



Bridging the gap between the impact and climate communities: lessons from the IS-ENES use cases

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The results of climate projections, such as the ones performed at the international level as part of the CMIP (Meehl et al.; 2000) or CORDEX (Giorgi et al.; 2009) projects, represent a wealthy source of data for a wide range of applications. Even though most of the data are easily available through specialised databases, their use can be misleading without enough background. Indeed, it is difficult for a user to find its way in the diversity of approaches or to understand how to best use these data for its own application. The Joint Research Activity n°5 of the IS-ENES EU-project aims to tackle this issue in bridging the gap between data and user communities. For that purpose 17 national and representative “use cases for climate data” have been selected. Their analysis - from the definition of the request by users to the delivery of final products - provides a good overview of European practices.

This work shows the large panel of methods and tools that are used to answer the different requests. It analyses the complex workflows, which include downscaling methods and bias corrections that are needed to translate climate data into suitable impact data. Even though some tools are used routinely, most of them have been developed to answer specific requirements and are still subject to research and development. Moreover, methodological choices depend on technical and scientific constraints and involve climate expertise. Expertise is also needed to correctly use the final products and to assess associated uncertainties. The analysis of the use cases allows us to propose a general workflow that includes seven steps starting from the definition and interpretation of a request to the delivery of final products. This work supported the development of the ENES Portal Interface for the Climate Impact Communities (EPICIC) as part of the European project IS-ENES (<https://is.enes.org/>) that should facilitate climate data access by impact communities.