (on-site and online) from around the world, all eager to dive into the latest advances in hydrological predictions and climate services. Partners from I-CISK were present to communicate the project’s insights to the global community. Read more [here](#).

Unpacking local knowledge and decision-making in the Alazani living lab, Georgia



In August and September, Sumiran Rastogi (PhD candidate, IHE Delft) along with I-CISK living lab leads at CENN, Miranda Apakidze and Vakho Chitishvili, carried out workshops and interviews with the multi-actor platform and members of the local community in Alazani River basin. The purpose of this field visit was to understand local perceptions of changing climate and weather patterns, the impact of climate change on livelihoods in the region, and identify coping and adaptation strategies implemented by local communities. The I-CISK team used various participatory techniques including

problem trees and seasonal calendars to interactively engage with the community members and understand how agricultural decisions are taken – factors affecting it and local knowledge underpinning it. Read more [here](#).

Lesotho Living Lab is starting to build the country's drought response capacity



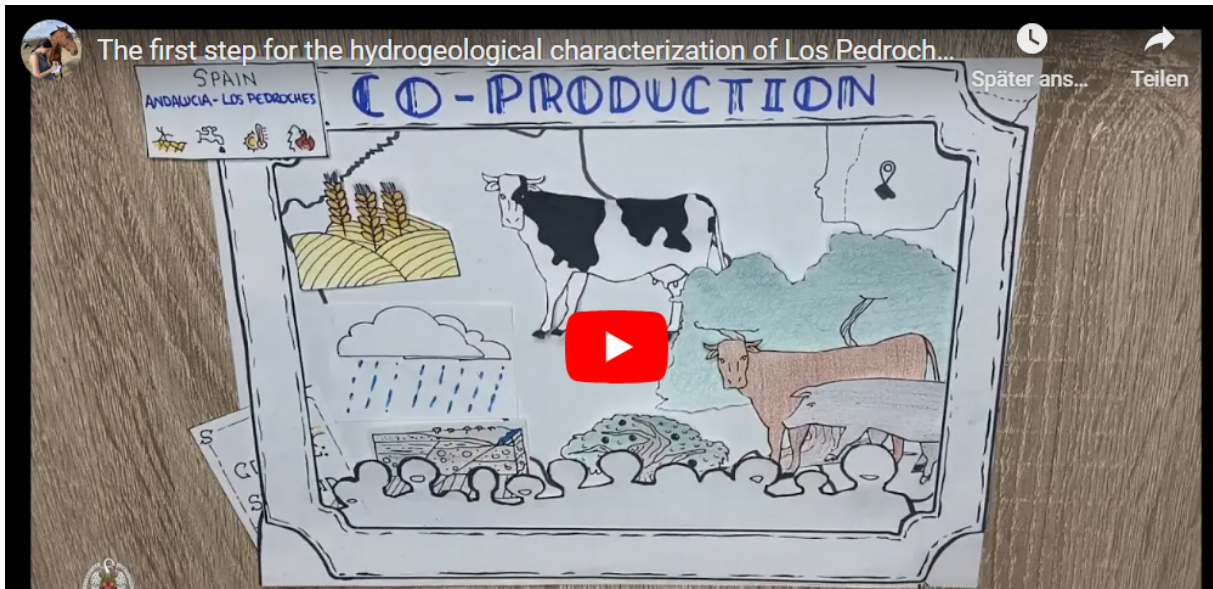
Marc van den Homberg, Balbina Nyamakura (IHE) and Riccardo Biella (CNDS, UU) carried out a visit to Lesotho where they attended the kick-off meeting of the Lesotho Living Lab and carried out important research. In the Lesotho Living Lab, I-CISK is supporting the Lesotho Red Cross Society and the 510 initiative in their project on Forecast-Based Financing aimed at building the country's drought response capacity. Paradoxically, while Lesotho is famous for its exports of mineral waters and hydropower electricity, its rural population remains highly vulnerable to droughts. As a consequence,

shifting rainfall patterns due to climate change threaten the security of many Basotho whose livelihoods depend on rain-fed agriculture. Read more [here](#).

The Comarca de los Pedroches reaches Montreal with the I-CISK project

Nikoletta Roperio from UCM will present her work on the characterization of the hydrology/hydrogeology of the Comarca de los Pedroches at the Adaptation Futures Conference 2023, organized by the United Nations International Adaptation Science Programme and the World Meteorological Organization in Montreal next October. She will present a poster entitled "Integration of Local and Scientific-technical Knowledge for the Characterization of the Comarca de los Pedroches". In addition to the poster, Nikoletta has prepared a short video explaining her work, which is of great interest to the members of the Living Lab, who actively

participated in developing the research, as well as to the general public, since it describes the work carried out in a very pleasant way. Read more [here](#).



Heat Mapping Campaign in Budapest: Insights from the I-CISK Project

In August 2023, under the framework of the I-CISK project, we embarked on a groundbreaking mission to measure heat emissions across two central districts of Budapest, Hungary: Terézváros and Erzsébetváros. This

task was accomplished as part of the Budapest Living Lab "Heat Mapping Campaign," utilising state-of-the-art technology. Read more [here](#).

