

# Newsletter on the Human Dimension in Water Management



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## **1** Stakeholder and Public Participation – Processes of Social Learning

*In recent years stakeholder and public participation has received increasing attention in water resources management that has a strong tradition in the engineering and technical sciences. The increased awareness of the human dimension is related to the insight that improved governance and integrated solutions are required to deal with the complexity of today's water related problems. This is also emphasized in European legislation.*

The European Water Framework Directive prescribes the involvement of interest groups and the public at large in river basin management. Some authorities may prefer to fulfil the minimum requirements to comply with the legal regulations; others may perceive here a chance to fundamentally change the practice of river basin management. Hence it is important to provide arguments and collect experiences on potentials and limitations of participation.

One can distinguish different types of participation.

*Information:* The lowest form of participation is information. It is no real participation. However, information is a prerequisite for any empowerment of citizens. Access to information is crucial to allow different interest groups and the broad public to participate in environmental decision making.

*Consultation:* In the case of consultation different stakeholder groups and the public at large are asked to give their opinion on a management plan / scenario.

*Active involvement:* Stakeholders and the public are actively involved in river basin management. In this case one may talk of a co-production of knowledge, of co-decision making. Active involvement can range from just having discussions with the authorities and experts, to actively contributing to policy development (co-designing), influencing decisions (co-decision-making), or even full responsibility for (parts of) river basin management.

Of those types active involvement is the most interesting and challenging. Active involvement of stakeholders and the public at large can result in social learning, and this is essential for achieving integrated water resource management.

#### *What is social learning?*

Social learning in river basin management refers to the capacity of different authorities, experts, interest groups and the public to manage their river basins effectively. Collective action and the resolution of conflicts require that people recognize their interdependence and their differences and learn to deal with them constructively. The different groups need to learn and increase their awareness about their biophysical environment and about the complexity of social interactions. Processes of social learning determine the options that are taken into consideration.

Processes of social learning should contain the following elements:

- Build up a shared problem perception in a group of actors, in particular when the problem is largely ill-defined (this does not imply consensus building).
- Build trust as a base for a critical self-reflection, which implies recognition of individual mental frames and images and how they pertain to decision making.
- Recognize mutual dependencies and interactions in the social environment.

- Reflect on assumptions about the cause-effect relationships in the system to be managed.
- Reflect on subjective valuation schemes.
- Engage in collective decision- and learning processes (this may include the development of new management strategies and the introduction of new formal and informal rules).

The nature of the processes of social learning will determine the types of decisions to be taken into consideration. Many intricate problems in water management require that social groups start to communicate and processes of social learning and collaborative governance will help to overcome the fragmentation in responsibilities characterizing wide areas of water management. The role of social learning in water resources management is currently explored by two European projects: *HarmoniCOP* and *SLIM*.

The *HarmoniCOP* project (Harmonizing Collaborative Planning) is about public participation and social learning in river basin management and focuses specifically on the challenges posed by the WFD. It is the goal to improve the scientific understanding of social learning and the role of ICT tools and to provide practical guidance for promoting social learning in river basin management. The project has started in November 2002. Currently work focuses on the design of case studies in 9 European countries. The inception report can be downloaded from the website ([www.harmonicop.info](http://www.harmonicop.info)). Further reports on the concept of social learning, the role of ICT tools and the importance of the cultural and national background will be available in autumn. A major product of the *HarmoniCOP* project will be a handbook with rules of good practice on how to design and implement participatory processes in different phases of river basin management taking into account differences in culture and institutions and how to design and use ICT tools. It will allow practitioners to judge possibilities and requirements. The

handbook will feed into the design of the guidelines for the implementation of the WFD. Anyone interested to participate in the design of the handbook is invited to visit the HarmoniCOP website and fill out the questionnaire.

The SLIM project (Social Learning for the Integrated Management and sustainable use of water at catchment scale – [www.slim.open.ac.uk](http://www.slim.open.ac.uk)) is now in its final year. Our case study research in four countries explores the following conceptual framework (Box 1). It continues to be revised in the light of research activity. The

operationalization of this ‘tool’ through project (case study) testing will constitute the first major research output for SLIM. It can also be seen as a meta-tool for the use of other tools e.g. in our own research we are using participatory GIS, along with others, as a ‘facilitation tool’ to trigger or enable social learning. We are currently in the midst of testing and refining this meta-tool in the light of case study experience using the common matrix we have developed. More material will be posted on our web site in the coming months as we prepare for national workshops with key stakeholders in water management and WFD implementation.



We hope to have triggered interest in the exciting scientific challenges of our work and the practical implications and look forward to any comments.

