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EUROPEAN COMMISSION

EURO-MEDITERRANEAN PARTNERSHIP

**Euro-Mediterranean Information System on the know-how in the Water Sector
Phase II (2003-2005)**

**Work Programme
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1. Description

1.1. Title

Euro-Mediterranean Information System on the know-how in the Water Sector

Phase II (2003-2005)

1.2. Location

The project is covering the 27 countries of the Euro-Med Partnership, i.e. the 15 EU member states and the 12 Mediterranean Partner Countries (MPC): Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Palestine, Syria, Tunisia and Turkey.

EMWIS National Focal Points have already been created in each Mediterranean Partner Country plus in eight countries of the European Union. The table below lists the organisations in charge of the NFPs in each country:

Country	NFP organisation
Mediterranean Partner Country	
Algeria	Agence de Bassin Hydrographique Constantinois -Seybousse - Mellegue
Cyprus	Water Development Department (W.D.D.)
Egypt	Ministry of Public Works and Water Resources
Israel	The Hydrological Service of Israel (HSI)
Jordan	Ministry of Water and Irrigation
Lebanon	Ministère de l'Energie et de l'Eau
Malta	Water Services Corporation (WSC)
Morocco	Ministère de l'Equipement - Direction Générale de l'Hydraulique
Palestine	Palestinian Water Authority (PWA)
Syria	Ministry of Irrigation - International Water Bureau
Tunisia	Ministère de l'Agriculture - Direction Générale des Ressources en Eau
Turkey	General Directorate of State Hydraulic Works (D.S.I)
European Union Country	
Austria	Austrian Water
Belgium	Aminal - Afdeling Europa en Milieu
France	Service National d'Information et de Documentation sur l'Eau (SNIDE)
Greece	Ministry of Environment Physical Planning and Public Works
Italy	Ministry of Environment
Luxemburg	Ministère de l'Environnement
Portugal	Instituto de Agua (INAG)
Spain	Centro de Estudios y Experimentacion de Obras Publicas (CEDEX)

The EMWIS Technical Unit that acts also as the International Focal Point is located in Sophia-Antipolis (France) and has its own legal structure: the European Economic Interest Group UT-SEMIDE.

2. Summary

After a rather short period of existence (about 3 years), EMWIS presents interesting results as well as some limitations. It has created a real momentum among the Mediterranean Partner Countries (MPC) about the interest of the necessary sharing of information and of developing National Water Information Systems (NWIS) that could be integrated into a seamless Euro-Med information system. Its organisational framework is up and running with 20 National Focal Points (the 12 MPC and 8 EU member states), a technical unit, a Steering Committee and a coordination committee. Thus EMWIS is a unique platform to foster regional cooperation in the water sector in the Euro-Med area that can effectively support EC water related initiatives such as the MEDA-Water programme.

Now that these solid foundations exist, it is important to develop a more ambitious vision and architecture to sustain EMWIS. Indeed, the awareness created in the MPC has initiated new needs and requirements, the basic technical architecture that have been set up to ensure quick development of NFP must be adapted using leading edge technologies in order to encompass these new needs, to attract the interest of more EU countries and to develop strong synergies with International initiatives.

The overall objective of EMWIS is to enhance the co-operation in the water sector. But for this second phase the approach is to develop EMWIS as an integrated network of interoperable National Water Information Systems. The system will be based on the following principles:

- Enhance the creation of national information systems on water with several windows, national (the “National Focal Points”) and international (the “International Focal Point”);
- Strive to make EMWIS as simple to use as possible, thanks to an approach: global, interactive, and able to manage significant data flows.
- Make EMWIS flexible, since the system should evolve permanently, according to new needs;
- Give EMWIS sustainability, and consequently preserve the international cohesion of the system (guaranteed by an appropriate organisation and a budget).

The expected results of this 2nd phase are:

- The co-ordination with political structures to maintain a high level of commitment for the support of the water sector in the Euro-Med area
- The reinforcement of the NFP to ensure their sustainability through a strong national commitment,
- The expansion and development of services, including the introduction of the Arabic language and a better knowledge of user needs and national requirements
- The technical upgrade of the existing system, taking into account state of art technologies and new water information systems under development in the various partner countries
- The operation of Euro-Med water information services
- Promotion of EMWIS to raise awareness about the benefits of sharing information and know-how, particularly best practices in water
- Development of topical activities (analyses, summaries and events) oriented towards the areas and themes of the Turin Action Plan.
- Dissemination of the MEDA-Water Programme results in close cooperation with the European Commission, the programme monitoring team and the Water Facilitators
- Liaison and cooperation with international initiatives to avoid duplication and develop synergies
- Visits to sites of best practices in Mediterranean water information systems

3. Justification

3.1. Background Information

The **Marseilles Euro-Mediterranean Conference on Local Water Management (November 1996)** initiated EMWIS (Euro-Mediterranean Information System on the know-how in the Water Sector). Its goal was to make wide-ranging and in-depth knowledge available in all partner countries, especially information on: stakeholders, available documentation, the technologies and methods used, research programmes and findings, training opportunities, etc.

