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OPTIMA

Optimisation for Sustainable Water Resources Management

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D16.4 Dissemination Report

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Dissemination level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Executive Summary

The present report documents the various activities which were undertaken in respect of disseminating the OPTIMA project and its results to a widest group of actors and stakeholders. It can be noted that dissemination activities were planned and actively implemented throughout the full duration of the project. Progress with the dissemination activities was reviewed at each of the Coordination Meetings, which took place at around 6 month intervals. The structure of the present report enables to document the progress that was achieved at these regular intervals.

As leader for the Workpackage Dissemination (WP16), IRMCo presented the Strategy for Dissemination in terms of the objectives and expected results, at the project kick-off meeting. Its implementation over the entire duration of the project, followed a step-by-step approach in which different 'formats' were used to engage with the stakeholders, including mailshots, questionnaires and posters. Also the meetings with stakeholders took different formats, including one-to-one meetings, workshops and seminars.

Common templates were drawn up to guide the communication with the stakeholders across the 7 case studies wherever this was deemed appropriate. This proved particularly effective with regard to the mailshots, as these were accompanied, respectively, by a common, generic Water Issues Questionnaire and a Poster highlighting the regional scope and dimension of the research. Case study partners collected 120 replies to the questionnaire which were posted on the OPTIMA website which also provides public access to an on-line database of over 300 stakeholders.

It also proved appropriate to link the stakeholder events to the successive stages of the OPTIMA research, i.e. from Problem Statement to Baseline Scenario, and from the formulation of Alternative Scenarios to Optimum Decisions. The format of these events was evidently left at the discretion of the case study partners and was no doubt influenced at times by prevailing conditions beyond their control. Participatory workshops, organized by 5 of the case study partners, were attended by over 200 stakeholders. These workshops enabled stakeholders to contribute directly to the formulation of the problem statement, the baseline scenario and/or the alternative scenarios. During the final months of the project, all case study partners organized events, ranging from one-to-one presentations, follow-up workshops as well as seminars, to bring the results obtained to the attention of the stakeholders.

The Regional Workshop in Malta in May 2007 was aimed particularly at encouraging a south-south dialogue. To this effect, major stakeholders from across the region accompanied the OPTIMA research teams, with representatives from international organizations facilitating the round-table discussions. More detailed information on the Regional Workshop, including the conclusions from the roundtable sessions have been collected in a separate document, D16.3 Regional Dissemination Workshop.

Dirk De Ketelaere
30 June 2007

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1. Dissemination Objectives

As defined in the Technical Annex, the objectives of dissemination (WP16) are to:

”Achieve wide dissemination of the project and its results for a range of possible user groups and audiences and the building of a wide interest group, within the case studies locally, across case studies regionally, and beyond that for the international research community but also the water sector concerned.

Specific objectives include:

- The involvement of all relevant actors and stakeholders, but in particular all administrative bodies of local and regional government and the developing water industry;
- Wide dissemination of results at a regional and international level through the Internet: will be a central component.”

Dissemination in OPTIMA is designed as an ongoing task, throughout the full duration of the project life-cycle. To this effect, progress by the Consortium on dissemination featured on the agenda of each and every Coordination Meeting.

It is deemed appropriate therefore that the structure of the present report is aligned with the timing of the 6 Coordination Meetings which took place, thus providing a detailed insight into the progress that was achieved at these distinct intervals of about 6 months (see Table 1).

Table 1 Dissemination updates aligned with timing of Coordination Meetings

Coordination meeting	1	2	3	4	5	6
Venue	Bugibba Malta	Izmir Turkey	Casablanca Morocco	Gumpolds- kirchen Austria	Milan Italy	Qawra Malta
Date	Oct 04	Apr 05	Nov 05	May 06	Dec 06	May 07
Project Month	4	10	17	23	30	35
Dissemination	Strategy	First Update	Second Update	Third Update	Fourth Update	Final Review

At each of the intermediate Coordination Meetings, progress with the dissemination activities was assessed and a new set of tasks were elaborated.

The Dissemination Strategy was presented at the Kick-off Meeting, while the Final Review coincided with the organization of a Regional Workshop, thereby offering the opportunity to review the overall dissemination not only among the Consortium but in direct consultation with major stakeholders as well as with representatives from international organizations.

2. Dissemination Strategy: Kick-off Meeting, Malta, October 2004

IRMCo, as WP-leader for the Dissemination, developed a Dissemination Strategy for the OPTIMA project, aimed at guiding a constructive dialogue with the actors and stakeholders from the very beginning of the project. The kick-off meeting provided the opportunity to present the Dissemination Strategy to the entire Consortium.

Table 2 Dissemination Strategy presented at the Kick-off meeting

<p>Dissemination Strategy: Scope of dissemination initiatives and Expected Results</p> <ul style="list-style-type: none">o Bring the OPTIMA research to the attention of actors in each of the case study areas ... communicate progress to them on a regular basis ... using different 'formats'.<ul style="list-style-type: none">➤ positive outcome: attract – and maintain - interest of stakeholders (even if no specific feedback is obtained)➤ very positive outcome: stakeholders provide feedback, respond to questionnaire(s)➤ excellent outcome: stakeholders actively contribute to research on their case study o Highlight that the same research is carried out across the region (seven different case studies) ... draw the attention of stakeholders to comparable or similar issues ... how this is being tackled in OPTIMA ... focus on practical problem solving & conflict resolution<ul style="list-style-type: none">➤ positive outcome: increased awareness of OPTIMA research effort across the Mediterranean region➤ very positive outcome: stakeholder networks are formed in each of the case study areas➤ excellent outcome: active south-south dialogue between stakeholders
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It must be highlighted that the above Dissemination Strategy was presented at each of the Coordination Meetings so that the scope of any specific dissemination activities would continue to be developed and implemented with the above 'Expected Results' in mind.

As a preliminary task the partners responsible for the Case Studies were asked to provide a simple list (inventory) of all such entities which should be considered as relevant Stakeholders and/or Endusers. The Tables 2a and 2b demonstrate that inventories can be structured according to different formats, which proved a valuable starting point to consider the design of a common template for the collection of a much more detailed inventory of stakeholders in each of the 7 case studies.

Dissemination activities agreed at the Kick-off Meeting:

- Design of template for on-line, detailed inventory of stakeholders
- Preparation of a first mailshot, introducing the OPTIMA project, linked also to
- Design of a Water Issues Questionnaire (developed in WP1)

Table 3a and 3b Preliminary inventories of stakeholders
(example of the Gediz Basin, Turkey)

Gediz River Basin TURKEY	Stakeholders / End-users	Concerned with
1	DSI	Water Production Water Distribution Water Quality (monitoring) Water conservation (limited) Regional development and planning of the territory
2	Irrigation associations	Water Distribution (limited)
3	Other irrigators	Water Distribution (limited)
4	Ministry of Environment	Water Quality (monitoring and setting quality standards) Regional pollution control
5	Local Governments	Regional development and planning of the territory
6	Industries	Water Users
7	Provinces (Ministry of Interior)	Water Quality (enforce quality)
8	NGOs (GEMA, TEMA, LA-21)	Public Awareness
9	Bank of Provinces (IB)	Water Distribution (Financial)

STAKEHOLDERS																									
KEY STAKEHOLDERS	SURFACE WATER								GROUNDWATER						WASTEWATER					AG RETURNS					
	Plan (basin-level)	Allocate Water	Construct Facilities	Distribute Water	Maintain Facilities	Monitor Quality	Ensure Quality	Protect Against Flooding	Protect Ecology	Plan (basin-level)	Allocate Water	Construct Facilities	Withdraw/Distribute	Maintain Facilities	Monitor Quality	Ensure Quality	Plan (basin-level)	Construct Facilities	Operate Facilities	Maintain Facilities	Monitor Quality	Enforce Quality	Construct Facilities	Maintain Facilities	Monitor Quality
DSI	❖	●	●		●	●		●	❖	❖	●	●			●							●	❖		
Irrigation Associations			❖	●	●																		❖		
Other Irrigators		❖	❖	●	●						❖	●	●	●											
MoE						❖		❖												❖					
Local Governments			●								●	●	●				❖	●	●						
Industries										❖	●	●	●					●	●	●					
Provinces (MoI)																					❖				
NGOs																									
Bank of the Provinces (IB)																		●							

3. First Dissemination Update: Izmir Meeting, April 2005

IRMCo prepared a first mailshot, purposely designed in a manner that it could be directly employed by each of the case study partners. This first mailshot was then translated into Arabic, French and Greek (see Annex 1 – Mailshots).

Apart from introducing the OPTIMA project, the first mailshot also had the objective to invite stakeholders to give their input towards the formulation of the Problem Statement on each of the case studies by means of a Water Issues Questionnaire. The design of this Questionnaire (WP1 task) presented a number of challenges and it soon became apparent that a final version of the Questionnaire required to be discussed during a joint meeting with all partners. Thus, at the Izmir Coordination Meeting, a major focus and priority was given to resolving the final structure and contents of the Water Issues Questionnaire.

Evidently, the first mailshot also targeted the collection of information on the stakeholders, which fed into an on-line database of stakeholders. The target for replies to the Water Issues Questionnaire was set at 10 to 15 for each case study.

Table 4 Calendar of Dissemination Activities up to Izmir Meeting

Date	Partner Resp	Description of initiative
Oct 2004	IRMCo	Format for a preliminary inventory of stakeholders
Nov 2004	CZERO	Spreadsheet for a detailed inventory of stakeholders
Feb 2005	IRMCo	'Standard' letter introducing OPTIMA to stakeholders
Feb 2005	CNRS	Translation of standard letter in Arabic
Feb 2005	CNTD	Translation of standard letter in French
	ATLANTIS	Translation of standard letter in Greek
Apr 2005	All	Discussion on final version of Issues Questionnaire at Izmir Coordination Meeting

New dissemination activities defined at the Izmir meeting included:

- finalization of the Water Issues Questionnaire (FEEM)
- distribution of first mailshot by the case study partners
- monitoring of progress (size of stakeholder database & number of replies to the Water Issues Questionnaire)
- preparation of a second mailshot in which the regional scope of OPTIMA would be highlighted

4. Second Dissemination Update: Casablanca Meeting, Nov 2005

A first set of dissemination activities during this period were executed shortly after the Izmir meeting. A final version of the Water Issues Questionnaire was issued by FEEM and then distributed to the stakeholders by the case study partners together with the first mailshot.

By the end of June 2005, i.e. also the end of the first year of OPTIMA, a total of 70 replies to the questionnaire were collected and information on more than 200 stakeholders was posted in the on-line database of stakeholders.

The statistical analysis of the replies and an overview on the stakeholder representativeness was drawn up by FEEM and CZero respectively, and included with the deliverable D02 Socio-Economic Framework Analysis, issued in September 2005.

A second set of dissemination activities during this period included the organization of a stakeholder workshop in Lebanon by ELARD and NCRS and with representation from CZero and UoJ. The letter of invitation and the workshop agenda are included in Annex 2. Forty participants attended the workshop which was held on September 21, 2005.

Also during September 2005, IRMCo joined CNT in a series of individual meetings with the major stakeholders. The outcome of the meetings led to the drawing up of a Melian Action Plan, with a focus on identifying the relevant stakeholders who could assist CNT with the data collection requirements for the baseline scenario.

All case study partners assisted IRMCo in compiling a brief overview of the case study areas in a comparable format. This resulted in a systematic collection of basic data (size of basin, population, etc.) and maps (river network, river morphology, digital elevation model, landuse etc.). These contributions were then taken up in the design of an OPTIMA Poster, giving an overview of the overall aims of the project and introducing the seven case studies (see Annex 3 – Posters).

The above dissemination activities were then reviewed at the Casablanca Coordination Meeting during November 2005 (see Table 5 for a schematic overview of the activities).

In particular, the completeness of the on-line stakeholder database and the number of replies to the Water Issues Questionnaire across the 7 case studies were analysed in detail. By November 2005, the stakeholder database increased to around 250 entries. However, as shown in Fig. 1, some fields in the database were markedly less populated compared to others.

As shown in Fig. 2, the number of replies increased to around 80, albeit with a large variation between the case studies. The highest number of stakeholders entries (59) as well as the highest number of replies (24) was posted for the Lebanese case study, originating to a large extent from the workshop that was organized on the Litani Basin.

