

Climate services components identified by Climateurope2

1. Introduction

Climate Services involve the provision of climate information in such a way as to assist decision-making. The service includes appropriate engagement from users and providers, is based on scientifically credible information and expertise, has an effective access mechanism and responds to users needs. Given the complexity of climate services and their landscape, Climateurope2 proposed to break the conceptualisation of climate services into a set of high-level components for which questions about best practices, guidance and standardisation can be addressed individually, but having in mind the ties between these components.

2. How components were identified

The components of climate services have been identified through a series of workshops with all the project partners that took place between January and February 2023. These workshops were designed around the questions of the “what”, the “why” and the “how” of standardisation of climate services. In these workshops participants agreed that identifying the data, processes, products, and actors that make up the key and broad components of climate services is the starting point for developing a framework for supporting standardisation.

The first workshop served as an introduction for CE2 project partners to working together, and helped clarify what approach we should take to standardisation and co-production. The second workshop allowed for some convergence on the key components of climate services. The third workshop focused on how CE2 can support climate services. This involved triangulating discussions on climate service components, standards and standardisation processes, and the work and output within different Work Packages (WPs) of CE2, especially WPs 2-5. The main outputs of the workshops relevant for this document are the following:

- There is adequate consensus on what the key components of climate services are.
- There is no consensus on the flow of the components (i.e., how different processes, products and actors are related to one another and the order they follow in a “typical” climate service), apart from the fact that a climate service starts from the users’ demand.
- Different WPs and related tasks all can contribute to providing information about the different components of climate services.

3. Components of climate services

The components aim to match the breath of the definition of climate services provided above and are an attempt to provide some boundaries and at the same time break the complexity of climate services into recognisable sets of data, processes, products and actors. Climate services components, in this context, refer to the data, processes, products and actors involved in the service context and demand, as well as the design, development, implementation, uptake and evaluation of climate services. The broad components identified by project members so far are listed below, but it is important to note that the order in which the components are listed does not necessarily reflect the order in which these may appear in a climate service. Also, it is critically important to pay attention to the interconnections and interoperability across components. Moreover, throughout the lifetime of the project, CE2 members will work to harmonise this approach with other existing approaches to conceptualising the climate service value chain, as well as illustrate these components with examples.

Climateurope2 has identified four main climate services components (visualised in Fig. 1 below) that are used to structure the discussions:

- The decision-making context for which climate services must deliver value: It refers to the kind of decisions the climate service supports, including its geographical, social, and political context.
- The ecosystem of actors and co-creation processes involved: It identifies the actors involved in co-producing, evaluating, and taking up climate services, as well as the actors that might become

relevant because of a particular decision context. This component also addresses the co-production processes that are relevant for different actors and different stages of the climate service development process.

- The different knowledge systems, information, and processes that contribute to co-develop successful climate services: This component relates to climate data, but not only. Environmental, social, economic and technical, as well as engineering data and local knowledge to develop and implement local adaptation and mitigation strategies, are relevant here too. This is also the case of all selection, evaluation and translation processes related to this data. Data accessibility, as well as its storage and stewardship, also fall under this component.
- The delivery mode and its co-evaluation: This refers to the way a climate service is delivered and how this delivery is evaluated. It should include the tailored aggregation and combination of data and processes to match the decision and context of the service client.

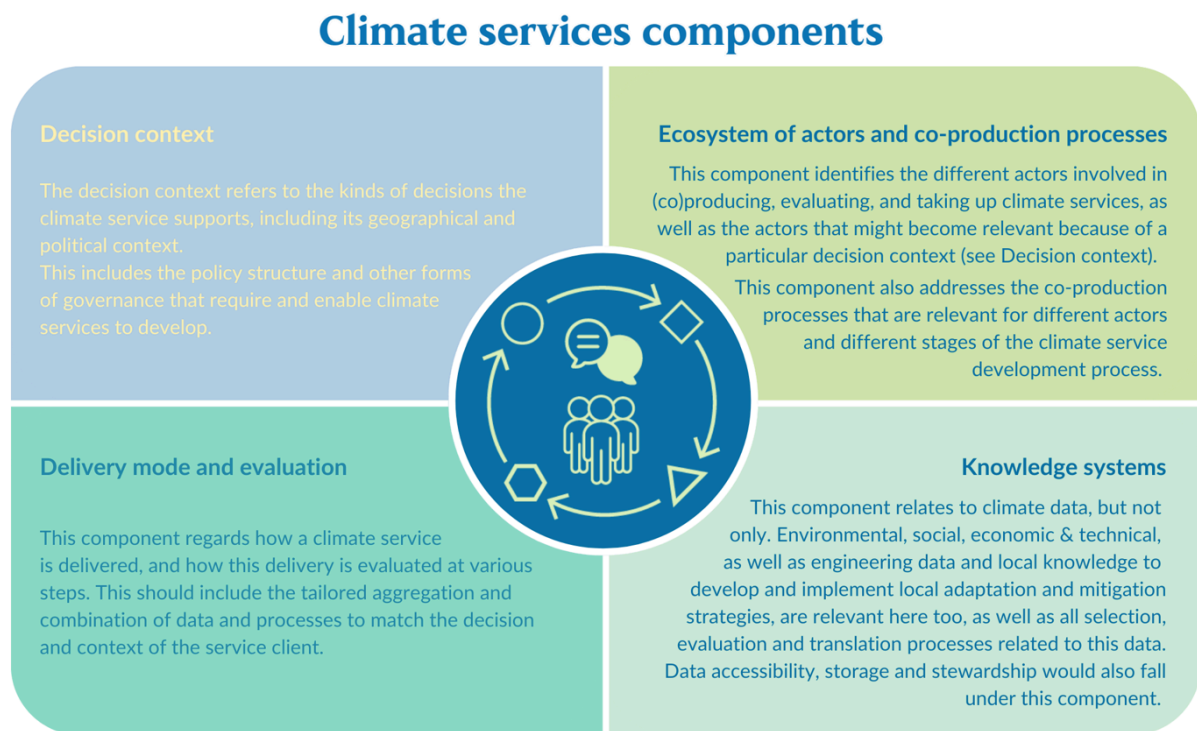


Fig. 1. Components of a climate service as identified in Climateurope2.