After a preliminary study of the technical, economic and organisational processes, the implementation of EMWIS was approved in **Naples (Italy) on 9 and 10 December 1997**, during a conference gathering the Water Directors of **the 27 countries involved in the Euro-Mediterranean agreements**.

The declaration of the **Turin Ministerial Conference on Local Water Management (October 1999)** emphasized the importance of EMWIS as being the first operational integration and co-operation system within the **Euro-Mediterranean Partnership (Barcelona Process, 1995)** in the water sector. During this Turin Conference, EMWIS was also underlined as being a tool for the implementation of the Action Plan, especially on the priority issue of sharing information and knowledge.

The first phase of EMWIS has aimed to set up the system. It has been co-financed, over a 3-year period (1999-2002), by the three countries of the European Union (Spain, France, Italy) participating in the "Technical Unit", by the European Commission and the countries themselves for the costs of their "National Focal Point". A European Economic Interest Group (EEIG) was created in July 1998 to manage the Technical Unit. This joint financing was the subject of a contract signed by EEIG-EMWIS Technical Unit and the European Commission the 20 July 1999. The Technical Unit, located at Sophia Antipolis (France) started its activities in October 1999.

During the EMWIS meeting held in Madrid in November 2001 the Water Directors of the Euro-Med countries welcomed the positive achievements of the first phase of EMWIS (1999-2002) and agreed on the implementation of a second phase along the lines of the EMWIS strategic plan 2002-2005.

Between March and July 2002, two different groups of independent experts mandated by the EC conducted a technical evaluation of the first phase of EMWIS, and a monitoring mission of the corresponding work programme, respectively. The conclusions of both missions have been substantially encouraging with regard to the results achieved, while at the same time highlighting certain weaknesses and formulating relevant recommendations aiming at the improvement of planning strategies, organisational matters and implementation approaches towards the promotion of the sustainable evolution of EMWIS.

Hence, the overall principle emanating from this collaborative work indicated the need for broadening the earlier approved strategic plan in the second phase of EMWIS in order to better adapt EMWIS to the evolving needs in water information systems to the member countries. This document is covering the implementation of the enhanced strategic plan (2002-2005).

3.2. Problems to be addressed

Three years after launching its operations, EMWIS had already achieved stimulating results in terms of political and organizational aspects (the need for co-operation among the partner countries was confirmed, political commitment had increased, appropriation of the system at the national levels is growing, gradual implementation of focal points in the countries). EMWIS needs to become a reference tool in the Mediterranean water information sector, providing in single access point to the information that is usually difficult to obtain otherwise. It is however an initiative that should be envisaged in a longer term.

The figure 1 presents the hierarchy of problems related to EMWIS development.