Table 5 Calendar of Dissemination Activities up to Casablanca Meeting

Date	Partner Resp	Description of initiative
Apr 2005	FEEM	Final version of Issues Questionnaire
May 2005	Case study partners	'Standard' letter + final issues questionnaire distributed to all stakeholders
June 2005	Case study partners	Posting of replies to issues questionnaire on the OPTIMA website
30 June 2005	Case study partners	70 Replies to issues questionnaire, and > 200 Stakeholders in on-line database
July 2005	FEEM	Statistical analysis of replies to issues questionnaire
	CZERO	Overview of stakeholder representativeness
Sep 2005	ELARD CZERO	Invitation & Agenda for Participatory Workshop in Lebanon
Sep 21, 2005	ELARD CNRS CZERO	First Participatory Workshop in Lebanon with 40 participants and representation from UoJ
Sep 2005	CNTD IRMCo	One-to-one meetings with stakeholders in Tunisia
Oct 2005	IRMCo	Design of poster introducing OPTIMA aims, river basins, partners, "putting stakeholders first"

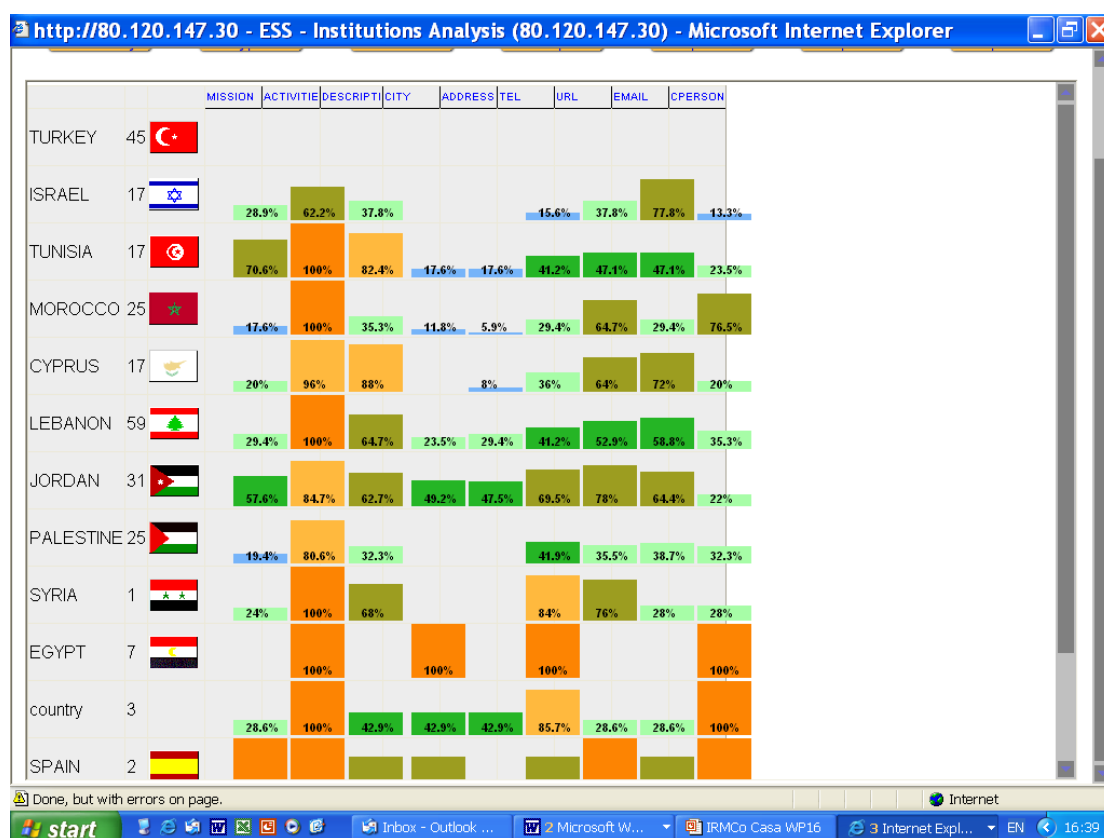


Fig. 1 On-line Stakeholder Database: progress update November 2005

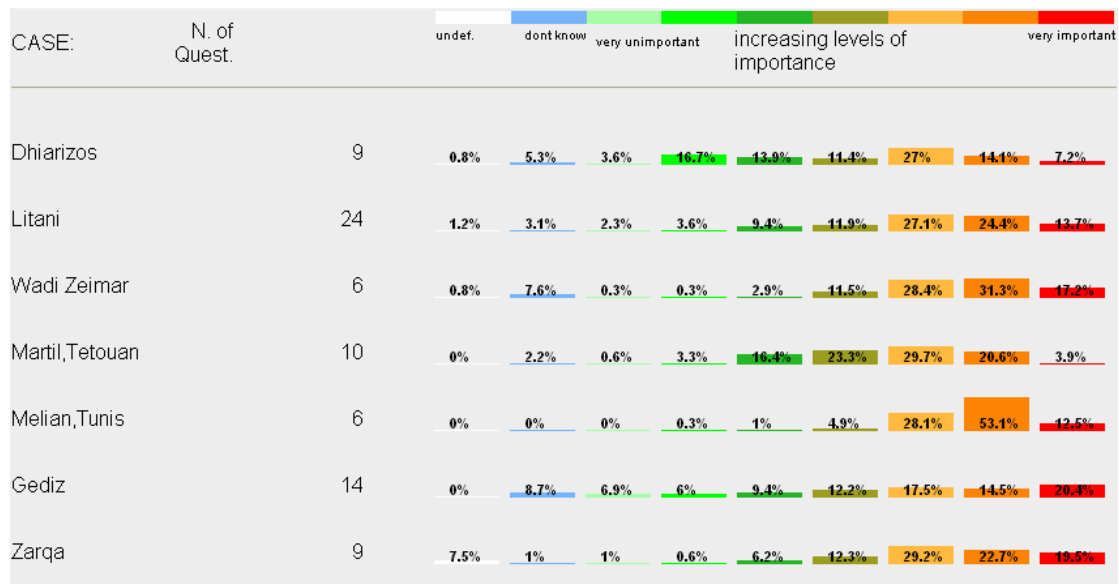


Fig. 2 Replies to Water Issues Questionnaire: progress update November 2005

Name: Water Development Department
Acronym: WDD
City: Nicosia
Country: CYPRUS

Type: Governmental
Size: large
Scope: national
Topic1: water resources
Topic2: water quality
Topic3: drinking water

Address: Water Development Department, Demosthenis Severis Avenue, 1413 Nicosia, Cyprus
URL: www.moa.gov.cy
Email: ydrologi@wdd.moa.gov.cy
Phone1: +357 22 451402
Fax: +357 22 675019

Mission Statement: The Water Development Department is responsible for implementing the water policy of the Ministry of Agriculture, Natural Resources and Environment. Main objective of this policy is the rational development and management of the water resources of Cyprus.

Description of the Organisation: The WDD consists of the following divisions: Water Resources, Hydrology, Planning, Design, Rural Projects Planning and Design, Sewage and Reuse, Construction, management, Operation and Maintenance of Governmental Water Supply Systems, Operation and Maintenance of Irrigation Systems, Telemetry and the Mechanical - Electrical Services Division.

Contact Person: Adonis Georgiou
Gender: MALE
Role in org.: top management
On site: yes
Phone1: +357 22 451402
Phone2:
Fax: +357 22 675019
Languages: English, Greek
Email:

Fig. 3 Example of record in on-line database of stakeholders

New dissemination activities defined at the Casablanca meeting included:

- Preparation of second mailshot (IRMCo)
- Re-run and distribution of OPTIMA Poster (IRMCo)
- Updating of the Stakeholder Database by all Case Study Partners (further completion of records, particularly with respect to 'Activity Reports' where the involvement of the stakeholders can be detailed – see Fig. 3)
- Define and collect comparable material for individual case study posters

5. Third Dissemination Update: Gumpoldskirchen Meeting, May 2006

In agreement with the dissemination plan issued at the previous meeting, a second mailshot was prepared up by IRMCo, highlighting the regional scope of OPTIMA and encouraging the establishing of stakeholder "networks" in each of the case studies. The mailshot was then distributed by the case study partners together with the OPTIMA poster. The template of the second mailshot, together with an example of its adaptation into French for the Melian River Basin is provided in Annex 1.

The inputs required for the design of posters for the individual case studies were drawn up so as to target a similar layout, and the case study partners were invited to provide the following: Location map with names of main towns; A selection of different thematic maps; Representative picture(s) of river basin; List of stakeholders and endusers (Acronym, full name); List main challenges using key phrases only. IRMCo received the aforementioned inputs for the Zarqa Basin (UoJ), the Lower Litani Basin (ELARD and NCRS) as well as for the Melian Basin (CNT).

As shown in Table 6, stakeholder workshops were organized in Turkey, Jordan and in Tunisia during May 2006 and were attended by a total of over 100 stakeholders. The latter workshop was preceded by a joint meeting between CNT and IRMCo to draw up the programme of the workshop and discuss the methodology that would adopted for the round-table discussions planned during the workshop (see Annex 2 – Programme of Tunis Workshop). Taking into consideration that these workshops were likely to result also in major updates of the stakeholder database as well as provide further replies to the Questionnaire, it was considered appropriate to postpone the review of these tasks until the next meeting.

Table 6 Calender of Dissemination Activities up to Gumpoldskirchen Meeting

Date	Partner Resp	Description of initiative
Nov 2005	IRMCo	'Standard' letter for second mailshot, introducing regional scope of OPTIMA
Dec 2005	IRMCo	Re-run and distribution of 150 OPTIMA Posters to case study partners
Jan 2006	CNT	Translation of second mailshot in French
Jan 2006	Case study partners	Second mailshot + OPTIMA posters distributed to respective stakeholders
Feb 2006	IRMCo	Invitation to case study partners to prepare individual 'Case Study' posters
Mar 2006	UoJ	Inputs for Zarqa Basin Poster
Apr 2006	ELARD NCRS	Inputs for Lower Litani Basin Poster
Apr 2006	CNT IRMCo	Joint review of Melian Case Study; Inputs for Melian Basin Poster
April 19-20, 06	SUMER	Participatory workshop in Turkey, 39 participants
May 16, 2006	UoJ Czero	Participatory workshop in Jordan, 30 participants
May 3, 2006	CNT IRMCo	Participatory workshop in Tunisia, 40 participants and distribution of Tunisia Case Study Poster

6. Fourth Dissemination Update: Milan Meeting, December 2006

The review of carried out at the Milan Meeting showed the very substantial progress that was made during this period in respect of:

- Clean-up and Updating of the on-line stakeholder database
- On-line posting of additional replies to Water Issues Questionnaire
- Reporting on Publications
- Printing and distribution of Individual Case Study Posters
- Setting up of Stakeholder Networks / Steering Committees for Individual Case Studies

As shown in Fig. 4a and 4b, each of the case study partners dedicated time and effort to update the on-line database of stakeholders. The total number of entries increased to 300, while also the individual records were substantially updated across the entire database of stakeholders.

The number of replies to the Water Issues Questionnaire rose by some 50% (from 82 to 120 replies). As shown in Fig. 5, this was clearly achieved as a result of the stakeholder workshops that were organized in Jordan and Turkey during May 2006. This was especially the case for the Gediz basin in Turkey, where the number of replies increased from 14 to 46!

An equally impressive progress was achieved with regard to the number of publications. Between May and November 2006, the number of publications available for downloading from the OPTIMA website increased from 7 (in Project Month 23) to 19 (in Project Month 30).

The design of individual case study posters continued for both the Zarqa and Lower Litani Basins, however during the summer of 2006 it proved exceedingly difficult for the partners in Lebanon to continue their dissemination activities due to circumstances beyond their control. The poster on the Zarqa River Basin was successfully completed just prior to the Milan meeting.

In consultation with IPCRI it was decided to organize two workshops for the Wadi Zeimar/Alexander River Basin. IRMCo joined IPCRI with the purpose of guiding the discussions with the stakeholders towards establishing a 'common platform' and thus towards reaching consensus on the integrated management of the Zeimar/Alexander basin. To this effect, a common programme with emphasis on round-table discussions was drawn up (see Annex 2). The workshops in Emek Hefer and Tulkarem were attended by 25 and 50 participants respectively.

During this period, the case study partners were encouraged to attempt the establishment of 'stakeholder networks'. The setting up of a 'Steering Committee', which was among the main outcomes of the Workshop in Tunis was presented as an example in this context. As can be derived from Table 7, all case study partners undertook to meet with their major stakeholders on a regular basis. For the Zarqa Basin, a Steering Committee with 9 members was established.

The presentation of the preliminary results achieved for the Gediz river basin to the stakeholders were made the object of a seminar, organized by SUMER and was

attended by 32 participants (see Annex 2).

