



European Research Area
for Climate Services



MEDSCOPE

MEDiterranean Services Chain based On climate PrEdictioncs

Climate predictions in the Mediterranean region to be used in
agriculture, water management and renewable energy sectors

Silvio Gualdi (CMCC) +
MEDSCOPE Partner Team



WMO Northern Africa
RCC Network



WMO RA VI
RCC Network



11th Session of the Mediterranean Climate Outlook Forum
20th Session of South East European Climate Outlook Forum
13th Session of Climate Outlook Forum for Northern Africa
3rd session of Arab Climate Outlook Forum

26-29 November 2018
Cairo, Egypt

Seasonal Forecasts and Climate Services

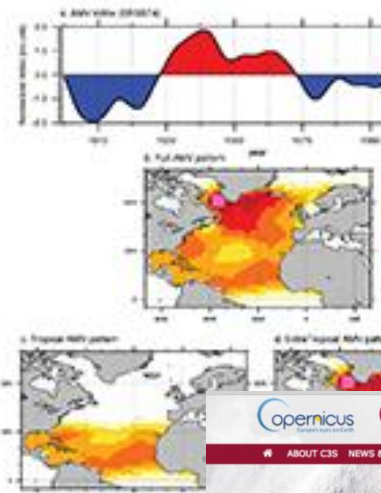


Seasonal forecasts provide information about the **probability** of occurrence of climate anomalous conditions in the **coming seasons** helping to tackle possible severe impacts.

Seasonal forecasts are an extraordinary source of data and information for climate service activities



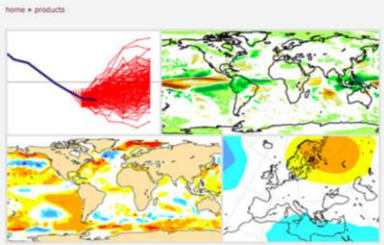
The Rationale






<#> [ABOUT C3S](#) [NEWS & MEDIA](#) [EVENTS](#) [TENDERS](#) [PRODUCTS](#) [SERVICES](#) [HEL](#)

Seasonal forecasts



The Copernicus Climate Change Service (C3S) is developing seasonal forecast products, with a target publication date of 15th of each month. These products are based on data from several state-of-the-art seasonal prediction systems.

The current proof-of-concept phase includes graphical forecast products for a number of variables (air and sea surface temperature, atmospheric circulation and precipitation); the forecasts are updated every month and cover a time range of 6 months. The interface to the set of products offers links to maps or timeseries for the forecast variables, and the facility to navigate the full set of graphics. Multi-system combinations, as well as predictions from the individual component systems, are available. A number of multi-system data products, derived from the outputs provided by the participants in the C3S seasonal




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MedCOF Mediterranean Climate Outlook Forum

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The Ninth MedCOF



The Ninth MedCOF
 Zagreb, Croatia, November 20-23, 2017

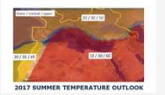
The Ninth Session of Mediterranean Climate Outlook Forum (MedCOF-9), the 18th Session of South East European Climate Outlook Forum (SEECOF-18) and the 11th Session of Northern Africa Climate Outlook Forum (PRESANORD-11) will take place in Zagreb, Croatia, from 20 to 23 November 2017, hosted by the Meteorological and Hydrological Service of Croatia (DHMZ). In addition, Copernicus Climate Change Service (C3S) related event will be held during the MedCOF session devoted to interaction with users.