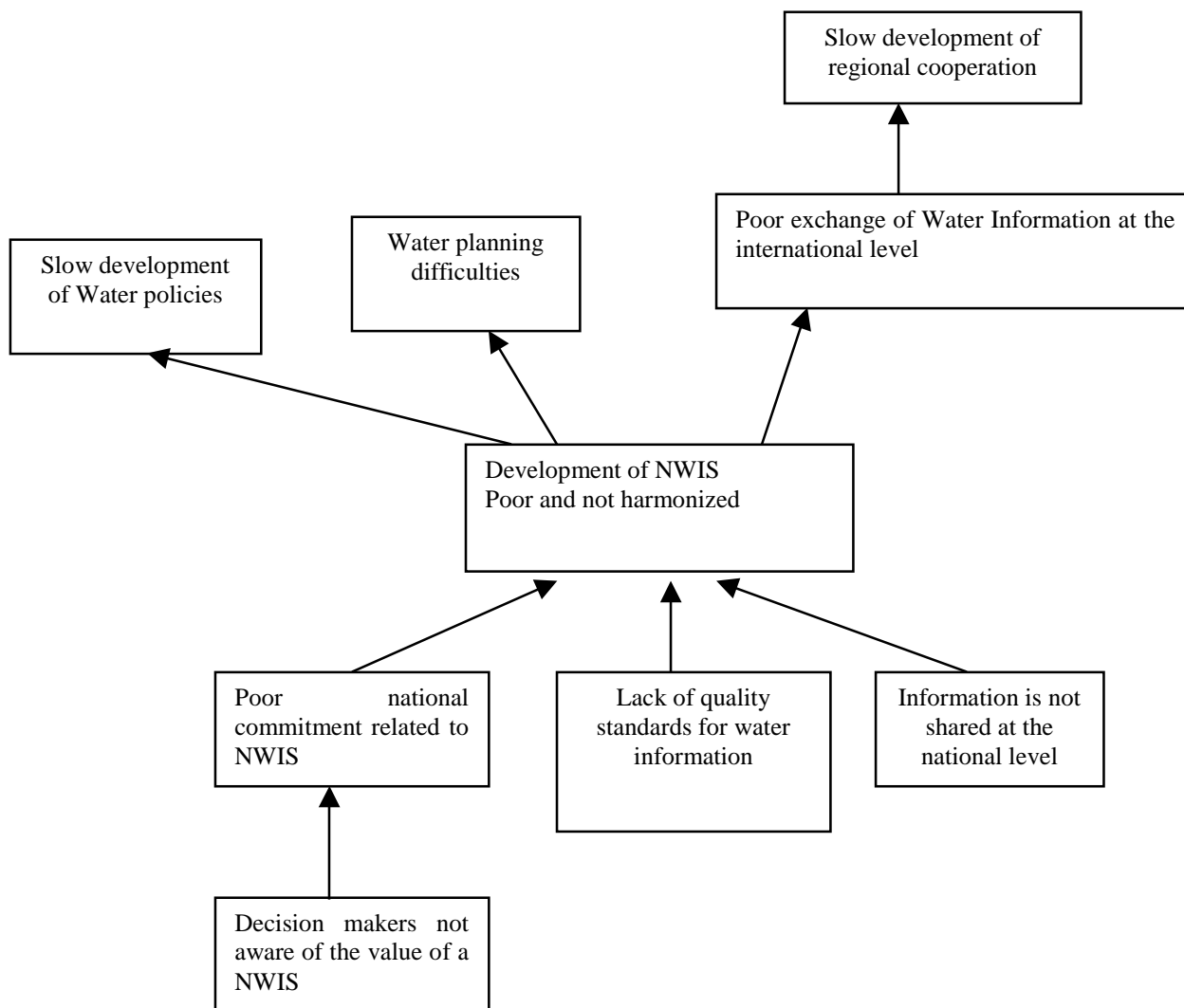


Figure 1: Problem tree analysis (hierarchy of problems)

Today, in most of the Mediterranean Partner Countries, water information is managed by different public or private organisations without real coordination. In the best cases, overlapping on information processing between each organisation is avoided. But very often, you can find different results for the same type of information published by different sources, usually this is due to the lack of transparency on “who is doing what”. EMWIS National Focal Points are trying to solve this problem by identifying certified sources of information in each country. The development of National Water Information Systems is expected to harmonise the procedures for water information processing and exchange between the different organisations. Such developments are long terms objectives, but are of prime importance to improve local water management.

At the same time, water stakeholders in the Mediterranean Partner Countries are facing huge problems of water scarcity, institutional reforms, master planning, etc. In order to improve their day-to-day management and for better policymaking, they need an easy access to water information at the national level but also at the international level (good practices, innovative technologies or know-how, etc). Due to the lack of experience on the building of coherent multi-stakeholder water information systems within the MPC, the development of such systems requires capacity building of human resources.

3.2.1. EMWIS assignment in the Turin Action Plan

EMWIS is the first and unique tangible co-operation tool implemented under the Barcelona process in the water sector. During the Ministerial Euro-Mediterranean Conference on Local Water Management, held in Turin in October 1999, the Ministers entrusted EMWIS with an additional assignment to support the implementation of the Action Plan. This activity supplements the initial EMWIS assignment to the five priority topics.

