



Harmoni-CA

An efficient tool for cost effective policy recommendations

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Abstract:

The preliminary evaluations done as part of the Water Framework Directive activities indicate that the agriculture is one of the major players in not achieving the environmental targets by the year 2015. Changes in agricultural practises minor or major will be required if the target good ecological conditions in water bodies shall be achieved.

The changes needed might be implemented by law (force) but lots of adjustments need to be implemented on a voluntary base given an adequate time frame. As a logical conclusion there will be some areas in which a complete change from traditional farming activities to sustainable land use will be required this having major economic impact on the parties involved. For this reason changes need to be understood and appreciated and possibly evaluated from cost-effectiveness or even a cost-benefit point of view. In some places an important issue will be a screening of the proportionality between the benefits in achieving the environmental objectives and the financial costs it takes.

As a policy maker and a case officer responsible for the water body activity plans I need an environmental economics tool. The tool must be able to abstract results from the many models used to estimate physical impacts, to calculate and compare different solutions to the environmental problems and to present the suggestions in an easy understandable manner to the many different stakeholders like the politicians, the industries, the public, the NCOs etc.

There are lots of models out there to assist us - some already created or tuned as part of the Harmoni project. Yet, as far as I know, there is not an efficient tool for cost effective policy recommendations that in a GIS environment integrate the environmental effects arising from point contamination sources, agriculture, land use and water abstraction, with the required remediating activities and the costs in achieving them.

Two Danish counties Copenhagen and Sønderjylland together with two consulting companies Carl Bro and Watervision have completed a pilot project achieving the above mentioned targets and are now in process of implementing this project into an interactive GIS environment. We expect to have a demo ready this year and will be interested to cooperate with other stakeholders to further develop and optimise the tool.

As part of the presentation of the pilot tool, the transfer and integration of physical and environmental data arising from external models and examples from the inbuilt calculation motor will be highlighted including examples of the GIS user interface.