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# Seasonal forecasts for an effective drought climate service

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Mediterranean Basin is one of the hot spots of the planet affected by temperature rising and rainfall distribution modifications (IPCC, 2013). Moreover, it is characterized by a strong vulnerability due to centuries of natural resources overexploitation. Climate changes and land mismanagement are exacerbating pressure on natural resources, reducing their resilience. Understanding drought and its variability, and timely communicating its evolution over time and space can allow a shift from an approach of crisis management to a more proactive one, where responses are planned in advance in respect to the droughts occurrence and therefore are more effective and coordinated during the event.
One of the main challenges to cope with drought, in fact, is reducing the temporal gap existing between the onset and development of a dry period, and the response in managing drought-related emergencies.
Following this idea, the Institute of Biometeorology of the National Research Council (Italy) has developed a seasonal forecast system based on an empirical approach to predict drought using the SPI 3 index (McKee, 1993), few months in advance from large scale observed climate indices (Magno et al., 2018).
A series of ongoing operational services, and research applications and projects (SERV_FORFIRE and MedGOLD) for drought detection take advantage of these forecasts, aiming to increase knowledge-based information for supporting decision-making activity of a wide variety of stakeholders.
Furthermore this seasonal forecasting system is part of the CNR-IBIMET's "Drought Observatory": a comprehensive Climate Service that responds to the need of integrating a timely monitoring with a forecast of occurrence and evolution of drought events and reshaping scientific information into operational information and services for end users such as policy makers, water authorities, researchers, etc.