[Read more ...](#)

- #### RELEVANT LINKS
- [APCC APEC Climate Center](#)
 - [ECMWF Seasonal Forecast](#)
 - [IRI Climate and Forecast Products](#)
 - [JMA Stratospheric Circulation](#)
 - [NOAA CPC ENSO](#)
 - [WMO LC LRF MME](#)
 - [World Meteorological Organization](#)

The Eighth MedCOF The Seventh MedCOF

Latest Consensus Outlook



The MEDSCOPE Project



MEDSCOPE is a **three-year project** that, by leveraging on previous experiences (e.g. CLIMRUN, EUPORIAS, ...), will enhance the **exploitation of climate predictions** from seasonal to decadal timescales, maximising the potential of their **application in different economic sectors**, public and private, of relevance for the Mediterranean region

Working in close relation with a wide basin of users in the Mediterranean area, **MEDSCOPE develops methodologies and tools aimed at improving climate forecast capabilities and related services**, maximising the societal benefit of climate predictions in the Mediterranean.

MEDSCOPE mainly focuses on the **seasonal timescale using the wealth of forecasts that is already available**. However, the project explores also the potential of predictions at longer time-scales (multiannual).



The MEDSCOPE Project



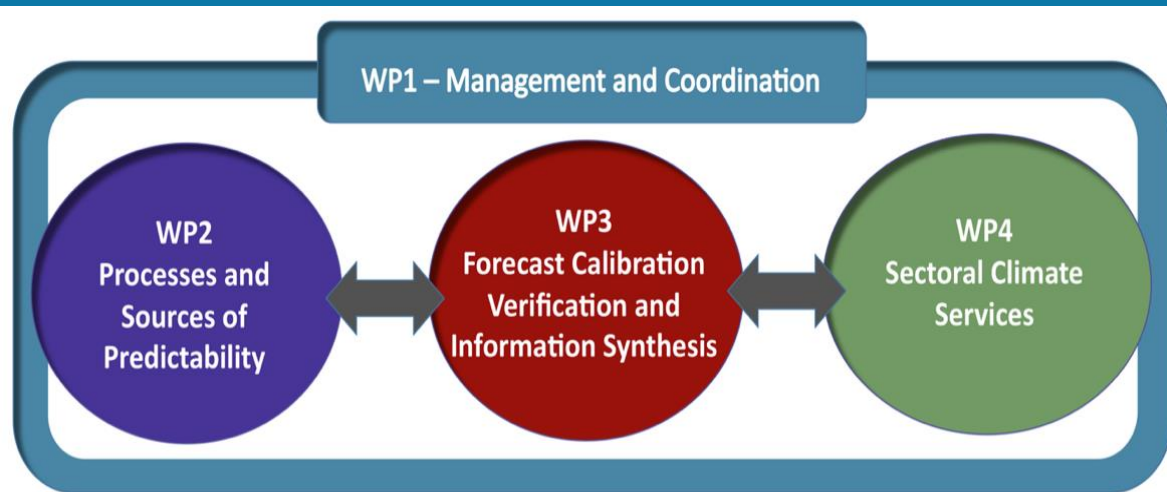
MEDSCOPE Overall Objectives



- **Improve comprehension of the mechanisms** driving the climate variability in the Mediterranean area (tropical–extratropical and polar–mid latitudes teleconnections).
- **Provide a set of methods and ready-to-use tools** for **verification and skill assessment, downscaling, calibration** and **bias adjustment** of the forecasts.
- **Provide prototypes of end-user tailored products and services** based on climate forecasts at seasonal and multi-annual timescales, in relevant economic sectors for the Mediterranean, such as **wind energy, water management (hydrology), and agriculture and forestry (and fire risk)**.

The MEDSCOPE Project

Project's structure:



WP1 (Management and Coordination): ensure the overall project monitoring, internal and external communication as well as administration and reporting. It will supervise and facilitate the collaboration and interactions among project WPs and within the team.

WP2 (Processes and Sources of Predictability): explore the mechanisms of variability and predictability in the Mediterranean, focusing on those linked with predictable signals in the **oceans** or associated with **land-atmosphere interaction** processes (**telconnections**) → **sensitivity experiments**.

WP3 (Forecast Calibration, verification and information synthesis): develop methodologies to extract usable information from predictions. It will produce tools for prediction verification, calibration, downscaling, ensemble member combination and selection that will be publicly released via a toolbox and shared among partners and users.

