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MEDiterranean Services Chain based On climate PrEdictions

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The World Climate Research Programme coordinates international research efforts devoted to improving forecast capabilities at seasonal to decadal timescales. In the Mediterranean region, several initiatives (e.g. CLIMRUN, EUPORIAS) have developed methods and tools for creating prototypes of climate services addressing users' needs in specific sectors, whereas the purpose of the Mediterranean Climate Outlook Forum is to satisfy the high demand for user-oriented operational climate information.
In this talk, we illustrate the main feature of a new international project (MEDSCOPE), funded in the framework of the ERA–NET Consortium "European Research Area for Climate Services" (ERA4CS). MEDSCOPE aims at improving climate forecast capabilities and related services on seasonal-to-decadal timescales. The strategy will be based on exploiting the range of existing datasets of climate observations and forecasts to improve our understanding of sources and mechanisms of predictability. This will be complemented by targeted sensitivity experiments focusing on key drivers of Mediterranean climate variability. Improved process understanding will serve as a basis to develop innovative empirical forecasting systems as well as novel process-based methods for bias correction, downscaling and optimal combination of sources of information, all of which will be publicly released via a toolbox. Extracting and tailoring the best information to produce climate services will fill the existing gaps between climate model output and applicable services. Special efforts will be devoted to sensitivity of climate predictions to models' climate drift, to spatial shifts of variability patterns and to the selection of sub-ensembles representative of the needs of specific applications. The added value provided by MEDSCOPE to climate services will be assessed for various sectors with high societal impact, e.g. renewable energy, hydrology and agriculture and forestry. MEDSCOPE will deliver top-quality climate information, supported by cutting-edge research, tailored for climate services in the Mediterranean and will empower their use by the Mediterranean user community.