Table 7 Calendar of dissemination activities up to Milan Meeting

Date	Partner Resp	Description of initiative
June 2006	UoJ	6 new entries and updating of on-line stakeholder database
June 2006	UoJ	On-line posting of 6 additional replies to Issues Questionnaire
July 2006	UoJ	Posting the OPTIMA project under UNESCO Chair in Wadi Hydrology website
Sept 2006	UoJ	Setting up of Steering Committee for Zarqa Basin, with 9 members
Nov 2006	UoJ	Meeting of Steering Committee in Amman, with 7 participants
Dec 2006	IRMCo UoJ	Printing and distribution of Zarqa River Basin Poster
Sep/Oct/Nov	Atlantis	Series of one-to-one meetings to review results with Institute of Agricultural Research, the Water Development Department and the Ministry of Natural Resources, Agriculture and the Environment
2-3 times per week	UH2M	Martil River Basin Agency meetings chaired by Mr Abdellah El Mahboul and stakeholders, including ONEP, Amendis (private company), Wilaya de Tetouan, and regional authorities
Sep/Oct/Nov	CNTD	Regular meetings with CRDA - Commissariat Régional au Développement Agricole Ben Arous, and DGBGH - Direction Générale des Barrages et des Grands Travaux Hydrauliques
Every 2 weeks	CNTD	Meeting with a water socio-economist from CNEA - Centre National des Etudes Agricoles
Sep 2006	NCRS ELARD	Meeting with head of board of directors of Litani River Authority to discuss project and how the model can be useful in post-war phase
Nov 2006	NCRS ELARD	Presentation of case study in WATMED III; paper published in proceedings
Apr/May 2006	SUMER	11 new entries and updating of on-line stakeholder database
Apr/May 2006	SUMER	On-line posting of 32 additional replies to Issues Questionnaire
Nov 29, 2006	SUMER	Stakeholder Seminar on preliminary results of OPTIMA with 32 participants
Dec 7, 2006	CNTD	Steering Committee Meeting on Water Technologies
Dec 5-7, 2006	IPCRI IRMCo	Stakeholder workshops, respectively in Emek Hefer with 25 participants and in Tulkarem with 50 participants

	MISSION	DESCRIPTION	CITY	ADDRESS	TEL	URL	EMAIL	CPERSON
CYPRUS May 2006	16 68.7%	100%	75%	68.7%	62.5%	50%	37.5%	68.7%
CYPRUS Nov 2006	16 68.7%	100%	100%	93.7%	87.5%	50%	37.5%	100%
ISRAEL May 2006	17 29.4%	100%	82.4%	82.4%	58.8%	52.9%	52.9%	76.5%
ISRAEL Nov 2006	17 29.4%	100%	82.4%	82.4%	58.8%	52.9%	52.9%	100%
JORDAN May 2006	34 85.3%	85.3%	97.1%	100%	76.5%	70.6%	70.6%	82.4%
JORDAN Nov 2006	40 82.5%	100%	97.5%	97.5%	72.5%	70%	70%	100%
LEBANON May 2006	67 41.8%	89.6%	58.2%	59.7%	29.9%	19.4%	29.9%	80.6%
LEBANON Nov 2006	67 41.8%	100%	58.2%	59.7%	29.9%	19.4%	29.9%	100%

Fig. 4a. On-line database of stakeholders updated

		MISSION	DESCRIPTION	CITY	ADDRESS	TEL	URL	EMAIL	CPERSON
MOROCCO	25	80%	100%	100%	92%	64%	36%	28%	80%
MOROCCO	25	80%	100%	100%	92%	64%	36%	28%	100%
PALESTINE	25	76%	100%	100%	100%	16%	24%	72%	72%
PALESTINE	25	76%	100%	100%	100%	16%	24%	72%	100%
TUNISIA	26	96.2%	96.2%	100%	100%	92.3%	61.5%	88.5%	80.8%
TUNISIA	29	89.7%	100%	100%	100%	86.2%	58.6%	86.2%	100%
TURKEY	78	37.2%	53.8%	60.3%	53.8%	44.9%	34.6%	12.8%	46.2%
TURKEY	67	94%	100%	100%	100%	95.5%	74.6%	40.3%	100%

Fig. 4b. On-line database of stakeholders updated

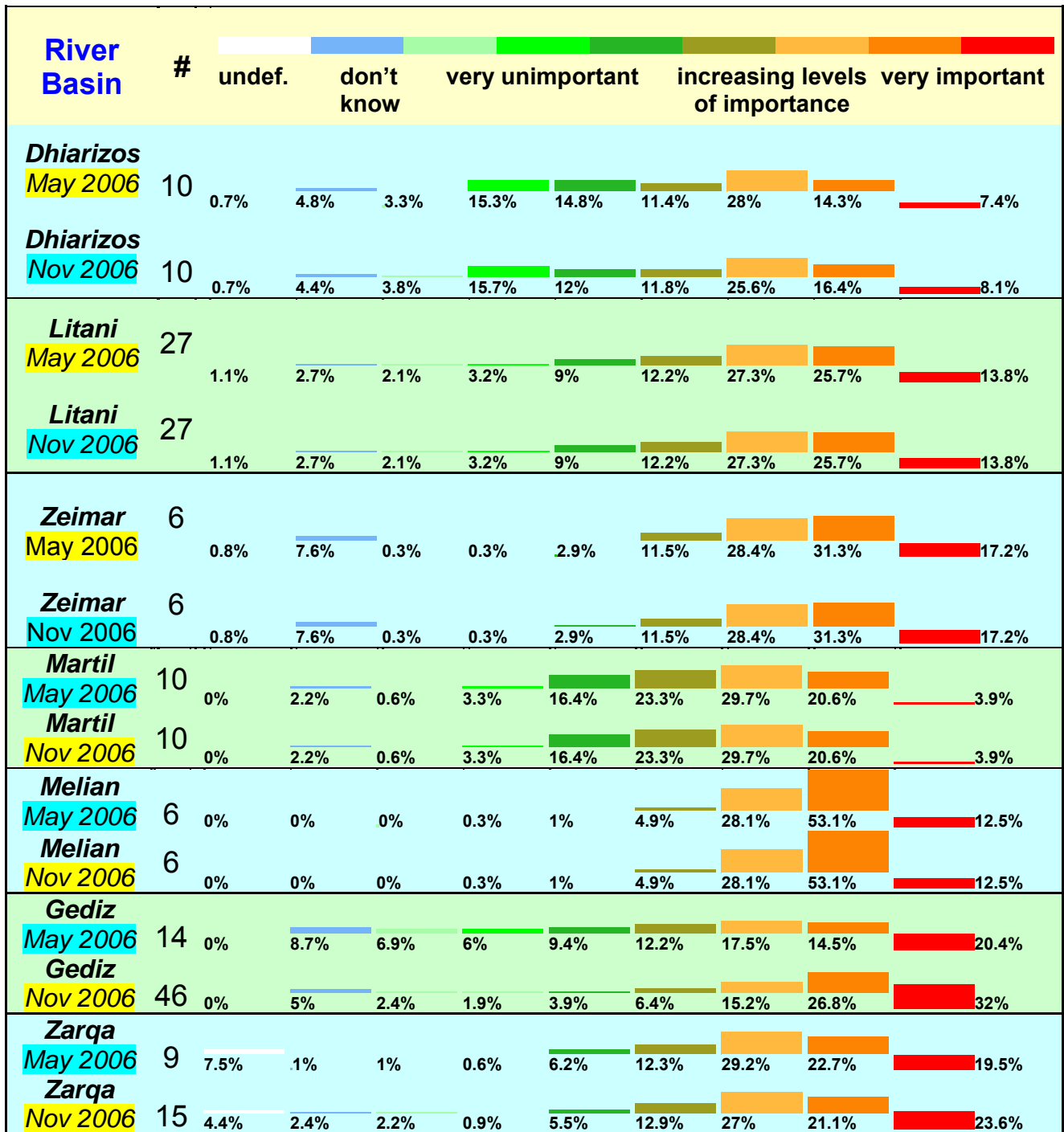


Fig. 5 From 82 (May 2006) to 120 (Dec 2006) Replies to Water Issues Questionnaire

Appropriate time was allocated on the agenda of the Milan Coordination Meeting with respect to the organization of the Regional Workshop in Malta. IRMCo, as the partner responsible for the organization of the Workshop, sought the advice of several experts outside the consortium to design the workshop programme, its objectives and expected results that would meet stakeholders' expectations. The rationale for the implementation, and hence the design of the Workshop Programme is summarized in Table 8 below.

Table 8 Rationale for implementation of Regional Workshop

<p>Objective:</p> <p>By highlighting that the OPTIMA research is carried out across the Mediterranean Region (7 case studies), the objective is to draw the attention of major actors to comparable or similar river basin management issues, and how these have been tackled within OPTIMA <u>through an active process of participatory stakeholder involvement throughout the research.</u></p> <p>Expected Result:</p> <p>a <u>comparative evaluation</u> of the individual case study findings based on an <u>active south-south dialogue.</u></p> <p>Implementation (feeding into Workshop Programme)</p> <ul style="list-style-type: none"> - Ensure that substantial time is available for <u>discussion</u> ! - Presentations should bring <u>focus on how the stakeholders in the respective case studies were involved</u> and how their input was used (interface with the development of the DSS) - Facilitate the discussions by dividing the presentations on Case Studies into two sessions, each session followed by roundtable discussion - Record the insights, viewpoints raised by the stakeholders (this should provide valuable input also for future dissemination !)
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Steps	Expected output	Stakeholder involvement	Interface with DSS development
1. State of the water resources	Problem statement		
2. Diagnosis of the water resources	Baseline scenario		
3. Alternative scenario formulation	Alternative scenarios		
4. Consensus on optimum decisions	Optimal decisions		

Fig. 6 Framework for common steps in each of the OPTIMA Case Studies

The OPTIMA research in each of the case studies followed the same logical steps as shown in Fig. 6. This led to the design of two Workshop Sessions as shown in Fig. 7, and whereby the focus of all presentations is on documenting the stakeholder involvement during the respective stages of the OPTIMA project, and on how this involvement has been linked and/or contributed to the development of the DSS.

Steps	Expected output	Stakeholder involvement	Interface with DSS development
1. State of the water resources	Problem statement	Workshop Session 1: From Problem Statement to Baseline Scenario	
2. Diagnosis of the water resources	Baseline scenario		
3. Alternative scenario formulation	Alternative scenarios	Workshop Session 2: From Alternative Scenarios to Optimal Decisions	
4. Consensus on optimum decisions	Optimal decisions		

Fig. 7 Design of Regional Workshop Programme

As agreed in fact already at the previous Coordination Meeting, the case study partners were urged to bring along two of the major actors in their respective river basin.

The attention was drawn also on the topic of future dissemination and exploitation plans of all partners in the Consortium. The suggestions provided by UoJ for post-OPTIMA dissemination activities were used as an example in the discussion.

New dissemination activities agreed at the Milan coordination meeting included:

- confirmation of Invited Speakers at the Regional Workshop (IRMCo)
- confirmation of Stakeholders to attend Regional Workshop (case study partners)
- abstracts of case studies to be included in Workshop Announcement
- organization of stakeholder seminars to present the OPTIMA results within the respective case studies

7. Final Review of Dissemination Activities

Malta Regional Workshop and Meeting, May 2007

In the run-up to the Regional Workshop, each of the case study partners undertook several initiatives to bring the results of the OPTIMA project to the attention of their respective stakeholders. Initiatives ranged from presentations of the results to major, individual stakeholders (ATLANTIS, UH2M, CNT, NCRS/ELARD, SUMER), presentations to their steering committee (CNT, UoJ), follow-up stakeholder workshops (NCRS/ELARD), presentations at international fora (IPCRI, UoJ) and also, specifically to the media (CNT). FEEM contributed to the dissemination activities through its Newsletter and Website.

IRMCo designed and circulated the First Announcement of the Malta Regional Workshop during March 2007. Each of the case study partners contributed to the Second Announcement with an abstract on their respective river basin, while IRMCo concluded arrangements with invited speakers from the UNDP Global Environment Facility – Danube River Project, Austria; the UNDP Water Governance Facility – SIWI, Sweden; the Gender Water Alliance, GWA, The Netherlands; and the Universidad de Castilla La Mancha, UCLM, Spain.

Letters of invitation were issued by IRMCo to the stakeholders nominated and supported to attend by the case study partners.

The Malta Regional Workshop took place during 28-29 May 2007 and provided the opportunity to review the overall dissemination not only among the Consortium but in direct consultation with a select group of major stakeholders as well as with representatives from international organizations. In order to stimulate an active south-south dialogue, IRMCo drew up lead-questions for three round-table sessions. More detailed information on the Malta Regional Workshop, including recommendations for future dissemination activities, beyond the end of the OPTIMA project, is provided in the Deliverable D16.3 Regional Dissemination Workshop.