Indeed, EMWIS is a privileged platform for the dissemination of information among the water stakeholders in the Partnership countries. To do so, specific technical facilities will have to be set-up and close relationships will have to be established between:

- The MEDA-water facilitators and the NFP
- The MEDA-water facilitators and the Technical Unit
- The Monitoring and Supervisory organisation of the MEDA-Water Programme and the Technical Unit

3.2.2. Evolution of user needs and national requirements

The awareness created by the first phase of EMWIS in the Mediterranean Partner Countries has revealed new needs and requirements to this effect. In addition it has become evident that, the sustainability of the system would be better achieved if EMWIS primarily addresses relevant national needs related to everyday water information management parallel to the foundation objectives of regional co-operation, communication and dissemination of public information. Most probably, these needs will vary among the EMWIS partner countries, and thus may result in different organisational and technical frameworks. The challenge of EMWIS will be to respond to these national requirements while maintaining the possibility to establish the international exchange of selected parcels of information defined by the partners themselves.

3.2.3. Providing information and services in Arabic language

Arabic is the official language in 8 EMWIS partner countries (Morocco, Algeria, Tunisia, Egypt, Jordan, Lebanon, Palestine and Syria). Arabic speaking persons represent an important target group of end-users for EMWIS. So, it is important to provide an access to information in Arabic language.

3.2.4. Adapting the technical architecture

A more ambitious technical architecture will be necessary to improve the co-operation within and among different national water information systems and to ensure an efficient exchange of versatile information as intended by a specific country. Therefore, the development of a more distributed architecture is foreseen based on standardised but flexible formats of information (using the eXtensible Markup Language to define them) in conformity with the concept of web-based services rather than on recommendations of specific technological solutions. In addition, it is expected that the introduction of these new technologies combined with the definition of a so-called markup language dedicated to water (e.g. WaterML or WaterTalk) could attract more interest from Northern EU countries.

3.2.5. Topical coverage and services provided

In its first phase (1999-2002), EMWIS aims at providing access to the information existing in each country and related to the following five priority topics: institutions, documentation, training, research and development and data management.

While processing these five topics (by refining their content in particular) and providing a specific support the MEDA-Water programme, new needs have arisen and must be taken into account, e.g. the areas of actions and the horizontal themes of the Turin Action Plan.

3.2.6. Geographic coverage

The 27 partner countries approved EMWIS and its NFP-based structure during the Naples Conference of 1997. Two year only after the operational launch of EMWIS, 20 NFPs have been designated and 17 are already active.

The commitment of each Euro-Mediterranean partner country must be reasserted especially concerning the implementation and operation of a NFP, as being a national water-related information system integrated into a Euro-Mediterranean information network.

3.2.7. Direct support to the NFPs of the Mediterranean Partner Countries

Some NFPs of the Mediterranean Partner Countries have faced great difficulties (lack of financial and human resources) for building their national information system, as part of the commitments taken during the Naples Conference (1997). During the first phase, EMWIS had no resource to help them. In addition, EMWIS has outlined the lack or obsolescence of some resources in certain countries (e.g. water-related documentation systems).

Therefore some direct assistance to the NFPs might be considered to encourage them in the building and operation of their national system, e.g.:

- Covering investment costs related to the purchase of the hardware and software necessary to the good operation of the NFPs.
- Searching for bilateral or multilateral financing, on the basis of specifications approved by EMWIS, in order to set up or improve the information systems linked to EMWIS
- Financing the NFP operating costs which concern Euro-Med co-operation activities and the promotion of the system at the national level

3.2.8. Financing by public authorities

As shown by the EMWIS sustainability study carried-out during the first phase of EMWIS, **funding by public authorities is absolutely necessary** for its future activities. Indeed EMWIS is an important political and technical tool for the Euro-Med Partnership in the Water sector and merchant services or private sponsoring cannot provide substantial contribution at this phase. However the development of merchant services should be technically possible in the future.

3.2.9. Technical Unit's assignment

During the first phase (1999-2002), the main assignment of the technical unit was to define and develop the foundations of the system, to provide technical recommendations to the NFPs and to train them to guarantee EMWIS development. The Technical Unit financing was supported by three countries of the European Union (Italy, France and Spain). The European Commission has financed the relations between the Technical Unit, the National Focal Points and the national administrations. All the financial resources are managed by the European Economic Interest Group –EEIG UT-SEMIDE- based in Sophia Antipolis on the Mediterranean border of France.

The commitment of the three member countries of the technical unit has been reaffirmed for this new EMWIS phase during the 6th EMWIS Steering Committee meeting (Rome, September 2002). At the same time, the EEIG is open to any new countries of the European Union interested to join it.

3.3. Stakeholder Analysis

In each country, the links with the water stakeholders are managed by the NFP who have been designated by the country Water Director for their know-how of the sector. They will be invited to participate in topical activities (analysis, fora and seminars) planned in the action plan.