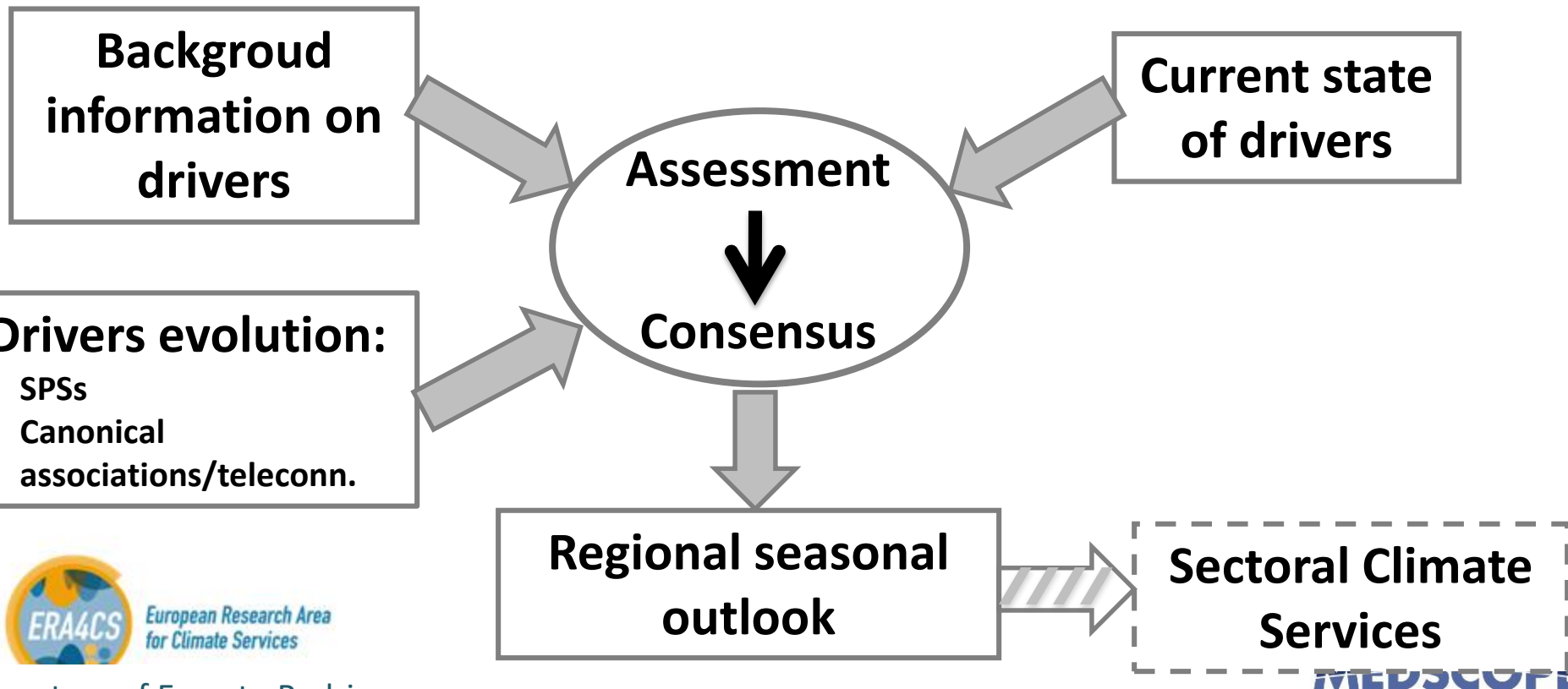
WP4 (Sectoral Climate Services): demonstrate the feasibility of climate services and generate prototypes for three important sectors for the Mediterranean: **renewable energy, hydrology (including water resources management) and agriculture and forestry.**

Expected (main) impacts:

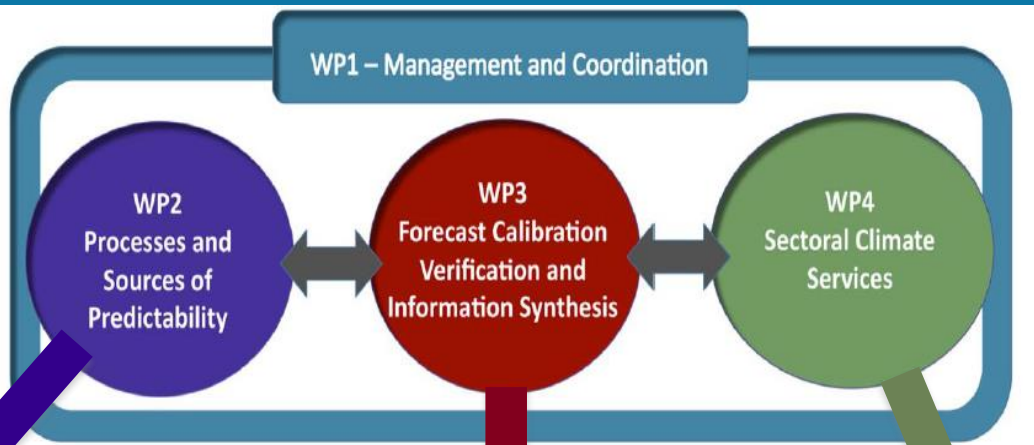


- **MEDSCOPE** steers collaboration and networking between climate prediction providers and specialized end-users in the **Mediterranean region** → building a community that shares knowledge, methodologies, practices, tools and data
- **MEDSCOPE** contributes to demonstrate the feasibility and usefulness of climate predictions for the three considered priority sectors. The use of the tools produced within MEDSCOPE could easily extend benefits to other areas of the and to a wider number of sectors.
- **MEDSCOPE** societal impacts will be channelled mainly through the already existing network of experts in operational climate prediction operating under the umbrella of the MedCOF.

Current consensus practice in MedCOF



Matching

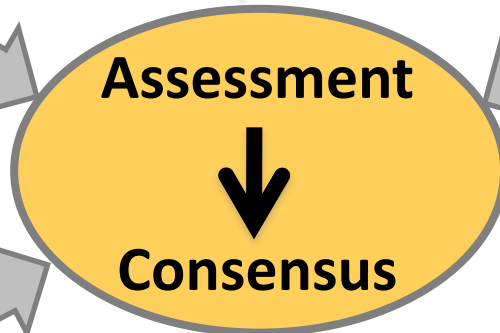


edCOF

Curre

Background information on drivers

Current state of drivers



Drivers evolution:
• SPSs
• Canonical associations/teleconn.

Regional seasonal outlook

Sectoral Climate Services



European Research Area for Climate Services

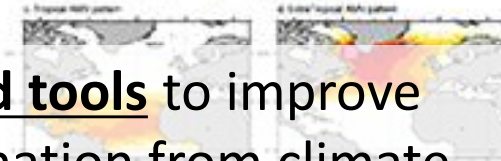
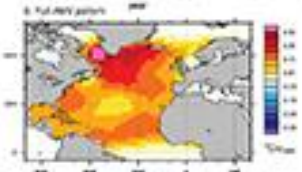
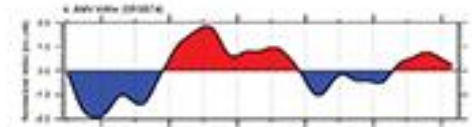
courtesy of Ernesto Rodriguez

MEDSCOPE

In conclusion, MEDSCOPE will ...



... provide a substantial advancement of scientific understanding of the climate predictability on seasonal- to- decadal timescales in the Mediterranean.



... develop and release advanced tools to improve the extraction of relevant information from climate prediction systems and assess their robustness and uncertainty.



... serve as a community builder for future climate service activities based on climate predictions in the Mediterranean, contributing to the building of a common and shared knowledge.





Thank you



www.medscope-project.eu



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