



INNOMED: linking land use and water resources from the local to the catchment scale in the Mediterranean

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There is a growing interest on achieving a better understanding on the interactions between land use and climate and their effect on water resources and people's livelihoods, with the aim of improving long-term sustainable water use. This is even more relevant in areas such as the EU Mediterranean (EUM) region, which is a major climate change hotspot due to water scarcity, concentration of activities, and reliance on climate-sensitive resources. Irrigated agriculture is the largest blue water user in the EUM, accounting for more than 50% of total water withdrawal, largely doubling the EU average. Among non-extractive water uses, forests and rainfed agriculture have the largest green-water footprint and play a fundamental role on the allocation of effective rainfall between green- and blue-water flows, determining the water availability for other uses.

We present INNOMED, a collaborative international research project under the ERA-NET WaterWorks2015 Call (H2020-WATER 3-2015). The project aims at quantifying the physical and economic effects of alternative management options in forestry and irrigated agriculture on the local and the catchment's water balance. INNOMED promotes a holistic approach to water resources management by: i) considering the full water cycle as manageable and the catchment scale as the most relevant management level; and ii) addressing the integrated management of land and water. Diverse experiments in six case studies provide experiences on: i) determining the water footprint of different management options on forests and irrigated crops, including experimental trials, field monitoring and modelling, at the field scale; ii) estimating the allocation of green- and blue-water flows of different land uses and their spatial and temporal variations, at the catchment scale; iii) integrating the physical and economic flows resulting from alternative management options.