In addition to the involvement of national stakeholders, close relations will be maintained with the relevant international initiatives identified during the phase I of EMWIS. Agreements will be signed with these initiatives in order to plan common activities and develop synergies. The potential activities and the identified initiatives are presented in the action plan.

STAKEHOLDER ANALYSIS				
Stakeholder	Numbers /Geographical Location	Characteristics	Interests and Expectations	Potential and Deficiencies
NFP in MPC	12		Taylored support to organise and develop their National system Support to enhance the interest of national stakeholders	
NFP in EU	8		Upgrade the existing systems with emerging Internet technologies	
EU countries without NFP	7		Implementation of EU water directive: sharing knowledge Integration of innovative Internet technologies	Some lack of direct interest in the Mediterranean area Conflict of interest with existing national initiatives
International initiatives	World wide		Promotion of their work Support for dissemination Global water information systems harmonisation Information sharing Transfer of know-how	
MEDA-Water community	EU MPC		Dissemination of project results Collaboration among the community	
National information providers	In each country with a NFP	Libraries Governmental agencies Universities	Promotion of their information Quality labelling	Reluctant to give a direct access to their information
End-users Institutions *	EU + MPC		Access to pertinent information: water legislation in other countries, good practice studies, innovative technologies	
Private sector *	EU + MPC		Access to pertinent information: water legislation, contacts in governmental bodies, call for tenders, opportunities for Public-Private partnership, quantitative data	
Universities / research institutes *	EU + MPC		Access to pertinent information to carry-out their research: results from R&D projects, grey literature	
Students *	EU + MPC		Access to pertinent information to carry-out their research, information on training and job opportunities, contacts in other countries	
Professionals *	EU + MPC		They require information for their daily work such as up-to-date legislation, contact persons from government bodies, innovative technologies, call for tenders	
General public *	EU + MPC		Access to pertinent information about legislation, contact persons from government bodies, awareness about water resources and better use of them	

* Each target group of end-users has specific needs with regards to water information. The table below presents an overview of pertinent information for the various target user-groups.

End-user groups	water legislation	call tenders/ proposals	grey literature	Best practices	Innovative technologies	Training	Quantitative data
Institutions	X						
Private sector	X	X			X		X
Universities			X				X
Students						X	
Professionals		X			X	X	
General Public	X						X

4. Intervention logic

4.1. Objectives

EMWIS is a result of the Barcelona process; its overall objective is to increase the cooperation between the Euro-Mediterranean countries in the water sector. More specifically, it aims:

- To facilitate access to the information existing on know-how in the water sector
- To develop the sharing of useful information
- To prepare common outputs and promote the necessary co-operation programmes

4.2. Strategy Analysis

EMWIS addresses the identified need of Mediterranean Partner Countries for exchange and dissemination of information in order to improve sustainable local water management. To achieve this, EMWIS will provide the appropriate technical support, capacity building and awareness.

As a distributed system, EMWIS relies on the effective operation of its National Focal Points. Most of the efforts of this second phase will be dedicated to strengthen the capacity of NFP (to provide adequate information to the national stakeholders and disseminate results and good practices from other countries) and to the appropriation of the system at the national level in order to ensure its long-term sustainability (coordination with political structures, reinforcement of NFP, technical upgrade of the system, and expansion of services). At the same time it is necessary to develop the use of the system by the Euro-Med community. This will be achieved by the development of content (e.g. topical activities), the operation of existing services, promotional activities and the dissemination of the MEDA-Water results.

Finally, cooperation with international initiatives related to water information will be fostered to avoid duplication and to develop synergies (e.g. definition of common protocols for exchanging water information).

4.3. Detailed description of activities

4.3.1. Co-ordination with political structures and project management

The goal of co-ordination with the political national and international structures is mainly to maintain a high degree of co-operation between the Euro-Med countries in the water sector, to encourage EU countries to take part in EMWIS activities, to liaise with the EC headquarters, Delegations and water facilitators, and to establish strategic alliances (e.g. with international initiatives working on similar issues, first regional then international).

4.3.1.1. Supporting EMWIS Steering Committee

The Technical Unit will act as a permanent secretariat for the Steering Committee and its President. This Committee, and in particular its President, has the direct responsibility of EMWIS external/foreign relations.

During this 2nd phase, it is planned to organise at least a meeting of the Steering Committee every year. This committee includes today the water directors of 9 countries of the Partnership, the organisations supporting the Technical Unit (observer members) and a non-voting observer of the European Commission.