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## 2 The EUROMARKET Project – First Results

*The EUROMARKET project has started in January 2003. Its main objective is to design possible Water Supply and Sanitation (WSS) liberalisation scenarios in the European Union and Switzerland.*

The first work package (WP), which has just been completed, consisted of a review of the explicit and implicit European policies influencing the organisation of water services. In this regard, three aspects were taken into account: 1) the drinking water and sanitation standards, 2) the management of natural resources (in particular the Water Framework Directive (WFD)), and 3) the liberalisation processes of the network industries.

Each of these aspects has been structured according to the following logic: a review of the European policies and legislation, as well as of their dynamics; an assessment of emerging principles and notions; and an illustration of these principles at the national and the sector levels.

The main challenge of the first WP was to determine whether and to what extent the current EU policies in water standards, resources management, and liberalisation of the network industries could constitute a general framework for analysing the possible evolution of the WSS, especially when it comes to its liberalisation. The objectives of this first WP were:

- to analyse the role of the EU in the current liberalisation process,
- to point out the elements that could further or impede the trend towards liberalisation of WSS services, a trend which is
- currently observable in some countries.

The main result of this WP is as follows. The relationship between the development of drinking water standards and urban wastewater treatment and their impact on private sector involvement in the EU is not

straightforward. One cannot point out a unique trend towards private sector participation, considering each country's particularities. It is nonetheless possible to highlight several channels through which private sector involvement can develop: technical complexity, financial pressure, regionalisation and the emergence of new stakeholders. In terms of resources management, the WP concluded that the WFD, in its principles, does neither reinforce nor hamper the liberalisation process *per se*. The main issues linked with liberalisation (e.g.: unbundling, market regulation, definition of the services of general interest) are neither treated nor mentioned in the Directive. Finally, there is some empirical evidence in favour of a relative liberalisation of water services in several European countries, including a greater autonomy of operators – even when they remain public – and a growing private sector participation (PSP) in the management of water services. The introduction of these market principles in the management of water services is mainly due to national policies, and the European Union has played only a minor role so far.

For more results, please read our [first report](#) (WP1) on our website.

To follow the progress of our research, please register to our [newsletter](#) on our website.

Prof. Matthias Finger, Scientific co-ordinator, EUROMARKET.

For more information on the project, please contact **Jeremy Allouche** ([jeremy.allouche@epfl.ch](mailto:jeremy.allouche@epfl.ch))

# 3 New Projects

*A number of projects applied to be members of the cluster to support its objectives. The following projects have been accepted:*

**AQUADAPT** - Strategic tools to support adaptive, integrated water resource management under changing utilisation conditions at catchment level: A co-evolutionary approach

<http://www.aquadapt.net/>

The overall aim of the Aquadapt project is to generate knowledge which supports the strategic planning and management of water resources in semi-arid environments at catchment level under changing supply/demand patterns. The intellectual framework which underpins the project reflects recent thinking on the co-evolution of natural resource availability with human societies. Hence, we explicitly seek to provide a basis for the integration of water resource planning with structural, social, economic, agricultural and regional development planning.

**TiGrESS** - Time-Geographical approaches to Emergence and Sustainable Societies

<http://www.riks.nl/projects/TiGrESS>

The aim of the TiGrESS project is to improve the methodology for understanding human-environmental interactions on the basis of three regional case studies. TiGrESS will evaluate the utility of Time-Geography methods as a mechanism for producing information to integrate sustainability into policies and for identifying pathways to sustainability.

TiGrESS will build and assess TG models, disseminate through scientific monographs and produce a generic environment for reuse by consortium partners and the wider scientific and policy communities.

**MANTRA East** - The Integrated Strategies for the Management of Transboundary Waters on the Eastern European Fringe - the pilot study of Lake Peipsi and its drainage basin

<http://www.mantraeast.org>

The aim of the MANTRA East Project is to analyze and develop strategic planning methodologies and scientific tools for integrated water management in transboundary water basins following the requirements of the EU Water Framework Directive. The project's special geographical focus is on transboundary water basins located on the existing and future borders of the European Union.

The project deals with the implementation and integration of the WFD requirements on transboundary waters from ecological, informational and policy perspectives. One of the major goals of this project is to investigate the use and role of environmental monitoring, database development, information generation and communication for policy- and decision-making and management within a limited number of European transboundary river basins.

Lake Peipsi shared by Estonia and Russia was chosen as the pilot region for the MANTRA East project. The project will develop an information and communication strategy for communication of scientific and technical information to local stakeholders for the pilot lake basin that would promote more effective implementation of the EU Water Policy in that lake basin.