Table 9 Calendar of dissemination activities up Malta Meeting

Date	Partner Resp	Description of initiative
January 2007	FEEM	<i>FEEM Newsletter.</i> Extensive dissemination of OPTIMA is made through a regular FEEM publication: FEEM Newsletter. The Newsletter is issued twice a year, and it covers reports on latest FEEM research, highlights of research programmes, reviews on relevant FEEM working papers, conferences, latest publications and news on FEEM activities in general. It is disseminated free-of-charge, electronically and on paper (2,000 copies), to a wide international audience of researchers, policy-makers, and businesses. More specifically, it provides information on the OPTIMA objectives and progress/achievements.
February 2007	FEEM	<i>Update of OPTIMA page on FEEM's web site.</i> FEEM strongly supports the dissemination of OPTIMA through its well established web site (www.feem.it). Information is given so as to capture the widest audience possible also trying to avoid the project's jargon that may be unintelligible to non specialists. The web page is currently updated providing fresh and user-friendly information on the project progress and achievements. The project web page includes a link to the project web site, proceedings, information on the partnership, contact details and case studies. The initiative will last throughout the duration of the project and long after its coming to an end.

Date	Partner Resp	Description of initiative
March 5 2007	ATLANTIS	Meeting with the Water Development Department. In the meeting inputs to the model and results of WRM were discussed.
April 17 2007	ATLANTIS	Second meeting with the Water Development Department. Various management scenarios were discussed for selection of instruments to use in the optimisation runs.
February 2007	NCRS ELARD	Meeting with Litani River Authority engineers to discuss latest results and validate data
May 14, 2007	NCRS ELARD	Second participatory workshop; 12 participants; selection of preferred alternative; validation of criteria and instruments

Date	Partner Resp	Description of initiative
May 2007	IPCRI	Presentation of report on project at a workshop on "stream management in Israel/Palestine" held in Amman and attended by 60 representatives of NGOs and local government from Israel, Palestine and Jordan (more than half from the Wadi Zeimar/Nahal Alexander region)
March 2007	SUMER	Presentation of OPTIMA project and Gediz Case Study results to Ministry of Environment and Forestry Water Resources General Directorate in Ankara
April 2007	SUMER	Presentation of OPTIMA project and Gediz Case Study results to DSI II. Regional Directorate including 21 stakeholders from different institutions
April 2007	SUMER	Presentation of OPTIMA project and Gediz Case Study results to Ministry of Environment and Forestry with high level decision makers from different directorates in Ankara
February 26, 2007	UoJ	A visit was made to Meyahona (the new water company) that replaced LEMA to inquire about their efforts in improving efficiency of water distribution system and securing additional supply. Presentation of the optimization process used in OPTIMA.
March 8, 2007	UoJ	The involvement of GENDER as partners and stakeholders of OPTIMA Project was presented in the seminar entitled "The role of women in integrated water resources management and rural development in Jordan", University of Jordan, Amman
March 23, 2007	UoJ	The activities of the OPTIMA project were presented at UNESCO meeting in Bahrain organized by UNESCO Cairo office.
May 5, 2007	UoJ	A meeting with a number of the steering committee was held to discuss the optimization and DMC
Jan/Feb/March/ April/May 2007	UH2M	Regular meetings with the Hydraulic Direction of Ministry for Land Use Planning , Water and Environment about the definition of constraints and objectives for the Martil Basin principally in the discussion within the framework of the National Debate on water policy in Morocco. Discussions animated by Mr. Abdellah El Mahboul and about fifty stakeholders assisted.

Date	Partner Resp	Description of initiative
Jan/Feb/March/ April/May 2007	UH2M	Martil River Basin Agency meetings chaired by Mr Abdellah El Mahboul and stakeholders, including ONEP, Amendis (private company), Wilaya de Tetouan, and regional authorities
Jan/Feb/March/ April/May 2007	UH2M	Martil River Basin Agency meeting chaired by Abdellah El Mahboul with several private companies (e.g. INGEMA, CID etc.) about their works in the Martil river basin, asked within the framework of invitations to tender by River Basin Agency
Jan/Feb/March 2007	CNT	Periodic phone calls with members of steering committee (CRDA – SONEDE)
February 2007	CNT	one to one meeting with members of SONEDE, CRDA and CANAL MEDEJERDA
March 1, 2007	CNT	Field trip with some of our stakeholders in the catchment of Melian
March 7, 2007	CNT	OPTIMA project presentation to the Defense Minister of Algeria
March 2007	CNT	Training day on the WaterWare System with Mr Nacef (CRDA)
April 2007	CNT	Presentation of OPTIMA project to students from ENSG (France) and from Paris IV universities
May	CNT	Presentation of OPTIMA project to students from ISET (Institute of technological studies, Nabeul, Tunisia)
May 21, 2007	CNT	Presentation of Optima project to journalists (15) came to visit the CNT activities (radio and newspaper)
June 11-12, 2007	CNT	Making a poster and a computer demonstration of the WaterWare system for the International Symposium organised by CNT “Forest and Pastoral inventory using remote sensing : tool for a sustainable development and resources valorisation”
June 23, 2007	CNT	Oral presentation of a student from the institute of water Science and technology of Gabès in the frame of his final study project research
March 2007	IRMCo	Malta Regional Workshop, First Announcement
April 2007	IRMCo, case study partners	Malta Regional Workshop, Second Announcement with abstracts of case studies
28-29 May 2007	All partners	Malta Regional Workshop with 31 participants, including 4 invited speakers and 6 major stakeholders

Annex 1

Mailshots

- **First mailshot and translation into French, Arabic and Greek**
- **Second mailshot template and translation into French**

First mailshot to stakeholders (English, French, Arabic and Greek)

To the attention of

<Name of person>

<Organisation>

<Address>

<Date>

Subject: OPTIMA: Optimisation for Sustainable Water Resources Management

Dear <Name of person>

We take pleasure to inform you of our participation in OPTIMA, an EU sponsored three year research project which started on 1st July 2004 and which brings together researchers from 11 countries in the Euro-Mediterranean area. The overall aim of the project is to develop, test, and critically evaluate an innovative approach to water resources management in the Mediterranean region.

The results of the project should contribute to increased efficiency and to reconcile conflicting demands. While the OPTIMA approach is based on rigorous, scientifically sound concepts, the highest importance will be given to achieve results that can be implemented in a practical manner. In this regard, we duly recognize that a successful implementation will ultimately depend on the acceptance by the whole chain of stakeholders involved with the decision-making level, planning, production and distribution ... up to the various end-users (domestic, agriculture, industry, tourism etc.).

We would like to invite your organization to assist us in achieving these goals by sending us your feedback during all stages of our research efforts. For a detailed description of the project, case studies and partners in OPTIMA, you may wish to visit the website <http://www.ess.co.at/OPTIMA/>. Among the progress achieved so far, you may wish to consult the on-line database of major actors and stakeholders, identified to-date in each of the seven case study areas where the OPTIMA methodology will be applied (see <http://www.ess.co.at/OPTIMA/cases.html>). To further extend this on-line database, we would welcome to receive a brief description on the scope, mission statement, and any other information you may wish to provide about of your organization.

During the first year of our research we are keen to obtain a concise and clear overview of the water issues as relevant to our mutual case study area. For this reason, we are enclosing a comprehensive list of water issues. We would appreciate if you kindly fill out the attached questionnaire and return it to us by 15 March 2005.

Thank you for your co-operation and we look forward to keep you up-to-date on the progress with the OPTIMA research project

Yours Sincerely

A l'attention de

<Nom de la personne>

<Organisation>

<Adresse>

<Date>

Objet: OPTIMA: Optimisation de la gestion durable des ressources en eau

Cher Monsieur, Madame

Nous avons le plaisir de vous informer de notre participation au projet OPTIMA, un projet de recherche financé par la Communauté Européenne. Ce projet, de 3 ans de durée, a débuté le 1^{er} Juillet 2004 et rassemble des chercheurs de 11 pays Euro-Méditerranéens. L'objectif du projet est de développer, tester et évaluer une nouvelle approche de gestion des ressources en eau dans la région méditerranéenne.

Les résultats du projet devraient contribuer à réconcilier les demandes conflictuelles sur les ressources en eau. L'approche du projet OPTIMA est basée sur un concept scientifiquement rigoureux. L'accent est mis sur l'implémentation pratique des résultats. Cette implémentation ne peut être réellement efficace que grâce à l'implication effective des différents protagonistes nationaux impliqués dans les processus de décision, de production ou de distribution, ainsi que celle des utilisateurs finaux de la ressource (usages domestique, agricole, industriel, touristique ...).

Nous sollicitons votre institution afin de nous aider à réaliser les objectifs du projet OPTIMA et ce, en nous faisant part de vos réactions et de vos remarques à propos des différentes étapes du projet. Pour une description détaillée du projet, des différentes études de cas et des différents partenaires, nous vous invitons à visiter le site Web <http://www.ess.co.at/OPTIMA/>. Parmi les progrès réalisés jusqu'à maintenant, vous pouvez consulter on-line la base de données relative aux principaux acteurs identifiés pour chacun des cas d'étude au niveau desquels la méthodologie du projet OPTIMA sera appliquée. (Voir <http://www.ess.co.at/OPTIMA/cases.html>).

Dans le but d'enrichir cette base de données nous vous invitons à consulter les données relatives à votre institution et d'y apporter toute modification que vous jugez utile et pertinente.

Durant la première année de la recherche, nous comptons obtenir une vue globale sur la problématique de l'eau au niveau des 7 cas d'étude. Pour ce faire nous sommes entrain de finaliser une liste exhaustive des différentes problématiques de l'utilisation de l'eau. Nous vous saurions gré de remplir le questionnaire ci-joint et nous le retourner au plus tard le 15 mars 2005.

Nous vous remercions de votre coopération et nous vous tiendrons au courant de l'avancement du projet.

Salutations distinguées.

(stakeholders) بالأمر المعنيين إلى الرسالة مسودة

تاريخ

لجان

المياه لموارد المستدامة الإدارة ترشيد **OPTIMA** مشروع : الموضوع

طبيّة، تحية

الأوروبية السوق تموله الذي "OPTIMA" مشروع في مشاركتنا عن نعلمكم أن يسرنا -أورو بلداً 11 من باحثون فيه ويشترك، 2004 (يوليو) تموز أوائل منذ بدأ وقد، سنوات لثلاث المتوسط منطقة في المياه موارد لإدارة رائدة سبل وتقوم لتطويع المشروع يهدف. متوسطي

المياه على الطلب مشاكل معالجة فعالية زيادة في المشروع نتائج تساهم أن نتوقع نتائج على بالتركيز الأهمية ستكون، دقيقة علمية مفاهيم على المشروع يعتمد فبينما بملاءمة مرهون النجاح التنفيذ أن، ذلك من انطلافاً، ونعتبر. ملموسة بطرق تنفيذها يمكن، والقرار، التخطيط أي: المستويات كافة في بالأمر المعنيين تطلعات مع المشروع طروحات، القطاعا كافة في المستهلك وإلى، والتوزيع، والإنتاج

تأمين في تعاونكم عبر تقدّم ما تحقيق في مساعدتنا مؤسستكم على نتمنى، هنا من المشروع تفاصيل على الإطلاع ويمكنكم. المختلف المشروع بمراحل قيامنا خلال معلومات الإلكتروني العنوان بزيارتكم والشركاء فيه المتوسطية بالدول الحالات ودراسة

<http://www.ess.co.at/OPTIMA/>

فيه الخاصة "الدراسية الحالات" عن والمعلومات بالمشروع العمل تقدّم على الإطلاع يمكنكم كما العنوان بزيارتكم عنهم المعرف بالأمر والمعنيين (المشتركة المتوسطية البلدان في) الإلكتروني:

<http://www.ess.co.at/OPTIMA/cases.html>

أخرى ومعلومات وتطلعاتكم أهدافكم إطار في مؤسستكم عن المتوفرة المعلومات وزيادة توسيع ويمكننا صلة ذات.