In order to give an opportunity to all the MPC to take part in the Steering Committee and thus reinforcing their high-level commitment, during its first meeting, the Steering Committee will decide on members renewing rules. This will ensure

that this Committee will comprise both permanent members (i.e. those funding the Technical Unit) and rotating members (e.g. renewing 3 members every two years).

The Water Directors of the Partnership will be informed on the conclusions of these meeting and thus will have the opportunity to react directly to the President of the EMWIS Steering Committee.

4.3.1.2. Supervising Board of the Technical Unit

In addition to the Steering Committee meeting, co-ordination between political and technical levels will be ensured through quarterly meetings of a supervising Board. This Board will include the sponsor organisations (i.e. Technical Unit's organisations and European Commission as an observer member), the President of the Steering Committee and the honorary President of the Steering Committee.

The structure and organisation of the Technical Unit is being revised in order to carry out its activities with more efficiency and responsibility. Therefore the first meeting will lead to the adoption of new management procedures, internal rules and the formalisation of the relationship between the various entities of EMWIS (Steering Committee, Technical Unit, Coordination Committee, and Supervising Board).

4.3.1.3. Coordination Committee seminars

The Coordination Committee involves the coordinators of all the NFP. It will meet once a year for progress reviews, defining new services, prioritising developments, and review of the annual action plan. In order to foster the cooperation between the NFP and the MEDA-Water facilitators, at least one joint meeting will be organised (this will be defined with the MW-RMS).

4.3.1.4. Euro-MED conference of Water Directors

The organization of a conference involving the 27 Water Directors during the 3-year period is also necessary to maintain a high level of political commitment as well as assess the results achieved and initiates additional cooperation.

4.3.1.5. Project administration

This task is related to the daily management of the Technical Unit as well as the six monthly reporting to the European Commission. Regular contacts will be maintained with the European Commission, the partner countries and the main international initiatives (specific meetings, participation in events)

4.3.2. Reinforcement of the NFPs

The objective is to foster the development and to sustain the activities of National Focal Points in each country of the Partnership and to coordinate their activities to make possible (when decided by a NFP) a seamless access to the national water information (i.e. interoperability of national services).

This activity will include both generic support and training provided to all the NFP as well as tailored support focused on the individual needs and requirements of each MPC.

4.3.2.1. NFP training seminars

Four seminars are planned over the project period to train NFP staff members (data manager and IT experts) on common technical issues (detailed contents management, technological solutions and exchange formats such as XML) and to define common format and protocol for information exchanges. During the first phase, a first set of issues have already been identified for further training:

- On information and communication technologies:
 - o Internet security
 - o XML for web management
 - o Common web enabled agenda and news
- On content management:
 - o Usability
 - o Common format for exchanging or cataloguing information
 - o Definition and validation of multilingual thesaurus and key-words for EMWIS applications

A detailed programme of the training seminars will be defined each year.

4.3.2.2. Review of national needs and requirements

The awareness created by the first phase of EMWIS in the Mediterranean Partner Countries has revealed new needs and requirements to this effect. In addition it has become evident that, the sustainability of the system would be better achieved if EMWIS primarily addresses relevant national needs related to everyday water information management parallel to the foundation objectives of regional co-operation, communication and dissemination of public information. Most probably, these needs will vary among the EMWIS partner countries, and thus may result in different organisational and technical frameworks. The challenge of EMWIS will be to respond to these national requirements while maintaining the possibility to establish the international exchange of selected parcels of information defined by the partners themselves.

For each MPC, an independent analysis of national needs and requirements will be carried out and will result in a detailed report, a set of technical, financial and organisational recommendations and a roadmap for the operation of the NFP. The main focus of these reviews that will be conducted during the first year, will be on:

- Existing and planned water information systems
- Collaboration with information providers
- Knowledge of end-users
- Organisation of the NFP and its information system, including specific needs for training or assistance

On request of a NFP, this activity could be extended to a wider area to cover the whole spectrum of a NWIS. The concept of National Water Information System has two major: components quantitative data, including geographical information (rainfall, consumption, dams, etc.) and textual information (documents, contracts, directories, studies, etc.). The level of confidentiality of the information processed by a NWIS is usually rather high; this leads to the development of intranets with access restricted to a limited number of organisations and persons. Nevertheless, the development of such intranets is important for EMWIS as it will foster the ownership of the System and its sustainability in the country while, at the same time, more content will be available in electronic format for potential publication on the public side of EMWIS.

On this basis, the NFP will then have the opportunity to prepare an action plan with priority and its related budget. When required the Technical Unit will assist the NFP in the preparation of a fund rising application.

