



NOSTRUM-DSS

Network on Governance, Science and Technology for Sustainable Water Resources Management in the Mediterranean. Role of DSS tools.

Coordination Action funded by the European Commission, Sixth Framework Programme, "Specific measures in support of international co-operation" - Mediterranean Partner Countries (MPC), 2004-2007.

PROJECT BACKGROUND AND MAIN OBJECTIVES

The Mediterranean basin is characterised by a strong heterogeneity of cultures, economies and societies that often implied problematic interactions. It is one of the areas where water resource scarcity and conflicts between different water users are the most dramatic. The need and relevance for sustainable integrated water management strategies is therefore clear. Decision Support Systems (DSS) are promising tools for helping policy makers to bring the principles of Integrated Water Resources Management (IWRM) into practice for managing socio-political conflicts over competing demands for water uses in different environmental situations. However, their potential seems not yet fully exploited. Various evidences suggest that there are various reasons for this, first of all a lack of interaction between policy makers and researchers: on the one hand, researchers are often not responsive to the needs of stakeholders and policy makers; on the other hand, policy makers have a tendency not to use scientific information for the formulation of water resources management

policies. A need for reorienting science to support policy making and for adopting multi-sectorial and multi-disciplinary approaches integrating socio-economic and environmental considerations is evident. NOSTRUM-DSS is a Coordination Action which aims at addressing this gap, approaching the analysis of needs expressed by stakeholders belonging to the various Mediterranean countries directly involved in the project activities, and fostering mediation between policy objectives and scientific knowledge to create an enabling environment for a more equitable and efficient water resources management in the basin.

The **key objectives** of this Coordination Action are:

- 1.** To establish durable links between scientific institutions, governments, NGOs, SMEs and other stakeholders and to improve public awareness on water management;
- 2.** To improve scientific knowledge and applied methodologies in IWRM;
- 3.** To promote the development of suitable Decision Support System tools built upon real needs of policy making in IWRM.



The Mediterranean is strategically located between different sets of cultures, different development choices, dividing them. However, in its historic role, the Mediterranean used to be a unifying element between those different but intrinsically interconnected worlds. It is in order to contribute to the idea of the Mediterranean area as a *unicum* of diversities, that NOSTRUM-DSS has established a wide partnership between interested parties in the field of Integrated Water Resources Management (IWRM) with concrete prospects of long term duration.

In theory, DSS should have an enormous potential as tools for the identification of optimal water resources management regimes in the Mediterranean basin, where water resource scarcity could prove a contributing factor to conflict and instability. DSS tools can help to design management strategies which are flexible enough to accommodate changing political and socio-economic situations as well as technological innovations, while being strict enough to ensure the ecological sustainability of water uses. In addition, water planning is traditionally understood within a centralised framework, which focuses on engineering solutions: the current attempt to move towards participatory planning for water resources can significantly be improved by the adoption of suitably designed DSS tools, which take into consideration the interests, needs and objectives of all relevant stakeholders.

The ultimate aim of the NOSTRUM-DSS Coordination Action is to contribute to bridge the gaps between science and real life, in order to provide DSS developers with insight into the language and needs of policy makers

(PMs) and stakeholders, and subsequently to provide PMs with effective tools based on an integrated approach for problem solving in the context of IWRM.

The European Union supports the development of IWRM plans, with stronger stakeholders' participation, pro-poor emphasis and gender sensitivity, and NOSTRUM-DSS will offer support to this policy through its emphasis on the development of useful DSS tools. In short, NOSTRUM-DSS has a strong potential to support and foster the achievement of many EU initiatives and international relation policies, especially with Partner Countries in the Mediterranean through the contribution to the Euro-Mediterranean Partnership.

The main **expected results** of the NOSTRUM-DSS Coordination Action are:

- **Improved communication** between science and policy;
- **Improved co-operation** among Mediterranean institutions;
- Identification of **multi-sectorial approaches** to the design, development and implementation of DSS tools in IWRM;
- Identification of **multi-disciplinary approaches** to the design, development and implementation of DSS tools in IWRM;
- **Assessment of data availability** and constraints in relation to DSS users' needs;
- **Establishment of durable links and long-term collaborations** between the partners and representatives of the political and academic institutions in the Mediterranean Area;
- **Set of Best Practices Guidelines** for the development and application of DSS tools for IWRM in the countries of the Mediterranean basin.