المياه وشجون شؤون حول المعلومات تأمين المرحلة هذه في حرصنا لكم لنؤكد فرصة نأخذها نتمنى. المانية الشؤون تلك حول شاملة لائحة ربطاً تجدون لذلك. أعلاه "الدراسية الحالات" في 2005 آذار 15 قبل لنا وإعادتها معنا بتعاونكم مساهمة الاستمارة ملء تقدّم ما عضو في عليكم

OPTIMA مشروع بمجريات اطلاع على نبيكم أن ونأمل لتعاونكم شكراً

والتقدير الاحترام فائق بقبول وتفضلوا

المسؤول

Θέμα: OPTIMA - Βελτιστοποίηση της Αειφόρου Διαχείρισης Υδατικών Πόρων

Σχετικά με το παραπάνω θέμα θα θέλαμε να σας πληροφορήσουμε για τη συμμετοχή μας στο OPTIMA, ένα τριετές ερευνητικό πρόγραμμα επιδοτούμενο από την Ευρωπαϊκή Ένωση, το οποίο ξεκίνησε την 1^η Ιουλίου 2004 και μέσω του οποίου έρχονται σε επαφή και συνεργασία ερευνητές από 11 χώρες στην Ευρωπαϊκή - Μεσογειακή περιοχή. Ο ευρύτερος σκοπός του προγράμματος είναι η ανάπτυξη, η δοκιμή και η κριτική αξιολόγηση μιας καινοτομικής προσέγγισης για την διαχείριση υδατικών πόρων στην περιοχή της Μεσογείου, σύμφωνα με τις απαιτήσεις της Οδηγίας 2000/60. Ο σκοπός αυτός επιτυγχάνεται μέσω παράλληλων ερευνητικών δραστηριοτήτων (case studies) στην περιοχή της Μεσογείου. Στην Κύπρο η ερευνητική περιοχή είναι η λεκάνη απορροής του ποταμού Διαριζού.

Τα αποτελέσματα του προγράμματος στοχεύουν κυρίως στο να συμβάλλουν στη μεγαλύτερη αποδοτικότητα διαχείρισης υδάτινων πόρων και στην συμφιλίωση αντικρουόμενων χρήσεων. Παρόλο που το OPTIMA βασίζεται σε ακριβείς και επιστημονικά έγκυρες έννοιες, θα δοθεί ιδιαίτερη σημασία στην επίτευξη αποτελεσμάτων, τα οποία θα έχουν άμεση πρακτική εφαρμογή και θα παρέχουν τη δυνατότητα χρήσης τους τόσο από εξειδικευμένους επιστήμονες όσο και από πολιτικά πρόσωπα. Βάσει των αρχών αυτών, αναγνωρίζουμε ότι μία επιτυχής εφαρμογή βασίζεται κυρίως στην αποδοχή και εμπλοκή όλης της αλυσίδας των ενδιαφερόμενων και εμπλεκόμενων στα στάδια της διαδικασίας λήψης αποφάσεων, παραγωγής και διανομής νερού μέχρι και τους διάφορους τελικούς χρήστες σε τομείς όπως οικιακούς, αγροτικούς, βιομηχανικούς, τουριστικούς κλπ.

Για να επιτευχθεί ο στόχος αυτός είναι ιδιαίτερα σημαντικό να επιτύχουμε τη συνεργασία και βοήθεια των εμπλεκόμενων και άλλων ενδιαφερόμενων φορέων. Για το σκοπό αυτό θα θέλαμε να προσκαλέσουμε την εταιρία /οργανισμό σας να υποστηρίξει την ερευνητική εργασία μας, συμβάλλοντας έτσι στην επίτευξη των παραπάνω στόχων.

Για μία λεπτομερή περιγραφή του προγράμματος, των σχετικών ερευνητικών δραστηριοτήτων και των συνεργατών του OPTIMA, μπορείτε να επισκεφτείτε την ιστοσελίδα του έργου, <http://www.ess.co.at/OPTIMA/>. Επίσης, μπορείτε να συμβουλευτείτε την διαδικτυακή βάση δεδομένων των κυριότερων ενδιαφερόμενων και των εμπλεκόμενων μερίδων που έχουν αναγνωριστεί μέχρι τώρα για κάθε μία από τις επτά χώρες στις οποίες θα εφαρμοστεί η μεθοδολογία του OPTIMA (βλ. <http://www.ess.co.at/OPTIMA/cases.html>). Για την περαιτέρω ανάπτυξη αυτής της διαδικτυακής βάσης δεδομένων, θα χαϊρόμασταν πολύ να λάβουμε μία σύντομη περιγραφή του αντικειμένου, των στόχων και οποιασδήποτε άλλης πληροφορίας που κρίνετε εσείς σκόπιμο να συμπεριλάβετε για τον οργανισμό/εταιρία σας.

Κατά τη διάρκεια του πρώτου χρόνου της έρευνάς μας, έχουμε ως στόχο να αποκομίσουμε μία συνοπτική και ξεκάθαρη αντίληψη των υδατικών ζητημάτων σχετικών με την ερευνητική μας περιοχή (λεκάνη απορροής του ποταμού Διαριζού). Γι' αυτόν τον λόγο, επισυνάπτουμε μία ευρεία λίστα με σχετικά υδατικά ζητήματα. Θα εκτιμούσαμε πολύ εάν θα είχατε την καλοσύνη να συμπληρώσετε το επισυναπτόμενο ερωτηματολόγιο και να μας το επιστρέψετε μέχρι της 30 Μαΐου 2005.

Εναλλακτικά είμαστε στη διάθεση σας ούτως ώστε να βοηθήσουμε στη συμπλήρωση του ερωτηματολογίου.

Σας ευχαριστούμε εκ των προτέρων για τη συνεργασία σας και είμαστε στη διάθεση σας για οποιαδήποτε περαιτέρω πληροφορία και ενημέρωση.

Με εκτίμηση,

Template for second mailshot

To the attention of
<Name of person>
<Organisation>
<Address>

<Date>

Subject: OPTIMA: Optimisation for Sustainable Water Resources Management

Dear <Name of person>

We take pleasure to bring to your attention a poster on the EU sponsored research project OPTIMA, which brings together researchers from 11 countries in the Euro-Mediterranean area.

During the first phase of the project, our research focused on collecting and organizing the data available on our case study area, <insert name of your river basin>, into a set of thematic information layers. In this regard, the poster provides an example thematic layer for each of the 7 case studies.

We are also pleased to advise that many stakeholders in each of the case studies responded to the Water Issues Questionnaire. The replies enabled us to gain a much deeper understanding of the issues. In the current phase of the project, we will start the formulation of possible future water management scenarios, based for example on the use of alternative water technologies and their cost structure.

For a more detailed description of the different case studies, the on-line database of stakeholders and the response received to date on the water issues across our Region, you may wish to visit the project website <http://www.ess.co.at/OPTIMA/>.

We thank you for your continued co-operation and we very much look forward to keep you up-to-date on the progress with the OPTIMA research project in the near future.

Yours Sincerely

Example adaptation of second mailshot for Melian Basin

Objet : Projet OPTIMA (Optimisation de la gestion durable des ressources en eau).
P.J. : Poster du projet

Monsieur,

Nous avons le plaisir de vous présenter le poster du projet de recherche **OPTIMA**, financé par la Communauté Européenne et impliquant des chercheurs de onze pays de la région Euro-Méditerranéenne.

Durant sa première phase, le projet a eu pour objet, la collecte et l'organisation des données en un ensemble de couches d'information géographiques pour les sept cas d'études à savoir : la Tunisie, le Maroc, la Turquie, la Palestine, la Jordanie, le Liban et Chypre. Une illustration vous est présentée dans le poster ci joint. Pour la Tunisie, la zone d'étude concerne le bassin versant de l'oued Méliane (gouvernorat de Ben Arous).

Nous remercions nos partenaires nationaux et en particulier : la DGRE, l'ONAS, l'APAL, le CITET et le Ministère de l'agriculture et des ressources hydrauliques, qui ont pris part à cette étude en répondant à un questionnaire concernant la problématique de l'eau . Les réponses nous ont permis de mieux cerner d'une manière plus approfondie cette problématique dans notre bassin versant. Une base de données de ces réponses a été constituée on-line, et se trouve, sur le site Web du projet : <http://www.ess.co.at/OPTIMA/>, que nous vous invitons à consulter.

Actuellement, nous entamons la deuxième phase du projet, et qui concerne la formulation de scénarii d'optimisation de la gestion de l'eau dans chacun des bassins versants.

Nous vous remercions pour votre coopération et nous vous tiendrons au courant de l'avancement de ce projet.

Cordialement.

Mme Myriam HAFFANI
Chef de projet

Annex 2

Participatory Workshops and Stakeholder Seminars

- Letters of Invitation
- Agenda of Workshops
-

Sep 21, 2005	ELARD CNRS CZERO	Participatory Workshop in Lebanon with 40 participants and representation from UoJ
April 19-20, 06	SUMER	Participatory workshop in Turkey, 39 participants
May 16, 2006	UoJ Czero	Participatory workshop in Jordan, 30 participants
May 3, 2006	CNT IRMCo	Participatory workshop in Tunisia, 40 participants and distribution of Tunisia Case Study Poster
Dec 5-7, 2006	IPCRI IRMCo	Participatory workshops, respectively in Emek Hefer with 25 participants and in Tulkarem with 50 participants

Nov 29, 2006	SUMER	Stakeholder Seminar on preliminary results of OPTIMA with 32 participants
May 14, 2007	NCRS ELARD	Second participatory workshop; 12 participants; selection of preferred alternative; validation of criteria and instruments

September 10, 2005

Letter of Invitation to Stakeholder Workshop in Lebanon

Ref: Optimization for Sustainable Water Resources Management (OPTIMA)

Dear <Stakeholder>,

Earth Link and Advanced Resources Development (ELARD) s.a.r.l., a regional consulting firm in the fields of environment and water resources management based in Lebanon, takes pleasure to inform you of our participation in OPTIMA, an European Union sponsored three-year research project that started on July 1st 2004. We are working on this project in collaboration with the National Center for Remote sensing (NCRS). The overall aim of the project is to develop, test, and critically evaluate an innovative approach to water resources management in the Mediterranean region. The results of the project should contribute to increased efficiency and to reconcile conflicting demands. While the OPTIMA approach is based on rigorous, scientifically sound concepts, the highest importance will be given to achieve results that can be implemented in a practical manner. In this regard, we duly recognize that a successful implementation will ultimately depend on the acceptance by the whole chain of stakeholders involved with the decision-making level, planning, production and distribution up to the various end-users (domestic, agriculture, industry, and tourism).

A decision-support system (DSS) will be developed aiming at the optimization of water resources management. The platform of the DSS will be the WaterWare Water Resources Management software developed by the Austrian company Environmental Services and Software (ESS).

In order to develop a national case study, the lower Litani River Basin was selected. The reasons for selecting this basin are that very limited work has been carried out in the area due to the geo-political context and that the region presents a unique opportunity to put forth preventive measures in water management given the low level of development.

It is in this context that we would like to invite you to attend the first participatory workshop to be conducted on **September 21, 2005** to present details about the project and to reach a shared understanding among the different stakeholders about the development objectives and constraints of the basin. The workshop is jointly organized by ELARD, NCRS and the Italian NGO Corridoio.zero. Please refer to the preliminary workshop agenda for an overview of the planned activities.

The workshop will be held at the Hotel Montana in Mseileh, located within the study area, close to the intersection that leads to Nabatiyeh. For directions, please do not hesitate to contact Mr. Adib Ismail, hotel manager at 03-247 235.

We would appreciate if you could confirm the number of attendees from your institution at the following number: 01-51 21 21 (extension 26) by Monday, September 19, 2005.

We are looking forward for your active involvement in this project so that your opinion will make a difference.

Yours Sincerely,

ELARD s.a.r.l.

Ramez Kayal

General

Manager

FIRST PARTICIPATORY WORKSHOP

Wednesday, September 21, 2005

Hotel MONTANA - Mseileh

PRELIMINARY WORKSHOP AGENDA

9:00 - 9:30	Registration
9:30 - 9:45	Welcome note and Presentation of Workshop Objectives and Agenda (ELARD)
9:45 - 11:15	Presentations <ul style="list-style-type: none">■ The Optima Project: objectives and expected outcomes (NCRS)■ The Optimization Process (ELARD)■ The Participatory Process (Corridoio. zero)■ The Lower Litani River Basin Case Study (ELARD)
11:15- 11:45	Coffee Break
11:45 12:30	– Working Session I Understanding of the study area (strengths, weaknesses, opportunities and threats)
12:30 13:20	– Working Session II Understanding of the conceptual model of the river basin
13:20 13:50	– Coffee Break
13:50 14:40	– Working Session III Visioning: the study area in 10 years
14:40 15:30	– Plenary Session: Discussions, conclusions and next steps
15:30 16:30	– Lunch



T. C.

DOKUZ EYLÜL ÜNİVERSİTESİ

SU KAYNAKLARI YÖNETİMİ ve SU KAYNAKLI DOĞAL AFETLERİN KONTROLU



SAYIN MUHLİS ÖĞÜTÇÜ'NÜN DİKKATİNE

Sayın Yrd. Doç. Dr. Muhlis Öğütçü
Dokuz Eylül Üniversitesi
Hukuk Fakültesi

Faks: 0 232 420 18 27

Buca / İZMİR
11 Nisan 2006

Konu: AB FP6 INCO-MPC Programı Tarafından Desteklenen OPTIMA (Optimisation for Sustainable Water Resources Management – INCO-CT-2004-509091) Projesi Paydaş Çalıştayı

Sayın ÖĞÜTÇÜ,

Araştırma merkezimiz, 1 Temmuz 2004 tarihinde başlamış olan ve Avrupa Birliği FP6 INCO-MPC Programı tarafından 3 yıl süreyle desteklenecek olan OPTIMA (Optimisation for Sustainable Water Resources Management – INCO-CT-2004-509091) Projesinde ortak araştırma grubu olarak görev almaktadır. Avrupa ve Akdeniz yöresindeki 11 ülkeden araştırmacıları bir araya getiren projenin amacı, özellikle Akdeniz ülkelerinde su kaynakları yönetimi için yeni ve güçlü bir yaklaşım geliştirmek, sınamak ve değerlendirmektir. OPTIMA projesi, 2002-2005 yılları arasında AB FP5 INCOMED programı çerçevesinde yürütülen ve SUMER'in de ortakları arasında bulunduğu SMART (Sustainable Management of Scarce Resources in the Coastal Zone - ICA3-CT-2002-10006) başlıklı projenin devamı niteliğindedir (<http://www.ess.co.at/SMART>).

