

# newsletter

## EU.WATER

First issue

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Photo by: Nazario Spadoni

**Dear readers,**

**we are glad to send you the first international newsletter of EU.WATER project, created thanks to the generous effort of all partners and – above all - to the passion of our colleagues, a passion that is making EU.WATER project an important and day-by-day growing professional and human experience.**

**EU.WATER, approved in March 2009, is stepping into the its first year of implementation, but it was born much before when at the early 2007 the first ideas and inputs were circulating all over the South East Europe programme area and an always increasing number of people and institutions have come together to form up the today's partnership.**

**The project was born from two simple assumptions: agriculture is the largest consumptive user of water throughout the world and – at the same time – it represents the main threat for water resources, due to a massive and low efficient use of water for intensive tilling-ground water pollution from fertilizers. Efforts have to be made to manage agricultural water in the most efficient possible way.**

**In South East Europe countries, where agriculture represents one of the major components of the local economies and the rural reform process from socialism is somewhere still undergoing, one of the main environmental challenges consists in the issues related to water and especially the impact of agriculture in water pollution and consumption.**

**EU.WATER addresses regional planning and water managing strategies in line with the central priorities of the EU Water Directive and Nitrate Directive, and paves the way towards good farming practice, natural resource saving and optimization of nitrogen fertilization saving water and optimise nitrogen fertilisation.**

**One big challenge that EU.WATER partners have decided to tackle all together, supporting each other to overcome difficulties, in a friendly spirit of cooperation.**

**Get involved by EU.WATER adventure  
Enjoy the reading!**

**Marco Meggiolaro**  
*project coordinator*

## What is EU.WATER project



The EU.WATER project consists in the development of joint strategies and implementation of pilot actions to promote better management of water and natural resources in rural areas, coherently with the Water Framework Directive (Dir. 2000/60/EC) and the European Directive about Nitrates (Dir. 91/676/EEC). The project, led by the Province of Ferrara and carried out in selected rural study areas belonging to 8 SEE Countries, addresses the problem of water rationalization in agriculture and the reduction of nitrate loads and other pollutants in the water basin / ground water table caused by the intensive agricultural exploitation. Through the joint methodology sharing and its downscaling within each Project Partner's governance framework, as well as development of technical and normative instruments and the involvement of local stakeholders, the EU.WATER project therefore represents a key factor to address sustainable patterns of development in rural areas and fosters in significant way the ongoing rural reforms and agricultural transformation processes of most of the SEE Countries. Furthermore, thanks to its well-tailored and balanced partnership, composed of governance actors (at national, regional and provincial level) and high-professional technical institutions, the EU.WATER has the capacity to give concrete answers to the problem of water consumptions and contamination caused by the intensive exploitation operated by agriculture in selected rural communities across SEE space.

The initiative, co-financed by the European Union under the South East Europe Transnational Cooperation Programme, involves as partners Ministries, Regions, Local Authorities and Universities from Greece, Hungary, Italy, Romania, Serbia, Croatia, Moldova and Ukraine.

**Marta Krakowiak**  
*Technical Assistance*

## Scientific forums: Ferrara and Thessaloniki



### **Kick off meeting in Ferrara**

The EU.WATER project was officially launched during the kick-off meeting organized and hosted by the LP in the Estense Castle in Ferrara, Italy on 6th July 2009. This one day event focused on the presentation of project's structure, objectives and tools to be applied to ensure its successful performance and wide public promotion and dissemination. During the meeting all Project Partners presented shortly themselves and the problems related to water management and pollution in their local rural communities. Following the overview of project status and its activities, Marco Calmistro on behalf of the LP presented the project initial high-level planning road map in order to guarantee it's effective start-up. The EU.WATER project was also introduced to the public during the specially organized press conference.

### **First ST Forum in Thessaloniki**

The first Scientific and Technical Partnership Forum of the EU.WATER project was organized by the University of Aristotle and the Region of Western Macedonia, in Thessaloniki on 12th and 13th November 2009. The forum focused on the definition of common methodology to be applied for the efficient implementation of GIS vulnerable maps of project's target water-sensitive areas and guidelines to set up the related on-line databank. In conjunction with the ST forum, was organized the Steering Committee meeting that dealt with project administrative-financial management issues and monitored the progress of communication activities carried out by Universities of Debrecen and Aristotle, who introduced to the whole partnership the project Communication Strategy supported by dissemination tools as project brochure, official website and corporate design.

