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Traditional water management systems - Are they still important to local communities?

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Sustainable water resources management is a key issue for the 21st century. The international community is becoming aware about water scarcity and the significant implications on socio-economic and environmental issues. This concern has lead to new juridical instruments. The EU Water Framework Directive (WFD) is the ultimate example of the new tendencies towards a more sustainable water management and use. Nevertheless, it is arguable that such solutions will be enough to provide all the water that society requires for a sustainable development, and at the same time mitigate the impacts of extreme drought and flood events arising from climate change.

In Portugal, agriculture is the sector that consumes more water, accounting for circa 75% of the country global consume in 1999 (National Water Plan, 2001, INAG). In the other hand, most of the subsistence agriculture from the Portuguese mountainous areas is based on water and land management traditional techniques that use significant human effort. The aims of this communication is to assess the water techniques and systems conservation status; to evaluate the degree to which local population still depends on them; and to evaluate the inhabitants motivation to preserve and maintain these systems.

The study area lies in the central littoral Portuguese mountain range, namely the Águeda and Tondela municipality. These areas are very dependent from agriculture and forest activities, but are loosing progressively the resident population. The maintenance of the water management techniques are essential aspects for the soil and water conservation and the involvement of the land users is crucial in this strategy.

The identification and evaluation of the traditional techniques and systems of water management was made through an exhaustive identification and characterization of those techniques and systems and by the implementation of a questionnaire to the inhabitants. This research was and is being performed under two research projects, namely CLIMED (INCO-MED ICA3-CT-2000-30005), supported by the European Commission; and TRADWATER (POCI/CLI/60784/2004), funded by the Fundação para a Ciência e Tecnologia.