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An overview of the EUCP project – towards improved European Climate Predictions and Projections

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There is clear evidence that, even with the most favourable emission pathways over coming decades, there will be a need for society to adapt to the impacts of climate variability and change. To do this regional, national and local actors need up-to-date information on the changing climate with clear accompanying detail on the robustness of the information. This needs to be communicated to both public and private sector organisations, ideally as part of a process of co-developing solutions.

EUCP is an H2020 programme that began in December 2017 with the aim of researching and testing the provision of improved climate predictions and projections for Europe for the next 40+ years, and drawing on the expertise of researchers from a number of major climate research institutes across Europe. It is also engaging with users of climate change information through a multiuser forum (MUF) to ensure that what we learn will match the needs of the people who need if for decision making and planning.

The first big issue that EUCP seeks to address is how better to use ensembles of climate model projections, moving beyond the one-model-one-vote philosophy. Here, the aim is to better understand how model ensembles might be constrained or sub-selected, and how multiple strands of information might be combined into improved climate change narratives or storylines. The second area where EUCP is making progress is in the use of very high-resolution regional climate simulations that are capable of resolving aspects of atmospheric convection. Present day and future simulations from a new generation of regional models ae being analysed in EUCP and will be used in a number of relevant case studies. The third issue that EUCP will consider is how to make future simulations more seamless across those time scales that are most relevant user decision making. This includes generating a better understanding of predictability over time and its sources in initialised forecasts, and also how to transition from the initialised forecasts to longer term boundary forced climate projections.

This presentation will provide an overview of the challenges being addressed by EUCP and the approaches the project is using.