**Marta Krakowiak**  
*Technical Assistance*

The first challenge:  
mapping  
water sprawls in  
the project territories



Digital Elevation Model, Sarigkiol basin - Western Macedonia (source EU.WATER database)

The first technical phase of the project concerns the improvement of the knowledge asset in each project area to highlight the hot-spot areas related to the water management sprawl (mainly, consumption and pollution).

The Aristotle University of Thessaloniki is the coordinator of this work package, where all partners are called to collect all available data regarding socioeconomic indexes, legislation and water and nitrogen management in their designated target areas. The aim of this task is to standardize the mapping process for the development of the GIS platform and the dissemination of knowledge regarding the Geographical Information Systems and their application in water resources management and agriculture. The results of this phase will support the development of local water management policies and targeted-interventions.

During the Technical Partnership Forum in Thessaloniki, the methodology for data collection and elaboration was presented and general guidelines for the GIS maps development were defined in order to facilitate the collection of available data regarding water and nitrogen management in the designated target areas of the project.

Currently, the partnership is dealing with the Web-GIS application development for the visualization of GIS maps and dissemination of GIS information. GIS experts from all partners' areas are upgrading the available information on soil use, temperature and rainfall in order to complete the Information Databank and the Web-GIS by using one common on-line questionnaire.

The first results will be available on the project databank in Spring 2010.

**Vasileios Aschonitis**

*Aristotle University of Thessaloniki*

Focus article.  
One best  
practice in managing  
zotechnical  
effluents



The EU.Water project aims to deepen the issues related to the distribution of zotechnical effluents in particular focuses on how these agricultural practices interfere with the movement of nitrogen in soil and groundwater. It is interesting and worthy of future in-depth also another aspect regarding the structures that contain fertilizers before using them. The main legal requirements for the planning and dimensioning of the manure storages in the Target Area of the Province of Rovigo are following Ministerial Decree of April 7, 2006 and the Veneto Regional Committee Resolutions (D.G.R.V.) No 2495 of August 7 and No 2439 of August 7, 2007. The legislator, with above quoted standards, lays down the precise coefficients that have to be multiplied by the live weight raised in one year. The coefficients vary with the bred species and type of stalling. After three years of application experience, based on a comparison between what was actually produced in the stable and what was expected from the use of those quoted coefficients, is possible to draw the first conclusion: the ratios are too high and lead to oversize the storage structures for zotechnical effluents. The over-sizing of the containers for zotechnical manure implies a waste of both the construction costs as well as administrative management of volumes and nitrogen that is not consistent with the business reality: in other words, the fertilization plans must be set taking into account the volumes of manure and nitrogen which in fact are not produced. To overcome these problems, in the opinion of the writer, it is necessary to change the parametric approach dictated by the Italian legislation by introducing a greater articulation of the factors to be considered: the two parameters used (species bred and type of stalling) should be integrated by at least three other parameters such as race bred, the type of diet and the latitude of breeding (which influences the climate, in particular the evaporation). With this approach, coordinated at the international level particularly among the EU.Water partners, it will be possible to better represent the reality of the single production of zotechnical effluents on the Italian territory and in different project target areas.

**Gianluca Carraro**

*Agronomist consultant of the Province of Rovigo*

## Communicating with the local stakeholders



*Interregional communication plan of Ferrara and Rovigo: the catchment areas*

The validity and the outcome of each project is measured according to ability to disseminate the results: EU.WATER therefore provides a strong communication activities based on a general communication strategy carried out by the University of Debrecen and eight specific local communication plans prepared in each study area. Particularly, in interregional basin territory of the Po Delta, which covers an area of cultivated approximately 295,000 hectares across the province of Ferrara and Rovigo - EU.WATER partners – specific activities of stakeholders’ training and information will be implemented, so that business operators and farmers will be delivered with EU.WATER results towards a more rational use of water and nitrogen fertilizers organic synthesis. At the same time, also all the citizens will be informed about the actions taken by project and its fallout for the entire provinces of Ferrara and Rovigo: LIN (Local implementation Network) composed by farmers, agricultural technicians, civil society and companies will be formed up in each project area and they will be regularly invited to give their contribution to shape the local adaptation of the transnational strategy for local management of water’s nitrogen and rationalization of the use of natural resources in agriculture. One strength of the communication activities will be the coordinated use of several communication channels that are provided both by the project and by the PR offices of the partners, in order to reach the widest audience with a targeted and timely information over the newest practices developed by EU.WATER. In this frame, broad space will be given to communication via web and television, creating specific services for TV shows dedicated to the farming world and able to potentially reach all the inhabitants of the territory. More and more information about EU.WATER project can be founded on the project website at: [www.eu-water.eu](http://www.eu-water.eu)