SMART projesinde başlatılıp OPTIMA'da geliştirilen yaklaşım ve yöntemler, 7 Akdeniz ülkesinden seçilmiş örnek havzalar üzerinde uygulanarak doğrulanmaktadır. Gerek SMART ve gerekse OPTIMA projelerinde Türkiye'den seçilmiş olan havza, Ege Bölgemizdeki Gediz Havzası olup, projelerde yer alan örnek havzaların en büyüğü niteliğini taşımaktadır.

OPTIMA projesi sonuçlarının, havza yönetimi konusundaki etkinliği ve verimliliği artırması; özellikle de birbiriyle çelişen su ihtiyaçlarının söz konusu olduğu durumlarda, su tahsisinin sağlıklı ve güvenilir biçimde yapılmasına olanak sağlaması hedeflenmektedir. OPTIMA yaklaşımı, bu hedefler doğrultusunda güçlü bilimsel yöntemleri içermekle birlikte, sonuçların pratikte kullanılabilirliği de gözönünde bulundurulmaktadır. Bu açıdan proje sonuçlarının başarılı olarak uygulanabilmesi, yaklaşımın havza yönetimindeki tüm paydaşlar (karar verici makamlar; planlamacılar; evsel, tarımsal, endüstriyel su kullanıcıları; sivil toplum örgütleri, vs.) tarafından kabul görmesi ile mümkün olabilecektir.

Yukarıda açıklanan hedeflere varılabilmesi için, sizin ve temsil ettiğiniz kuruluşun görüşlerine, tercihlerine ve katkılarına ihtiyaç duymaktayız. Proje özellikleri, örnek havza çalışmaları, yöntemler ve proje ortakları hakkındaki bilgilere, OPTIMA'nın resmi web sitesi olan <http://www.optima.ess.co.at/OPTIMA/> adresinden ulaşmak mümkündür. Adı geçen web sitesinde, OPTIMA yaklaşımının uygulandığı 7 örnek havza hakkında bilgiler (<http://www.optima.ess.co.at/OPTIMA/cases.html>) ve ayrıca her ortak ülke için paydaş listesi bulunmaktadır. Gediz Havzası için de SUMER tarafından yapılan uygulamalar ve projenin ilk yılında ulaşılabilen paydaşların listesi bu sitede yer almaktadır.

Örnek havza uygulamalarında halihazırda optimizasyon aşamasına gelmiş bulunmaktadır. Bu noktada, Gediz Havzası yönetimi için optimum planın oluşturulabilmesi için, havzadaki su sorunlarının, yönetim amaçlarının, sınır şartlarının, orta ve uzun vadedeki hedeflerin, paydaşların görüş ve tercihleri çerçevesinde belirlenmesi önem taşımaktadır. Gediz Havzasında başarılı sonuçlar elde edildiği takdirde, yaklaşımın ve yöntemlerin diğer sorunlu havzalarımıza da uygulanması mümkün olabilecektir. Bu hedefler doğrultusunda, **19-20 Nisan 2006 tarihlerinde, İzmir Hilton otelinde 2 günlük bir paydaş çalıştayı düzenlenecektir.** Kesin programı 2-3 gün içinde tüm katılımcılara gönderilecek olan çalıştayda, SUMER tarafından SMART sonuçları ile birlikte OPTIMA projesi tanıtılacak; Gediz Havzasında sürdürülen çalışmalar hakkında bilgi verilecek; daha sonra katılımcıların havza sorunları, beklentiler, hedefler, sınır şartları ve optimizasyonda dikkate alınması uygun olabilecek seçenek çözümler (teknolojik, sosyal, ekonomik) hakkındaki görüş ve katkıları 3 tür anket yardımıyla belirlenmeye çalışılacaktır. Somut çözümlere ulaşılabilmesi için de tüm katılımcıların her iki günde de çalıştaya katılımı beklenmektedir.

Çalıştay ile ilgili son hazırlıkların tamamlanabilmesi için, tüm paydaşların **17 Nisan 2006** akşamına kadar toplantıya katılım teyitlerini, kuruluşu temsilen katılacak kişilerin isimleri ile birlikte, **faks (0 232 453 1192) veya e-mail (nilgun.harmancioglu@deu.edu.tr)** yoluyla tarafımıza iletmelerini arz ve rica etmekteyiz.

Su sorunlarının yoğunlukla yaşandığı Gediz ve diğer benzeri havzalarımızda etkin yönetim mekanizmalarının geliştirilmesi için sürdürmekte olduğumuz çabalara destek verebileceğinizi ümit etmekteyiz.

Saygılarımla,



Prof.Dr. Nilgün Harmancıoğlu
SUMER Müdürü

AB FP6 INCO-MPC PROGRAMI OPTIMA PROJESİ
(Optimisation for Sustainable Water Resources Management)
PAYDAŞ ÇALIŞTAYI

19-20 Nisan, 2006
İzmir, Hilton Oteli

PROGRAM

19 Nisan 2006, Çarşamba

09:30 – 10:00	Açılış
10:00 – 11:00	OPTIMA Projesinin Tanıtımı
11:00 – 11:30	Kahve Arası
11:30 – 12:30	Anket I: Açıklamalar
12:30 – 13:30	Yemek Arası
13:30 – 14:30	Anket I: GEDİZ HAVZASINDAKİ SU SORUNLARININ ÖNCELİĞİ
14:30 – 15:00	Kahve Arası
15:00 – 16:30	Anket II: ÖNCELİK VE EĞİLİMLERİN BELİRLENMESİ (Grup Çalışması)
16:30 – 17:30	Grup Raporlarının Sunumu

20 Nisan 2006, Perşembe

09:30 – 10:30	Anket III ve IV ile İlgili Açıklamalar
10:30 – 11:00	Kahve Arası
11:00 – 12:30	Anket III: HAVZA YÖNETİMİNDE SINIR ŞARTLARI (Grup Çalışması)
12:30 – 13:30	Yemek Arası
13:30 – 15:00	Anket IV: HAVZA YÖNETİMİNDE ARAÇLAR (Grup Çalışması)
15:00 – 15:30	Kahve Arası
15:30 – 17:00	Serbest Tartışmalar
17:00 – 17:30	Kapanış

PRESENTATION

Dans le cadre du projet de recherche **OPTIMA** (Optimisation for Sustainable Water Resources Management), financé par l'Union Européenne et mené par le CNT avec dix pays de la rive méditerranéenne, l'équipe du projet présentera aux organismes Tunisiens, impliqués dans le domaine de l'eau, le système WaterWare d'optimisation de la gestion des ressources hydriques. Ce système permet de combiner :

- Un système d'information géographique intégré associé à un serveur Web
- Des modèles de simulation : modèle Pluie- Débit (RRM), modèle de Gestion des ressources en eau (WRM), modèle de demande en eau pour l'irrigation, modèle de qualité des eaux de surface et souterraine, modèle de changement d'occupation de sol (LUC)

Un cas particulier du fonctionnement du modèle a été testé sur le Bassin Versant (BV) de l'oued Méliane (Gouvernorats de Ben Arous et de Zaghouan).

A travers ce workshop, l'équipe du projet présentera :

- le projet, les résultats préliminaires, les problèmes rencontrés et les solutions proposées pour une meilleure gestion des ressources hydriques dans le BV de l'oued Méliane
- le modèle conceptuel du bassin versant nécessaire au fonctionnement du système WaterWare
- Les scénarii d'optimisation de la gestion des ressources hydriques dans le BV de l'oued Méliane

Pour de plus amples détails sur le système WaterWare, nous vous invitons à consulter le site dédié au projet : www.ess.ca.at/OPTIMA/

PROGRAMME

08h.30- 09h.00	Inscription
09h.00- 09h.10	Allocution de M. le Directeur Général du CNT
09h.10- 09h.30	Le développement des ressources en eau à travers La recherche scientifique. (Dr K. ATTIA, Président Directeur Général de l'ONAS)
09h.30- 09h.45	Les techniques d'implication des institutions dans les projets de recherche (Mme A. SPITERI, IRMCo Malte)
09h.45- 10h.05	Activités du CNT
10h.05- 10h.30	Pause café
10h.30- 10h.50	Présentation du projet OPTIMA (Mme M. HAFFANI, CNT)
10h.50- 11h.10	Le système de gestion des ressources hydriques WaterWare (Mr A. EZZINE, CNT)
11h.10- 12h.00	Table ronde : La gestion de l'eau dans le BV de l'oued Méliane
12h.00- 14h.00	Déjeuner
14h.00- 15h.00	Table ronde : Modélisation conceptuelle du BV de l'oued Méliane
15h.00- 16h.00	Table ronde : Optimisation de la gestion des ressources hydriques dans le BV de l'oued Méliane
16h.00- 16h.20	Pause café
16h.20- 17h.00	Recommandations et clôture

BULLETIN DE PARTICIPATION

au Workshop sur l'optimisation de la gestion
des ressources hydriques
Tunis, le 03 Mai 2006



Centre National de
Télédétection
IRMCo



Organisent

Dans le cadre du projet **OPTIMA**
(Optimisation for Sustainable Water Resources Management)

un Workshop

Sur le thème

Optimisation de la gestion des ressources hydriques

Cas du Bassin versant de l'Oued Meliane

Le 3 Mai 2006

Lieu

Centre National de Télédétection
Route de La Marsa. BP 200. 1080 Tunis Cedex
Tel : 71 761 333- Fax : 71 760 890
Mail : cnt.dg@cnt.nat.tn

Nom et prénom :

.....

Institution :

.....

Fonction :

Adresse :

.....

Tél :

Fax :

E-mail :

A retourner au plus tard **le 27 Avril 2006**

Fax : 71 760 890 ou Mail: cnt.dg@cnt.nat.tn

Contact : *Mme Myriam Haffani*



Optimization for Sustainable Water Management (OPTIMA)

الرقم: /OPTIMA
التاريخ: ٢٠٠٦/٣/١٦

عطوفة أمين عام وزارة المياه والري

تحية طيبة، وبعد،،،

أرجو التكرم بالعلم بان الجامعة الأردنية وبمشاركة عدد من الدول المتوسطة تشارك في تنفيذ مشروع مدعوم من المفوضية الأوروبية بعنوان:

Optimization of Sustainable Water Resources Management
(OPTIMA)

يهدف المشروع إلى استخدام واختيار وتقييم وسيلة إبداعية لإدارة الموارد المائية في منطقة دول البحر المتوسط، ويتوقع لهذا المشروع أن يحدد سياسة تزيد من كفاءة استعمال هذه الموارد والتقليل من التنافس عليها بين مختلف القطاعات من خلال تطوير نماذج محاكاة و تحليل اقتصادي اجتماعي لكل منطقة. وفي الأردن تم اختيار حوض نهر الزرقاء كمنطقة للدراسة نظراً لأهميتها وتنوع موارد المياه واستخدامها ولتداخل اهتمامات الجهات أصحاب العلاقة في استعمالات المياه.

وللحصول على أفضل النتائج فإننا ننوي عقد حلقة عمل حول نشاطات المشروع والمتعلق بالإدارة الأمثل للموارد المائية في حوض نهر الزرقاء وعرض السيناريو الأولي ورسم السياسة المستقبلية لإدارة المياه في الحوض وذلك بتاريخ ٢٠٠٦/٥/١٦ في تمام الساعة التاسعة صباحاً في فندق القدس الدولي. هذا وتستمر أعمال حلقة العمل لغاية الساعة الثالثة مساءً يتبعها غداء عمل.

