

## **Developing high-quality historical Mediterranean climate data and bringing them into the 21st Century: The WMO/MEDARE Initiative**

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The fragmentation and scarcity of available and accessible long and high-quality surface climate records is still hampering our ability for better detecting, predicting and adapting the countries to present and future impacts of climate variability and dangerous anthropogenic climate change. This is particularly striking in a region, the Greater Mediterranean Region (GMR), where first meteorological observations were made and it is regarded as a climate change "hot spot" (Giorgi, 2006). To address these issues, the World Meteorological Organization (WMO) MEDiterranean DATA REscue (MEDARE: <http://www.omm.urv.cat/MEDARE/index.html>) Initiative was set up to develop comprehensive, long and high quality instrumental climate datasets for the GMR, with a focus on the Essential Climate Variables (ECV) of the Global Climate Observing System (GCOS). Such a dataset will support and improve GMR countries ability to monitor, detect and predict climate variability and change at regional and national levels, thereby allowing countries of the Mediterranean to develop robust strategies for managing climate related risks and adapting to climate change present and future impacts. MEDARE is a cooperative effort bringing scientists from most of the National Meteorological Services in the GMR, universities and other scientific institutions that are working together for the enhancement of research activities and capacity building in the field of integrated Data Rescue (DARE), which also includes quality control and homogenisation of climate records. MEDARE is also intended to carry out multi-country integrated DARE projects, raising awareness on the importance of bringing climate records into the 21st century and also ensuring climate data exchange, accessibility and their traceability (<http://www.omm.urv.cat/MEDARE/goal-objectives.html>). Among other MEDARE's activities, this contribution will also provide details on the development of the implemented on-line metadata infrastructure (<http://app.omm.urv.cat/urv/>) and will focus on the efforts that are being put, linked to the EU-funded project EURO4M (EURO4M: European Reanalysis and Observations for Monitoring (FP7-Space Programme, grant agreement no. 242093), for enhancing historical climate data availability and accessibility over two of the poorest documented GMR sub-regions: North African and Middle East countries.