



On the use and potential use of seasonal to inter-annual climate predictions for decision-making in Europe

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Using climate information to support decision-making in sectors and organisations susceptible to climate events and impacts is widely recognised. Developments in the science and models underpinning the study of climate variability and change in Europe have led to an increased interest in seasonal to inter-annual climate predictions (S2ICP) in recent years. While seasonal climate forecasts are now routinely produced operationally worldwide, inter-annual climate predictions are still in its infancy restricted to the realm of research.

Contrary to other regions of the world where the use of these types of climate predictions, particularly at seasonal timescales, has been pursued in recent years, little is known about the uptake and information needs of decision-makers regarding S2ICP in Europe. To fill this gap we pursued a number of methods including in-depth interviews with European decision-makers, a survey of European organisations, and a workshop with European climate services providers.

Our analysis has shown that early adopters of seasonal forecasts in Europe tend to be related to the agriculture, health, energy, water, insurance, and transport sectors. Inter-annual predictions, although restricted to the research domain, were also noted as having the potential to inform decision-making in particular European sectors.

However, significant differences in S2ICP information needs across and within organisations and sectors are largely underpinned by factors such as the range of decision-making processes, and the institutional and regulatory contexts of the organisations. Such differences characterise the complex and heterogeneous landscape of users and potential users of S2ICP across Europe but also provide us with new knowledge and opportunities for developing climate services that respond more effectively to users' needs.

This paper will present the latest findings from our analysis and consider some of the broader issues raised by the emergence of S2ICP for climate services in Europe.