**Marco Calmistro**

*Project manager - Province of Ferrara*

Horizons: from  
research to  
application in the  
Province of Ferrara



Photo by: Federico Meneghetti



Strategies for water protection against nitrate are most of the times site specific and therefore need to be calibrated in each specific target area. The Po River Delta represents a clear example of an extremely sensitive area, where the links between agriculture and ground water contamination and eutrophication have to be analysed with a multidisciplinary approach, hydrogeological, agronomical and biogeochemical. Following this rationale, in the first year of EU-water, the group of the University of Ferrara and ParcAgri (Scientific and Technological Park for the Agro-Industry) have contributed both to develop scheduled joint activities and, at the same time, to calibrate them in the Province of Ferrara, by deepening the comprehension of nitrate fate temporal and spatial patterns. Particularly, themes as water balance and soil organic matter regulation of nitrate removal by denitrification, have been studied in the most important provincial soil types and results have been presented at an international workshop held by UNESCO (M. Andreotti, S. Bolognesi, G. Castaldelli, N. Colombani, M. Mastrocicco, E. Salemi, E. Tamburini, F. Vincenzi. 2009. Potential groundwater and surface water contamination from nitrate in the Po River Delta (Northern Italy): results from an applied research within the Water Framework Directive, Isonitrate International Workshop, 10-11 December, Paris) and will be presented at the 7th International Groundwater Quality Conference, Groundwater Quality Management in a Rapidly Changing World, to be held in Zurich, Switzerland, 13-18 June 2010 (M. Mastrocicco, N. Colombani, G. Castaldelli, E. Salemi, F. Vincenzi. The role of the unsaturated zone in determining nitrate leaching to groundwater. Oral presentation). EU-water has been recently presented also at a national workshop held in Padova (G. Castaldelli, S. Bolognesi, N. Colombani, E. Tamburini, F. Vincenzi, M. Andreotti, R. Loberi, M. Mastrocicco. 2010. La dinamica dell'azoto in diversi tipi di terreno, *Terra e vita*, 4: 30-31). Beyond the need to "give answers to local questions on WFD application", these and other publications, together with other Partners' contributions, will constitute the scientific reliability of Project's outcomes, i.e. shared practices for water protection.

**Giuseppe Castaldelli**  
*University of Ferrara*

# Who are the EU.WATER partners?



Province of Ferrara, Italy



Province of Rovigo, Italy



Trans-Tiszaian Inspectorate for Environment, Nature and Water, Hungary



University of Debrecen for Environmental Management and Policy, Hungary



Region of Western Macedonia, Greece



Aristotle University of Thessaloniki, Greece



Ministry of Agriculture, Forestry and Rural Development, Romania



National Institute for Research and Development in Soil Science, Agricultural Chemistry and Environment, Romania



Agency for Rural Development of Istria, Croatia



Institute of Agricultural Economics, Serbia



Odessa National Polytechnic University, Ukraine



Ialoveni Rayon Council, Republic of Moldova



## Two partners from Debrecen (Hungary) take part in EU.WATER partnership:

The **Trans-Tisza Region Environmental, Nature Protection and Water Inspectorate** is the regional body of the Hungarian Ministry of Environment and Water. Since January 1st, 2005 the Inspectorate as unified „Green Authority” is responsible for environment, nature and landscape protection tasks as well beside the authority tasks of environmental protection. As one of the 10 Regional Inspectorates for Environment, Nature and Water in Hungary, it has full responsibility to implement, monitor and evaluate the existing measures and has long-term and sound experiences in the field of water management/agricultural water management. The Partner participates to the development, control and monitoring of regional, national water management programmes and policies. The project team is composed by Bela Kelemen (director - project manager), Laszlo Rozsa (chief expert), Peter Dobos (financial expert), Katalin Nagy (communication expert).

The **Centre for Environmental Management and Policy (CEMP)** was established in 1997 at the University of Debrecen. Educational, research, expertise and advisory activities are the main profiles in the field of Environmental Management, Environmental Policy and Regional Development at local, regional, national and international level. CEMP participates and coordinates numerous national and European projects and policy supported research projects, in close and continuous cooperation with numerous actors, namely regional development agencies, environmental professionals and authorities, environmental agencies, ministries. Involvement of national, European and international stakeholders were part of the work during all activities. CEMP is responsible of the communication strategy of EU.WATER project The project team is composed by Zoltán Karácsonyi (director - project manager), Judit Karacsonyi (researcher), Tunde Szaboo (researcher).



EU.WATER international newsletter by Province of Ferrara

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