

HYDROCARE

Priority and measure of programme

Priority 4 Environment protection, resource management and risk prevention

Measure 4.3 Promoting integrated water management and prevention of floods.

Keywords

Water resource, Precipitation, Drainage, Meteorology, Hydrological cycle, Extreme events, Numerical Weather Prediction, Rain gauge network, Drought, Flooding, Data analysis techniques, ICT.

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Background

In the last 30 years most of the territories in the CADSES region have suffered of drought episodes staggered by short and intense rainy systems that have often led to damaging floods. Thereby, a monitoring network providing the necessary data to perform both diagnostic and

forecasting analysis has become a mandatory tool for the officials who are responsible for water management, protection and control, at the catchment scale. The proposed activities are the logic continuation of actions already developed in the INTERREG IIC Program "Territorial Planning and Combating Drought" and "Territorial Planning and Prevention of Floods". Within those frameworks, some partners developed and tested in the Objective 1 regions methodologies on water resources management and drought monitoring (prototypal drought bulletin, water re-use practices, and cyclic stream-flow measurements). The transferring of know-how acquired in that framework to the partners that were not involved in that initiative and the extension of methodologies to the CADSES area will be the starting point of the proposed activities. Objectives

The project HYDROCARE wishes to develop an integrated system capable of assessing the state of the water resources in the CADSES regions and the impact of hydro-meteorological events on the quantity and quality of such water resources. Emphasis will be on the development of effective tools for a rational exploitation of the water resources, with the purpose of preserving and enhancing economical and environmental welfare. Such managing tools will be illustrated also in practical terms by performing some case studies. Other main points of the

project will be the reconstruction of the hydrological cycle in the CADSES region, to be obtained by suitably merging observational data (both local and remote) and numerical models, and the development of a high level ICT network within a transnational frame for collecting and exchanging hydro-meteorological data and providing relevant information to end users such as professionals, farmers, entrepreneurs, public administrations. In this context, a relevant goal is also the establishment of a shared knowledge among the partners of efficient, up-to-date techniques for the analysis and interpretation of hydro-meteorological data coming from different but complementary sources. Altogether, the mission of the project is to create a transdisciplinary and transnational line of skill and action bridging directly the evaluation of the quality and quantity of the water resources of the CADSES region with soundly based tools able to reconstruct and model the hydro-meteorological events.