Sustainable Water Management in Castellarano (RE): Exploring innovative solutions for a water resilient future



The Italian Living Lab continues to make strides successfully. In July 2023, an insightful field trip was carried out at the hydraulic around the Castellarano weir on the Secchia River with the support of the Emilia Central Reclamation Board. Read more [here](#).

Climate Services using Open Data & Open API Standards



From June 26 to June 30, 2023, the second Data Week took place in the historic New City Hall in Leipzig, Germany. The main theme of the conference was urban development and planning. On Monday, presentations and keynotes focused on the European Green Deal projects and Data Cubes as a digital data resource to create a geospatial ecosystem for Europe. Tuesday focused on FAIR data, various urban planning topics and different data spaces such as agriculture, biodiversity and climate. 52°North's Johannes Schnell opened the Climate Data Space panel with a presentation of current projects. Wednesday evolved around AI and the need for semantics when providing data to make it machine-readable and processable. The last two days were dedicated to workshops and discussions on the sustainability and reproducibility of AI. Read more [here](#).

GECOSistema and 52°North meet virtually for a project hackathon



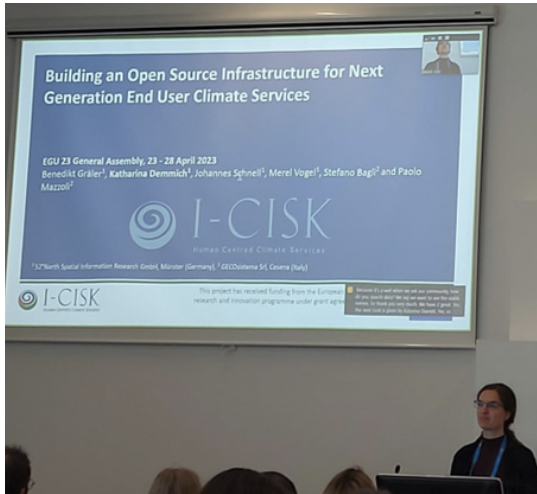
52°North currently works on the first developments of mock-up climate services for different I-CISK Living Labs. Recently, our developers met remotely with the GECO team from Italy to review the architecture designed earlier this year. We discussed necessary adjustments, organized the next steps, and prepared the work package contribution for the upcoming General Assembly. In the afternoon, the 52°North team worked on the first deployment of the different mock-ups in the cluster.

Addressing cross-sectoral climatic challenges to support the tourism sector



A workshop at the premises of the Organization for the Development of Crete S.A. (OAK) at Chania (Crete, Greece) was held on 29/5/2023. After a discussion on aspects of the advanced climatic information, which is produced within I-CISK presented by SMHI, representatives from the water management and road infrastructure sectors (OAK) have the chance for a hands-on display of the new Climate Service (CS) under development (EMVIS) within I-CISK to support the tourism sector, under a multisectoral approach. Vivid discussions provided significant input for further development of the CS to better address the needs of the end-users. Read more [here](#).

Building an Open Source Infrastructure for Next Generation End-User Climate Services



At the EGU conference in April, 52°North's Katharina Demmich presented the current status of the cloud-based web platform implemented within the I-CISK project. The I-CISK project aims to bridge the gap between science and society in the development of adaptation strategies to climate change. Although various research studies are currently addressing this challenge, the knowledge gained rarely reaches society in a format that can be easily understood and applied to adapt to climate threats. Therefore, the I-CISK consortium follows a co-creation process in which stakeholders as well as software infrastructure developers and climate modelers work in close collaboration. Together

with GECOsystema, 52°North leads the implementation of an open-source web platform that will provide climate indicators to stakeholders in a comprehensive way. The platform will connect modelling tools for weather forecasts and climate projections with local data sources and available climate services, e.g., from the Copernicus Earth observation program. Read more [here](#).

I-CISK resources

Integrating scientific and local knowledge to tackle climate challenges now and in the future

The European Green Deal seeks to support efforts by citizens, governments and businesses to adapt to change, while working towards a carbon neutral EU by 2050. As part of the Research and Innovation actions that underpin the Green Deal, the innovating climate services through Integrating Scientific and local Knowledge project, I-CISK in short, aims to bridge this gap by innovating how Climate Services are developed, through co-producing these with local stakeholders and citizens. For example, forecasting drought is a climate service that is useful to water dependent sectors such as tourism, but also to agriculture, though each of these sectors may be impacted differently, and the sector specific needs and knowledges will influence how climate information is used, interpreted and acted on. [Read more](#)

Partners and contact information

I-CISK brings together a highly specialised and multi-disciplinary team of experts from 13 consortium members: IHE Delft, The Netherlands (coordinator); European Centre for Medium Range Weather Forecasting (ECMWF), United Kingdom; Sveriges Meteorologiska och Hydrologiska Institut (SMHI), Sweden; Free University Amsterdam; The Netherlands; CREAM, Spain; Uppsala University, Sweden; Red Cross 510, The Netherlands; GECO-Sistema, Italy; Caucasus Environmental NGO Network (CENN), Georgia, Universidad Complutense de Madrid, Spain; 52°North Spatial Information Research, Germany; IDEAS-Science, Hungary; and EMVIS, Greece.

For more information and questions, please send an email to Dr. Micha Werner, Project Coordinator (m.werner@unihe.org) and Dr. Ilyas Masih, Deputy Project Coordinator (i.masih@un-ihe.org).

The I-CISK project team sent this information

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