SEMINARS AND CONFERENCES

- October 2004: Kick-Off meeting, Lisbon, Portugal.
- October 2005: Technical Workshop on “Sectorial issues for DSS use in water resources management”, Tunisia.
- February 2006: Technical Workshop on “Methodological issues for DSS use in water resources management”, Egypt.
- June 2006: Technical Workshop on “Data issues for DSS use in water resources management”, Lebanon.
- December 2006: Science and Policy Workshop, Cyprus.
- June 2007: Final Dissemination Conference, Italy.



PARTNERSHIP

Activities undertaken in NOSTRUM-DSS involve a core group of five partners (FEEM, ICS-UNIDO, EIA/UATLA, NCSR and CEDARE) from the North and South of the Mediterranean. Alongside the core group, the Consortium is constituted by a broader number of organisations, institutions, and individuals operating in the field of water resources management. A comprehensive list of partners follows:

- *Fondazione Eni Enrico Mattei (FEEM)*. Corso Magenta 63, 20123 Milan - Italy; Project Co-ordinator.
Web site: www.feem.it

- *International Centre for Science and High Technology (ICS-UNIDO)*. AREA Science Park, Bldg. L2, Padriciano 99, 34012 Trieste - Italy; Partner.
Web site: www.ics.trieste.it

- *Ensino, Investigação e Administração S.A. / Universidade Atlântica (EIA/UATLA)*. Antiga Fábrica da Pólvora de Barcarena, 2745-615 Barcarena - Portugal; Partner.
Web site: www.uatla.pt

- *National Council for Scientific Research (NCSR)*. Sports City Street, 1107 2260, P.O. Box 11-8281, Beirut - Lebanon; Partner.
Web site: www.cnrs.edu.lb

- *Centre for Environment & Development for the Arab Region & Europe (CEDARE)*. Heliopolis Bahary, 2, ElHegaz Street, Heliopolis, P.O. Box 1057, Cairo - Egypt; Partner.
Web site: www.cedare.org.eg

- *Laboratory of Radio-Analysis and Environment of the National Engineer School of Sfax (LRAE)*. Route de Soukra - km 4, P. O. Box W, 3038 Sfax - Tunisia; Partner.
Web site: www.enis.rnu.tn



- *National Technical University of Athens (NTUA)*. Heroon Polytechniou 9, Zografou Campus, 15780 Athens - Greece; Partner.

Web site: www.ntua.gr

- *Centre National de la Recherche Scientifique (CNRS)*. Legal address: 250 Av. Albert Einstein, 06560 Valbonne - France; Partner.

Web site: www.cnrs.fr

- *Dokuz Eylul University, Water Resources Management Research and Application Centre (SUMER)*. Tinaztepe Campus, Civil Engineering Building, 35160 Buca / Izmir - Turkey; Partner.

Web site: www.deu.edu.tr

- *Centro Interdipartimentale IDEAS/CESD University of Venice (IDEAS/CESD)*.

Palazzo Giovannelli S. Croce 1681, 30135 Venice - Italy; Partner.

IDEAS Web site:

www.venus.unive.it/ideas

CESD Web Site:

www.venus.unive.it/cesd

- *Centre for Research and Technology - Hellas (ITI/CERTH)*. 6th km Harilaou-Thermi Rd., P.O. Box 361, 57001 Thessaloniki - Greece; Partner.

Web site: www.iti.gr

- *Agricultural Research Institute (ARI)*. P.O. Box 22016, 1516 Lefkosia - Cyprus; Partner.

Web site: www.ari.gov.cy

- *MEDIAS-FRANCE*. 18, Avenue Edouard Belin-CNES BPI 2102. 31401 Toulouse - France; Partner.

Web site: www.medias.obs-mip.fr

- *Fundatia pentru Tehnologia Informatiei Aplicata in Mediu Agricultura si Schimbari Globale (TIAMASG)*. 6 Sfantii Voievozi Str., 010963 Bucharest - Romania; Partner.

Web site: www.tiamasg.ro

- *Universidad Politécnica de Madrid (UPM)* Avda. Ramiro de Maeztu, 7, 28040 Madrid - Spain; Partner.

Web site: www.upm.es

- *Association pour la Recherche sur le Climat et l'Environnement (ARCE)*.

Université d'Oran-Sénia, Faculté des Sciences, P. O. Box 4250 (Ibn Rochd), 31037 Oran - Algeria; Partner.

Web site: www.arce.asso.dz

- *Priority Actions Programme/Regional Activity Centre (PAP/RAC)*. Kraj Sv.

Ivana 11, 21000 Split - Croatia; Partner.

Web site: www.pap-thecoastcentre.org

- *Centre International de Hautes Etudes Agronomiques Méditerranéennes, Istituto Agronomico Mediterraneo of Bari (CIHEAM-IAMB)*. Via Ceglie, 9,

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