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

Benedikt Gräler¹, Katharina Demmich¹, Johannes Schnell¹, Merel Vogel¹, Stefano Bagli², and Paolo Mazzoli²

¹52°North Spatial Information Research GmbH, Münster, Germany
²GECosistema Srl, Cesena, Italy

Climate Services (CS) are crucial in empowering citizens, stakeholders and decision-makers in defining resilient pathways to adapt to climate change and extreme weather 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 incorporation of social and behavioral factors, local needs, knowledge and the customs of end users. In I-CISK, we put forward a co-design based requirement analysis to develop a Spatial Data Infrastructure and Platform that empowers a next generation of end user CS, which follow a social and behaviorally informed approach to co-producing services that meet climate information needs of the Living Labs of the European I-CISK project. Core to the project are climate extremes such as droughts, floods and heatwaves. The use-cases touch upon agriculture, forestry, tourism, energy, health, and the humanitarian sectors. We will present the summarized stakeholders’ requirements regarding the new climate-service platform and their technical implications for the open source spatial infrastructure. The design also includes assessing, managing and presenting uncertainties that are an inherent component of climate models.