4.3.2.3. Ad-hoc technical support to NFP

On the basis of the results of the national review of needs, technical support will be provided to MPCs. This support will be a compromise between EMWIS resources available for this activity and the NFP needs identified. This will be achieved through:

- Technical support assignments (e.g. JAVA programming);

- Field monitoring and organisational support assignments (e.g. for the preparation of a fund raising application);
- Technical visits between NFPs to foster the sharing of experiences.

A hotline will be operated by the Technical Unit to support the day-to-day activity of the NFP using email, Internet conferencing, instant messaging and phone.

4.3.2.4. Development of good practices examples

To improve the operation of the NFP, it is planned to develop four examples of "good practice" related to NFP activities that will be presented and discussed during the seminars of the coordination committee. As a result of this exercise, the good practice will be consolidated and used for further presentations at various events or for the creation of new NFP.

4.3.2.5. Management of financial support to NFP

The management of the allocation of direct aids to the NFPs of MPCs on the basis of procedures vetted by the European Commission.

- For the MPCs, coverage of part of the investment costs related to the purchase of the hardware and software recommended by EMWIS (10 000 Euros maximum for each NFP over a 3-year period);
- Coverage of expenses for translating the access interface and part of the national website content in one of the two EMWIS working languages (English or French) - cost estimated at 8 000 Euros for each NFP);
- Support for the operating costs of each NFP regarding its Euro-Med co-operation activities and the promotion of the system at the national level (estimated at 30% of the NFP's operating costs with a maximum of 10 000 Euros per year).

This task will start with the definition and signature of formal agreement between the Technical Unit and the organization managing the NFP. The progress of the NFP activities under this agreement will be monitored on a yearly basis and reported to the European Commission.

4.3.3. Expansion and development of services

4.3.3.1. Introducing the Arabic language into the system

Arabic speaking persons represent a wide community in EMWIS partner countries (Arabic is the official language in 8 EMWIS partner countries). Arabic will become an access language to the system as French and English today. Content will progressively be developed (i.e. information produced by the International Focal Point) and specific tools implemented as far as possible alongside the latest research efforts for similar products (automatic translations, etc.).

4.3.3.2. Definition and set-up of new services

A non-exhaustive list of services has been identified during the phase I, some of them already exist on the market (cf. EMWIS sustainability study) while other are missing or not targeted to the needs of the Euro-Med water community. The first step will be to identify and categorise the services already available on the Internet (coverage, possibility to integrate Euro-Mediterranean area, etc.) and to specify the functionalities of the missing ones as well as the resources necessary to run them. For the new services, this work will be completed by an a-priori analysis of their value as compared to implementation costs.

When the services already exist on the Internet and are of interest for Euro-Med water community, the related links will be added on EMWIS. The new services will be set-up on the basis of available EMWIS resources. The analysis and developments will have to provide an opportunity of including merchant services (for future potential exploitation).

Potential services already identified are listed below:

- Supplier directory and catalogue of products and services
- Tendering
- Provision of thematic maps
- Intelligent Frequently Asked Questions (with automatic transfer to competent specialists depending on the request topic)
- Electronic training
- Forum on software with option to download programmes
- Job offers
- Advertising
- Bibliographical research
- Press review
- Sworn translation service (for legal texts for instance)
- Webcasting and multimedia event archiving service
- Warning system
- Observatory of new technologies applied to the water sector
- Follow-up of European Water Policy

4.3.3.3. Development and set-up of a meta-crawler

As most of the relevant water information identified during the first phase of EMWIS is today available on the web, it makes sense of setting up a meta-crawler specialised on water issues. This will allow the semi-automatic classification of the information sources available on the web, simultaneous searches on several websites selected by the user (e.g. all NFP's websites) and alert system to be informed on selected web site or pages updates.

As far as possible the NFP will be advised to work with Public Relation offices of the Ministries in charge of water in their country to publish their press releases in a systematic way (c.f. Algerian NFP at www.semide-dz.org)

4.3.3.4. Synchronizing calendars of events

The calendars of events are among the most visited sections of EMWIS web sites. In order to aggregate the information provided by the national sites in seamless way, it is planned to set-up an automatic synchronization mechanism of the national diaries on events. The technology foreseen is based on the definition of an XML schema and a set of management and interactive consultation tools.