لذا أرجو التكرم بالموافقة والإيعاز للدكتور عيسى النصور والمهندس محمد المومني والمهندسة سوزان طه (نقطة الاتصال للمشروع) للمشاركة في تبادل الآراء والمساهمة في القضايا المتعلقة بكمية ونوعية المياه في منطقة الدراسة لإنجاح أعمال هذه الحلقة.

و تفضلوا بقبول فائق الاحترام،،،

مدير المشروع
الدكتور محمد شطناوي

*Optimization for Sustainable Water Resources Management
(OPTIMA)*

**First Stakeholder Workshop
May 16, 2006
University of Jordan**

in collaboration with *corridoio.zero*, Italy

09:00 – 09:15	Registration and Interaction
09:15 – 09:30	Welcome Session, workshop agenda
09:30 – 10:20	Oral Presentations <ul style="list-style-type: none">- OPTIMA project and the Zarqa Basin case study, Shatanawi- Land use change model, al Bakri- The participative approach, <i>corridoio.zero</i>- Introduction to the Baseline Scenario, Shatanawi and Shammout
10:20 – 10:40	Coffee break
10:40 – 11:50	Working Session I (Plenary) <ul style="list-style-type: none">- Sharing and understanding the baseline scenario- Planned actions and expected changes
11:50 – 12:10	Coffee break
12:10 – 13:20	Working session II (Parallel Groups) <ul style="list-style-type: none">- Problems and issues- From problems to objectives- Actions and instruments
13:20 – 14:30	Working Session III (Plenary) <ul style="list-style-type: none">- Introduction of the results- Sharing objectives and priorities
14:30 – 15:30	Lunch



DOKUZ EYLÜL ÜNİVERSİTESİ

SU KAYNAKLARI YÖNETİMİ ve SU KAYNAKLI DOĞAL AFETLERİN KONTROLÜ

ARAŞTIRMA ve UYGULAMA MERKEZİ

Sayın İlgili,

Başlıca hedefi, sürdürülebilir su kaynakları yönetimi amacıyla araştırma ve uygulamalar yapmak olan SUMER (Dokuz Eylül Üniversitesi Su Kaynakları Yönetimi Araştırma ve Uygulama Merkezi), bu çerçevede halen Avrupa Birliği FP6 Programları tarafından desteklenen üç uygulamalı projeyi yürütmektedir. Bu projelerin uygulamaları Ege Bölgesi havzalarında(**Gediz Havzası**) ve kıyı bölgelerinde gerçekleştirilmektedir. Anılan projelerin temel hedefi, su kaynakları yönetiminde kural bazlı uzman sistem teknolojileri ve interaktif karar destek sistemlerinin kullanıldığı; çevresel, sosyoekonomik ve politik etki değerlendirme yöntemleri ile sayısal simülasyon (benzetim) modellerini içeren gelişmiş niceliksel mühendislik sistemlerinin birleştirildiği; niceliksel ve niteliksel analizlerin sektörler arası entegrasyonuna ve havza genelinde su kullanımının optimizasyonuna dayanan yeni yaklaşımlar getirmektir.

Proje uygulamalarının ve kullanılan metot ve yaklaşımların ilgili kurum ve kuruluşlarımıza duyurmak ve yaygınlaştırmak amacıyla bir seminer verilecektir.

Bu kapsamda, **29 Kasım 2006 Çarşamba günü, Dokuz Eylül Üniversitesi Tınaztepe Kampüsü Mühendislik Fakültesi Konferans Salonu'nda, saat 14:00'da**

ECONOMIC ASSESSMENT AND MULTICRITERIA OPTIMIZATION FOR RIVER BASIN MANAGEMENT: THE CASE OF GEDİZ RIVER BASIN(Akarsu Havzaları Yönetiminde Ekonomik Değerlendirme ve Çok Amaçlı Optimizasyon Kullanımı: Gediz Havzası Örneği)

başlıklı bir seminer sunulacaktır. Seminer dili İngilizce olmakla birlikte Türkçe tercüme yapılacaktır.

Saygılarımızla,

Prof. Dr. Nilgün Harmancıoğlu
SUMER Merkez Müdürü

**Common Template for Workshop Agenda
in Emek Hefer and Tulkarem, 5 and 7 December 2007**

Wadi Zeimar / Alexander River

IPCRI and IRMCo

09.00 – 09.15 Registration

09.15 – 09.35 Welcome address

09.35 – 09.45 Stakeholder participation in OPTIMA:
Objectives and Expected Results

09.45 - 10.00 Workshop participants introducing themselves

10.00 – 11.00 Baseline Scenario for Wadi Zeimar/Alexander River

11.00 - 11.20 Coffee break

11.20 – 11.50 Modeling future, alternative scenarios for optimum water
management

11.50 - 12.00 Transboundary river basin management: the 3 viewpoints

12.00 – 13.00 lunch

13.00 – 14.20 Guided discussion

14.20 – 14.30 Coffee break

14.30 – 15.00 Feedback from the workshop and selection of optimum scenarios

Annex 3

Posters

- **OPTIMA Project Poster**
- **OPTIMA Poster: Jordan**
- **OPTIMA Poster: Tunisia**



Optimisation for Sustainable Water Resources Management

OPTIMA (INCO-CT-2004-509091) is an EU sponsored FP6 research project, 2004-2007

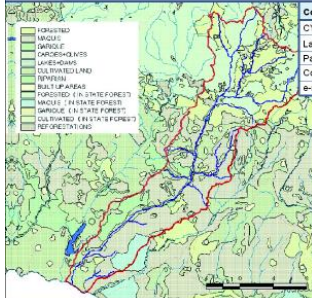


THE AIMS

- To recognize water as a valuable resource in the Region
- To achieve increased efficiency using innovative approaches
- To develop and test dynamic and distributed simulation models
- To use remote sensing technology for land use information
- To study water technology alternatives and their cost structure
- To quantify environmental and social dimensions

STUDYING 7 SELECTED RIVER BASINS

- towards a comparative evaluation and benchmarking, the first phase of the project focused on
- building common thematic information layers
 - establishing a priority ranking of water issues

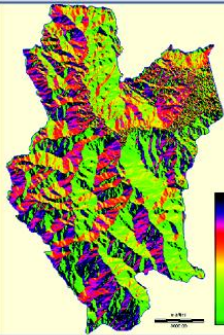


Country	River Basin	Size in km ²	Population
CYPRUS	Dhaizos River	260	3,550
Layer	Landuse		
Partner	ATLANTIS Consulting Cyprus Ltd		
Contact	Charalambos Panayiotou		
e-mail	c.panayiotou@atlantis.cy.net		



Country	River Basin	Size in km ²	Population
TURKEY	Gediz River	18,000	1,700,000
Layer	Irrigation and Drainage Return Flows		
Partner	SUMER, Hydrology and Water Resources Center Dokuz Eylul University, Izmir		
Contact	Nilgun Harmancioglu		
e-mail	nilgun.harmancioglu@deu.edu.tr		

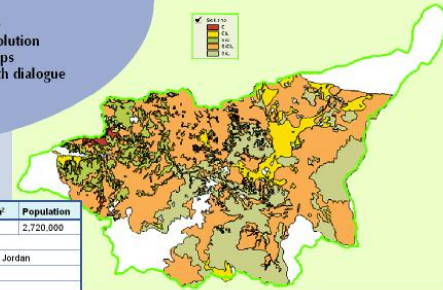
Country	River Basin	Size in km ²	Population
LEBANON	Litani River	600	390,000
Layer	Hydrographic network		
Partner	NCRS, National Centre for Remote Sensing ELAPD, Earth Link & Advanced Resources Development		
Contact	Mohamad Khawile (NCRS); Ricardo Khoury (ELARD)		
e-mail	mkhawile@crs.edu.lb; rkhoury@elard-group.com		



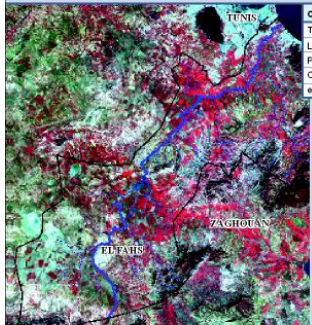
Country	River Basin	Size in km ²	Population
MOROCCO	Marrif River, Tetouan	1,129	445,000
Layer	Digital elevation model (DEM)		
Partner	University Hassan II Mohammedia		
Contact	Bachachmi Mohammed Karim		
e-mail	btkm@univh2m.ac.ma		

PUTTING STAKEHOLDERS AND ENDUSERS FIRST

- Introducing the project through individual letters
- Building an on-line database of stakeholders
- Inviting response to Water Issues Questionnaire
- Seeking practical problem solving & conflict resolution
- Inviting feedback through participatory workshops
- Establishing networks and promoting south-south dialogue

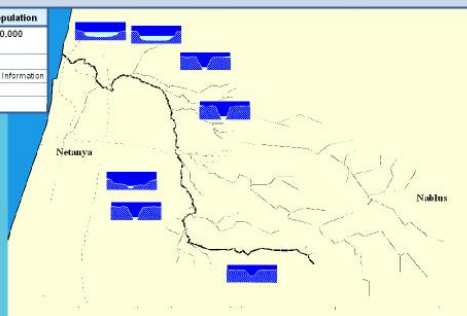


Country	River Basin	Size in km ²	Population
JORDAN	Zarqa River	4,120	2,720,000
Layer	Soils		
Partner	Faculty of Agriculture, University of Jordan		
Contact	Muhammad Shatanawi		
e-mail	shatanaw@ju.edu.jo		



Country	River Basin	Size in km ²	Population
TUNISIA	Mellian River, Tunis	1,467	420,000
Layer	Spot Image		
Partner	CNT, Centre National de Teledetection		
Contact	Myriam Haffani		
e-mail	cni.dg@cnt.nat.tn		

Country	River Basin	Size in km ²	Population
PALESTINE ISRAEL	Wadi Zemar Aleander River	500	600,000
Layer	River morphology		
Partner	IPCRI, Israeli/Palestine Centre for Research and Information		
Contact	Robin Twite		
e-mail	ipcri@ipcri.org		



Project Coordinator

ESS, Environmental Software & Services GmbH, Kurt Fedra, kurt@ess.co.at, AUSTRIA

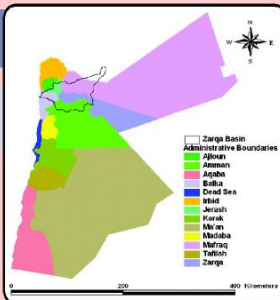
Other Partners

F2EM, Fondazione Eni Enrico Mattei, Ugo Gasparino, ugo.gasparino@feem.it, ITALY, corridoiozero, Marco Parolin, marco.parolin@corridoiozero.org, ITALY, INTERGEO HELLAS Environmental Technology, Stelios Papadopoulos, stelios.papadopoulos@intergeo-consulting.com, GREECE and

Design of Poster as Lead-Partner for Dissemination Strategy

IRMCo, Integrated Resources Management Co. Ltd, Anna Spiteri & Dirk De Ketelaere, irmco@keyworld.net, MALTA

www.ess.co.at/OPTIMA/



Jordan – the Zarqa River Basin

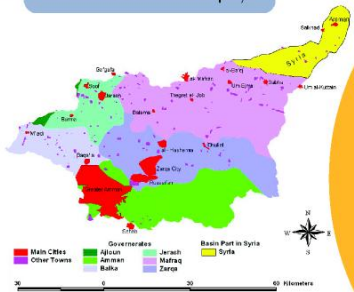
Extends across five governorates,
with an area of 4,120 km²
Annual population growth is 2.5%

The Challenges for the Stakeholders:

- Apply research results for informed decision-making
- Determine competing sectoral water demand
- Resolve conflict and overlap of responsibilities
- Employ a river basin management approach
- Enforce water laws and regulations

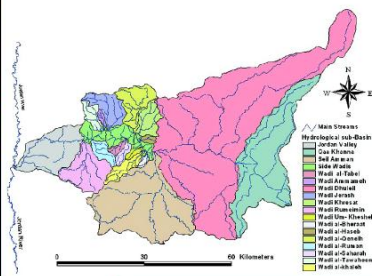
Contains 50% of Jordan's population
and 60% of its industries, treated
wastewater totals 60 million m³ per year