The strategy will be partially implemented through development of a demonstration prototype - a regional web portal that will be constructed using innovative ICT tools and approaches, such as interactive web GIS and "semantic web".

**River Dialogue** - Empowerment and Awareness Building in River Basin Management Through Focus Groups and Citizens Juries

<http://www.riverdialogue.org>

River Dialogue is aimed at identifying the best approaches to increase public participation in implementation of the EU Water Framework Directive, including preparation and implementation of river basin management plans. The project will practically test two specific participatory methods of citizens' involvement - focus groups and citizens' juries. The purpose is to examine whether meaningful participation in water management can be achieved through these methods. The focus groups and citizens' juries will be organised in three regions of Europe: in two EU countries - Sweden and The Netherlands; and in one accession country - Estonia. The selected river basin case studies in these countries - Motala River in Sweden, Lake IJsselmeer in The Netherlands and Emajõgi River in Estonia - represent a diversity of cultural and socio-economic contexts in the new Europe in which the proposed approach is implemented.

**WASAMED** – Water Saving in Mediterranean Agriculture

In the Mediterranean water scarcity is a chronic problem that is extending at such a rate that threatens sustainable development, societal welfare and stability of the whole region. The successful implementation of water-saving measures largely depends on the cultural, economic, institutional and environmental contexts, and on the boundary conditions and space-time scales they are based upon. Indeed, despite the numerous research activities on this subject, actual water saving in the Mediterranean countries is still much below expectations. The causes of this failure are mainly ascribed to the lack of effective regional co-ordination to establish (i) communication

among the relevant stakeholders to share the knowledge-base on water saving, and (ii) a comprehensive framework to support the formulation of co-operative water-saving projects and policies involving scientists, decision-makers and end-users. In this context, the Thematic Network WASAMED has been designed and implemented under the EC-FP5th (INCO Programme). The main objective of WASAMED is to establish a platform for effective Mediterranean communication and debate on water saving in agriculture, contributing to improved management of limited water resources and sustainable development in the Mediterranean Region.

The Specific objectives of the Project are:

- to improve regional co-ordination of present and future actions in water saving;
- to establish a Mediterranean-wide convention to strengthen communication and sharing of experience among relevant researchers, decision and policy makers, and end-users;
- to develop water saving research projects and actions that meet with the needs and concerns arising from the different Mediterranean contexts;
- to facilitate access of different stakeholders to an easy-to-use knowledge-base;
- to create a framework and seek consensus to assist regional planning and EU-funding in water resources management for the Mediterranean Region.

WASAMED partners are the various categories of water players like researchers, decision-policy makers, end-users, NGOs, associations of farmers, coming from all the Mediterranean countries (Algeria, Cyprus, Egypt, Greece, Italy, Jordan, Lebanon, Malta, Morocco, Palestine, Portugal, Spain, Syria, Tunisia, Turkey) for a total number of 42 partners.

## 4 Regular Columns

**Announcement: “Setting requirements for models to aid policy makers involved in participatory river basin management” (Workshop on the 16/17<sup>th</sup> October, 2003, in Osnabrueck, Germany)**

Harmoni-CA provides a forum to harmonise river basin management tools and knowledge for the implementation of the water framework directive. Within the 5<sup>th</sup> Work Package, a series of workshops will bring together policy/ decision makers and scientists in the field of water management to support the ambitious aims of the new European water management policy.

At this 1<sup>st</sup> expert workshop, policy makers will discuss the role of models, the human dimension and stakeholder and public participation in river basin management as well as the limitations of and prospects for participatory river basin management. As part of Harmoni-CA, the results will feed into the process of European harmonisation of river basin modelling.

If you want to participate, please feel free to contact Prof. Claudia Pahl–Wostl, [harmoni-ca.wp5@usf.uni-osnabrueck.de](mailto:harmoni-ca.wp5@usf.uni-osnabrueck.de), Institute of Environmental Systems Research, University of Osnabrueck, D-49076 Osnabrueck, Germany, phone: +49/(0)541-969-3328, fax: +49/(0)541-969-2770

# 5 List of Projects in the HDWM Cluster

## HarmoniCA – Harmonizing Modelling Tools at Catchment Scale

<http://www.harmoni-CA.info>

The concerted action HarmoniCA will provide guidance on management concepts and ICT tools for river basin management and the implementation of the WFD. Of specific interest for the HDWM cluster is the work package on “Integrated Assessment and the Science Policy Interface” that deals specifically with the involvement of stakeholders in the development of river basin management plans and the representation of socio-economic aspects in river basin management models.



