Water Cap & Trade

In a context of climate change, structural water deficits and climate extreme events are expected to become more frequent, putting at stake the mechanisms currently used for sharing water between economic sectors and among users. The IWRM project *Water Cap & Trade* will investigate whether and how water markets (WM) – or systems of tradable water quotas – could become a feasible policy option for water allocation under increasing scarcity conditions.

The underlying assumption is that the use of a "cap and trade" approach could simultaneously guarantee environmental protection, as required by the Water Framework Directive, and enhance flexibility in allocation to maximize water use utility and possibly reducing conflicts. Our research team recognizes that a lot of economic modeling has already been carried out to assess potential economic gains of implementing WM in various countries. Models were in particular used to predict water sales and purchase curves, the intensity of trade, price levels and the total welfare gains. However, in cases where markets have actually been established afterwards (Spain, California), trade intensity has been much lower than predicted by economic models. There is evidence that economic agents are reluctant to engage in water trading for a number of reasons which need to be investigated.

One of the key decisions taken during the kick-off meeting held in January 2011 in Montpellier was to focus our research effort on the design of WM scenarios that can be considered as credible policy options by stakeholders. Indeed, the consortium members postulated that the discussion of simplistic WM scenarios, slightly adapted from Anglo-Saxon experiences, would inevitably lead to rejection by stakeholders. This implies working out sophisticated description of WM scenarios which should incorporate elements from local economic, institutional, cultural and technical contexts. The team also recognizes the need to be creative while designing such scenarios, making the best possible use of the great diversity of water market experiences conducted in different states of Australia and Northern America (Canada, USA), in Chile, Spain as well as in developing countries (Pakistan, India).

Significant efforts have thus been made to document existing WMs around the world. The case of Spain, where such markets function relatively well since 2005, has been extensively documented (report available on request). We actually expect that French and Italian stakeholders will be more sensitive to experiences conducted in a nearby European Country than to Australian experiences. This material will soon be used to developed scenarios to be debated with stakeholders in regional arenas and with experts at the national level. Preliminary scenarios have already been defined for improving existing water markets in the Tajo-Segura basins and Guadalquivir-South basins in Spain.

In parallel with this first activity, different methodological approaches are currently being developed by the project team to test and fine tune WM scenarios with stakeholders. A limited number of workshops were organized with a few farmers in one of the French case study. A game simulating the functioning of water market has been designed and tested with students, before being deployed in a real case study (end of 2011). A semi-structured questionnaire has also been developed for

conducting interviews (planned end of 2011). In Spain, a National Advisory Group, comprising high-level stakeholders and experts has been formed and had a first meeting, which was followed by a seminar on water markets with experts from different fields and stakeholders. Similar events should soon take place in France (October 2011) and Italy. In Italy, preliminary interviews have been conducted with irrigation boards and the subject was discussed with experts at a conference in Florence.

The development and use of economic models for simulating possible development of water markets scenarios will only be take place at the end of the project, once the scenarios have been stabilized with stakeholders.

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The Water Cap & Trade project is carried out by a team of agricultural, environmental and resource economists from the French Geological Survey – Brgm (Fr), ACTEON (consultancy comp., Fr), Cemagref (agriculture & environment research center Fr), the Technical c University of Madrid (Sp) , the University of Cordoba (Sp) and the University of Bologna (It).

More information at www.capandtrade.acteon-environment.eu

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