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TERENO-MED: Observation and Exploration Platform for Water Resources in the Mediterranean

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According to the latest IPCC projections, the Circum-Mediterranean region will be particularly affected by Global and Climate Change. These changes include population growth, increases in food, water and energy demands, changes in land use patterns and urbanization/industrialization, while at the same time, the renewable water resources in the region are predicted to decrease by up to 50 % within the next 100 years. However, a profound basis for estimating and predicting the long-term effects of Global and Climate Change on the development of the quantity and quality of water resources and on ecosystems is still lacking. The main reason for this is that environmental monitoring, in particular in the Mediterranean region, is strongly disciplinarily oriented, and financing is usually limited to short-term periods.
The TERENO-MED (Terrestrial Environmental Observatories in the Mediterranean) initiative aims to fill the described gap. Together with partners in the region, TERENO-MED will establish a Circum-Mediterranean network of Global Change observatories, and will investigate the effects of anthropogenic impacts and of climate change on Mediterranean water resources and ecosystems. Within a set of representative catchments around the Circum-Mediterranean region (Southern Europe, Northern Africa, Near East), observatory sites will be installed with state-of-the-art and innovative monitoring equipment, in order to measure hydrological states and fluxes on a long-term basis (minimum 15 years). Monitoring equipment will cover all scales, from the point to the regional scale using ground-based and remote sensing technologies.

Based on the acquired information, TERENO-MED, together with partners across the Mediterranean region will develop model scenarios that may serve as a basis for sustainable political and economical decisions. In order to gain a deep understanding of the most relevant processes and feedbacks, and to deliver reliable future scenarios for the Mediterranean region, the two initiating Helmholtz Centres, UFZ (Helmholtz Centre for Environmental Research) and Forschungszentrum Juelich, are seeking interested German and international partners to conduct joint research within the planned monitoring network.