## HarmoniCOP – Harmonizing Collaborative Planning

<http://www.harmoniCOP.info>

The project HarmoniCOP explores stakeholder and public participation and the role of ICT tools in river basin management planning using a social learning perspective. HarmoniCOP aims at improving the conceptual base for stakeholder and public participation and provide practical guidance for the implementation of the European Water Framework Directive.

## GOUVERNe

GOUVERNe

<http://www.c3ed.uvsq.fr/c3ed/Gouverne/PresGOa.html>

The project responded to the requirement for integrated systems of information permitting coherent policy and resource management decisions covering water uses in Europe. The project developed and implemented in pilot studies a user-based and scientifically validated Decision Support System (DSS) for the improved management of underground water resources at the catchment and sub-catchment levels.



## SLIM - Social Learning for the Integrated Management and Sustainable Use of Water at Catchment Scale

<http://slim.open.ac.uk>

This project develops strategic planning methodologies and social tools for the integrated management of water at catchment or river-basin

scale and other "bundles" of natural resources. It emphasizes the importance of processes of social learning for integrated resource management.

## AQUALIBRIUM

[www.aqualibrium.de](http://www.aqualibrium.de)

This project investigates the implications of the increasing deregulation of national water markets, and the fact that more and more private companies are involved in the water market. It aims at giving an overview on the current debates and analyses the various models of involvement and co-operation between the public and the private sector in the EU member states.



## FIRMA

<http://firma.cfpm.org/>

This project explored new approaches to improve water resource planning by developing and applying agent-based modelling to integrate physical, hydrological, social and economic aspects of water resource management. Specific emphasis was given to stakeholder participation and participatory model building and scenario development.



## INTERMEDIARIES - New intermediary services and the transformation of urban water supply and wastewater disposal systems in Europe

<http://www.irs-net.de/intermediaries>

This project maps the development of intermediary services and organisations in the water and wastewater sectors, examines how they facilitate the application of new resource-saving technologies and social practices and assesses their impact on the environment, economic efficiency and network management.

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## EUROMARKET

<http://www.epfl.ch/mir/euromarket>

The EUROMARKET project studies the likelihood, nature, and forms water liberalisation may take in Europe in the foreseeable future. This is done by analysing different liberalisation scenarios, depending upon the evolving water markets, the different enterprises' strategies, and the existing legislation/regulation both at the national and at the European levels.



## MULINO

<http://www.feem.it/web/loc/mulino/index.html>

The MULINO project is developing a Decision Support System for the integrated management of water resources. The system includes a decision software based on multi criteria analysis procedures. This software is being developed in collaboration with representatives from water authorities in Italy, Romania, the UK, Belgium and Portugal, and through these relationships is exploring ways to include stakeholders' preferences in the assessment of a decision problem.



## EUWARENESS - European Water Regimes and the Notion of a Sustainable Status

<http://www.euwareness.nl/>

focuses on the dynamic relationships between conflicting uses of water resources, the regimes under which these uses are managed, and conditions generating regime transitions towards sustainability. Water basin regimes have been studied in six European countries (Netherlands, Belgium, France, Spain, Italy, Switzerland).

More information:  
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Internet: [www.euwareness.nl](http://www.euwareness.nl)

## ADVISOR

<http://ecoman.dcea.fct.unl.pt/projects/advisor>

ADVISOR aims at the delivery of a set of guidelines to river basin authorities and related EU agencies for the execution of integrated evaluation of projects. The theoretical platform thereby established will support the development of new integrated evaluation methodologies and tools, which will incorporate the state of the art of the latest scientific

thinking and assessment tools together with modern participatory, multi-stakeholder decision making processes.



## PRINWASS - Barriers and Conditions for the Involvement of Private Capital and Enterprise in Water Supply and Sanitation in Latin America and Africa: Seeking Economic, Social, and Environmental Sustainability

<http://www.geog.ox.ac.uk/~prinwass/>

The project develops an indicative framework of strategy and processes, expressed by relevant guidelines, for sustainable water supply and sanitation services in developing countries, taking into account the roles of the state (national, regional, and local government levels), civil society (users associations, citizen movements, etc.), market forces (privatized water utilities), and their interrelations (e.g. public-private partnerships, other forms of private sector involvement in WSS, etc.)

## MERIT - Management of the Environment and Resources using Integrated Techniques

<http://merit-eu.net/>

The aim of MERIT is to develop a water resource management methodology to help engage the stakeholder in the decision making process. Bayesian networks are being used as tool to help the decision maker by using input from stakeholders to design and construct the networks. A range of participatory techniques are being developed to facilitate the engagement process.

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