King Talal Dam has a storage capacity of 85 million m³

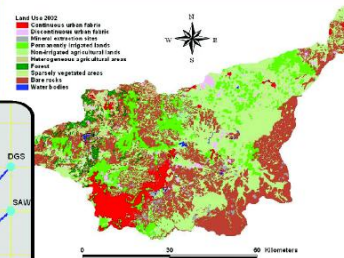


Stakeholders and Endusers

Ministries of Water and Irrigation, Agriculture, Environment;
Water Authority of Jordan; Jordan Valley Authority;
Meteorological Department; Department of Statistics;
Royal Scientific Society; Royal Jordanian Geographic Center;
Jordan Environmental Society; Jordan Society
for Combating Desertification and Badia Development;
Badia Research and Development Center;
Jordan Aqua Conservation Association;
National Center for Agricultural Research and Technology Transfer;
Zarqa Governorate;
Municipalities of Greater Amman, Greater Zarqa;
Chambers of Industry Amman, Zarqa;
Jordan Farmer Association; LEMA; Arab Potash Company;
General Computer and Electronics Company;
The Jordan National Committee for Women;
Arab Women Organization of Jordan;
Friends of the Earth, Middle East;
the World Conservation Union (WCSANA);
Water and Environment Research and Study Center

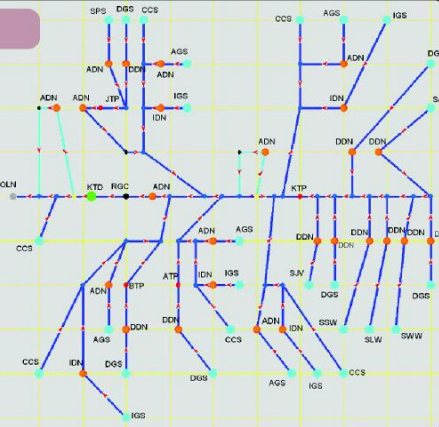


Second largest tributary to Jordan River
Annual rainfall varies by 50%
and decreased by 10% over last 80 years



Topological Model Legend

- ADN-Agricultural Demand Node
- AGS-Agricultural Ground Water Supply
- ATP-Abu Nsair WWTP
- BTP-Batqa's WWTP
- CCS-Catchment Contribution
- DDN-Domestic Demand Node
- DGS-Domestic Ground Water Supply
- IDN-Industrial Demand Node
- IGS-Industrial Ground Water Supply
- JTP-Jerash WWTP
- KTD-King Talal Dam
- KTP-Khibet es-Samra WWTP
- OLN-Outlet Node
- RGC-Runoff Gauge (Control Node)
- SAW-Supply from Azraq Wells
- SVJ-Supply from Jordan Valley
- SLW-Supply from Lajoun Wells
- SPS-Spring Supply
- SSW-Supply from Suraba Wells
- SWW-Supply from Wala Wells



Water supply to demand ratio is ca. 80%
70% of groundwater withdrawal is
used for irrigation

Seasonal flow ranges from 0.5 to 4 m³/s

Jordan's Research Team

Led by Muhammad Shatanawi, shatanaw@ju.edu.jo, with Iwaid al Bakri, Sawas Naber, Maysa'a Shammout, Nidal Afaifeh
University of Jordan, Faculty of Agriculture is a leading educational institution in the Middle East, with a
research focus on irrigation management, use of reclaimed wastewater, water harvesting and artificial recharge.
Women account for over 50% of researchers and 60% of the student population

Project Coordinator

ESS, Environmental Software & Services GmbH, Kurt Fedra, kurt@ess.co.at, AUSTRIA

and

Lead-Partner for Dissemination Strategy

IRMCo, Integrated Resources Management Co. Ltd.
Anna Spiteri & Dirk De Ketelaere, irmco@keyworld.net, MALTA

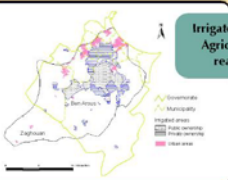
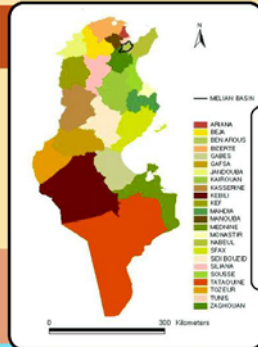


Optimisation for Sustainable Water Resources Management

OPTIMA (INCO-CT-2004-509091) is an EU sponsored FP6 research project, 2004-2007



Tunisia – the Melian River Basin



The Challenges for the Stakeholders:
Apply research results for informed decision-making
Determine competing sectoral water demand
Resolve conflict and overlap of responsibilities
Employ a river basin management approach
Enforce water laws and regulations

Extends across two governorates, with an area of 553 km²

Stakeholders and Endusers

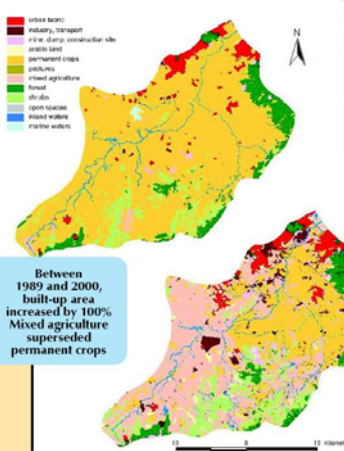
- Ministères de l'Agriculture et des Ressources Hydrauliques;
- de l'Environnement et du Développement durable;
- de la Recherche scientifique,
- de la Technologie et du développement des compétences;
- de l'Équipement,
- de l'Habitat et de l'Aménagement du territoire;
- Direction Générale des Ressources en Eau;
- des Barrages et des grands Travaux hydrauliques;
- du Génie Rural et de l'Exploitation des Eaux;
- de l'Aménagement du Territoire;
- de l'Environnement et de la Qualité de la Vie;
- de l'Aménagement et de la Conservation des Terres Agricoles;
- Société Nationale d'Exploitation et de Distribution des Eaux;
- Office National de l'Assainissement;
- Agence Nationale de Protection de l'Environnement;
- de Protection et d'Aménagement du Littoral;
- Commissariats Régionaux du Développement Agricole Ben Arous, Zaghouan;
- Instituts Nationaux de Météorologie;
- de Recherche Agronomique de Tunisie;
- de Génie Rural, Eau et Forêt;
- Centre International des Technologies de l'Environnement de Tunisie;
- Centre National de Technologies de l'Eau;
- Observatoire Tunisien de l'Environnement et du Développement durable;
- Ecole Nationale des Ingénieurs de Tunisie;
- Institut National Agronomique de Tunisie;
- Union Tunisienne de l'Agriculture et de la Pêche



Bir M'cherga dam has a storage capacity of 26 million m³



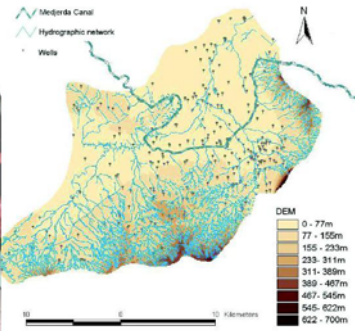
A dense hydrographic network of 1524 km length.
Medjerda canal conveys 14 million m³ of water from the north of Tunisia to Cap Bon
Groundwater over-exploitation reaches 150%



Between 1989 and 2000, built-up area increased by 100%
Mixed agriculture superseded permanent crops



Workshop 3rd May 2006, Tunis



Salinity in excess of 20 g/l in the area of Jabal West

Tunisia's Research Team
Led by Myriam Hafiani, cnt.dg@cnt.nat.tn, with Ahmed Ezzine, Emna Kochlef, Najeh Sayeh, Ali Chouaya
The Centre National de Teledetection, CNT, has a research focus on remote sensing and GIS in various fields of applications. Women account for over 15% of researchers

Project Coordinator
ESS, Environmental Software & Services GmbH, Kurt Fedra, kurt@ess.co.at, AUSTRIA
and

Lead-Partner for Dissemination Strategy
IRMCo, Integrated Resources Management Co. Ltd.
Anna Spiteri & Dirk De Ketelaere, irmco@keyworld.net, MALTA

www.ess.co.at/OPTIMA/

Annex 4

Scientific Publications

Becker, N. and Friedler, E. (submitted)

Alexander river restoration - A cost benefit analysis to find the social value of a clean river. Submitted to: WATMED-2, Marrakesh, Morocco, November 2005.

Benhachmi, M.K., Abdallah, E.M., Mouckchane, M. (submitted)

Simulation of Water Demand/Supply Scenarios in the Martil River Basin, Morocco
Accepted for presentation at: WATMED 3, November 1-3, 2006, Beirut, Lebanon.

Cetinkaya, C. and Harmancioglu, N (2006)

Optimisation Methods Applied to River Basin Management. In: Topping, B,H,V., Montero, G., and Montenegro, R. [eds.], Proceedings of the Fifth International Conference on Engineering Computational Technology; Civil Comp. Press, Stirlingshire.

Fedra, K., Kubat, M. and Zuvela-Aloise, M. (submitted)

Web-based water resources management: economic valuation and participatory multi-criteria optimization. Submitted to: WATER RESOURCES MANAGEMENT 2007, IASTED Conference on Water Resources Management, August 2007, Honolulu, Hawaii.

Fedra, K. (in print)

Coastal zone resource management: tools for a participatory planning and decision making process. 15 pp., In: R. Krishnamurthy [ed]: Integrated Coastal Zone Management - The Global Challenge. Research Publishing Services, Singapore.

Fedra, K. (2006)

Embedded GIS in environmental management. 22-16 pp., *GIS Development*, Vol. 10/2

Fedra, K. (2005)

Water Resources Modelling at the River Basin Scale. Tutorial presentation at IASTED/SMO 2005, Oranjestad, Aruba, August 2005.

Fedra, K. (2005)

Water Resources Simulation and Optimization: a web based approach. IASTED/SMO 2005, Oranjestad, Aruba, August 2005.

Fedra, K. and Harmancioglu, N. (2005)

A web-based water resource simulation and optimization system. In: Savic, D., Walters, G., King, R., and Khu, A-T. [eds], Proceeding of CCWI 2005, Water management for the 21st Century. Volume II, 167-172, Center of Water Systems, University of Exeter.

Gasparino U., Del Corpo, B. (2007)

Perceived Diversity of Water Management in Mediterranean Watersheds: A case study. Presented at WATMED III, 1-3 November 2006, Tripoli, Lebanon.

Gasparino U., Del Corpo B., Pinelli D. (2006)

Perceived Diversity of Complex Environmental Systems: Multidimensional Measurement and Synthetic Indicators FEEM Working Paper No. 49.2006 Presented at the Marie Curie EUODIV 2006, Milan, Italy, January 2006.

Gemini, G., Parolin, M., Sachero, V. (2006)

Participative Approach in Water Resource Planning within Mediterranean Region. Proceedings of B+V First International Congress - Water and Green: Resources for the built environment May 25th-26th, Milano Italy.

Harmancioglu, N. Fedra, K., and Barbaros, F.(2006)

Analysis of Sustainability in Management of Water Scarce Basins Accepted for presentation at: IWA 10th specialized conference on Diffuse Pollution and Sustainable Basin Management, Istanbul, September 18-22, 2006.

Khawlie, M., and Abdallah, C. (submitted)

Standardizing remote sensing and GIS data for optimizing water resources management. Submitted to: 15th International Symposium on Remote Sensing and Co-Systems, Damascus, September 18-21, 2006.

Khoury, R., Doummar, J., Khawlie, M., Doumit, A., Shaban, A., Abdallah, C. (accepted)

Using the Water Resources Model (WRM) for Optimization: The Lebanon Lower Litani River Case Study. Submitted to: WATMED-3, Tripoli, Lebanon, November 2006.

Khoury, R., Khawlie, M., Shaban, A., Abdallah, C. and Kayal, R. (accepted)

Relieving Water Stress: Optimizing Water Resources Management: Lower Litani River, Lebanon. Submitted to: WATMED-2, Marrakesh, Morocco, November 2005.

Shatanawi, M., and Naber, S. (submitted)

Watershed Management of Zarqa River Basin in Jordan. Submitted to: WATMED-2, Marrakesh, Morocco, November 2005.

Shatanawi, M., Naber, S. (2006)

Status of Gender Involvement in Water and Irrigation Activities in Jordan. Presented at the kick-off meeting of the GEWAMED project, February 20-23, IAMB, Bari, Italy.

Spiteri, A., and De Ketelaere, D. (printed)

Engaging Stakeholders and Endusers in EU funded research projects on land and water resources management in the Mediterranean. ECOLLAW 2006, 4-7 January 2006, Cairo, Egypt

Spiteri, A. and De Ketelaere, D. (printed)

Comments relevant to Communication, pp. 48-50. In: Gyawali, D., J.A. Allan et al., 2006, EU-INCO water research from FP4 to FP6 (1994-2006) – a critical review, Luxembourg, Office for Official Publications of the European Commission, 86 p.