4.3.4. ICT architecture review and upgrade of the existing system

A more ambitious technical architecture will be necessary to improve the co-operation within and among different national water information systems and to ensure an efficient exchange of versatile information as intended by a specific country. Therefore, the development of a more distributed architecture is foreseen based on standardised but flexible formats of information (using the eXtensible Markup Language to define them) in conformity with the concept of web-based services rather than on recommendations of specific technological solutions. In addition, it is expected that the introduction of these new technologies combined with the definition of a so-called markup language dedicated to water (e.g. WaterML or WaterTalk) could attract more interest from Northern EU countries.

4.3.4.1. Translating user needs and requirements into technical specifications

User needs and requirements will be mainly express at the following levels, with a special attention paid to the information flows:

- MEDA-Water dissemination facilities
- National needs (integration of different systems, use of the same content for several websites, etc.)
- Operation of EMWIS services
- Information providers
- Collaboration with international initiatives (e.g. publication of Med-Hycos information)
- Localisation/translation of EMWIS online services

As some of the national needs may only be expressed at the end of year and in order to set up the facilities necessary for the MEDA-Water programme with the upgraded technical architecture, the technical specifications will be prepared in two phases: first draft technical specifications (including content management and groupware facilities) and secondly the final technical specifications.

4.3.4.2. Review of the technical architecture and migration roadmap

On the basis of the technical specifications, an overall technical architecture will be proposed together with a migration roadmap from the existing architecture to the new one. The architecture will be based on recognised Internet standards rather than on specific technological solutions.

4.3.4.3. Progressive deployment

The new architecture will be progressively developed, tested and validated with the NFP before its full deployment among all the NFPs. The first services to be set-up on the new technical architecture will be dedicated to the dissemination of MEDA-Water projects.

4.3.5. Directing and operating Euro-Med information services

It mainly concerns the maintaining and improvement of the services currently offered by EMWIS according to the latest news in the water sector and ICT developments.

4.3.5.1. Updating and upgrading EMWIS websites

Several sections, now available, require continuous updating: event diary, references on legislation in the Euro-Med area, useful links, Euro-Med information on water, electronic forums.

In addition, the website design will be revised according to the main technological developments (pages interactivity, separation of content and presentation, dynamic pages) and lessons learned in surveys carried out with the users (planned at the end of EMWIS phase 1) to facilitate access to the services.

Topical electronic forums will be opened and led by specialists according to the users' field of interest and to the availability of experts. As far as possible, the forum will include indicators of the users' satisfaction (e.g. response delays, relevancy of the reply). They will be based on a common operation charter.

4.3.5.2. Exploitation of the thematic directory

The exploitation of the thematic directory on water will include:

- A campaign to update existing records and to collect complementary information
- Implementation of a protocol for quality control of available information
- Defining sub-topics to enable better-detailed searches
- Adding new fields, especially to integrate the MEDA-Water component (e.g. projects)

An open exchange format, based on recognized Internet standards, will be implemented to allow the interchange of information between heterogeneous software environments.

4.3.5.3. Multilingual access

As regards with multilingual information processing, three main activities will be carried out:

- Ensuring that each NFP will provide web access in the two or three EMWIS working languages (i.e. Arabic, English and French). This will be part of the financial agreement between the Technical Unit and the NFP).
- Developing web access in Arabic language on the International Focal Point. This will imply the translation and localization (e.g. page lay-out) of all the navigation tools, search and updating forms as well as a set of basic content about EMWIS. A working group of EMWIS NFP will be created to select the most suitable tools and validate the translations.
- Finally, the multilingual water dictionary (being implemented during the EMWIS phase I) will be completed to cover at least 4 languages and to provide search facilities from Arabic, English and French to information available in other languages. The architecture of the dictionary and its management tools will allow the simple addition of other languages that could be developed by the NFP.

4.3.6. Fostering the promotion of the system

An initial momentum has been already achieved during the phase 1 of EMWIS but further activities are required to maintain and expand it.

4.3.6.1. Promotional plan

At the early beginning of the second phase, a promotional plan, distinguishing the Technical Unit activities from those of the NFPs, will be defined. It will identify the main interesting media (events, press, search engines, news-groups) associated with target groups and will outline the promotional activities:

- Electronic marketing (referencing, bilingual newsletter, surveys, etc.)
- Developing promotional media (newsletter, multimedia presentation, etc.)
- Taking part in national and international events
- Introducing through audio-visual media
- Preparation of press releases and articles for the specialist press

4.3.6.2. Electronic marketing

The electronic marketing will be carried out on regular basis, it will include:

- The publication and broadcast of an electronic EMWIS newsletter (to about 1500 email addresses)
- Referencing in major search engines (refreshed every six months)
- An annual online survey of users satisfaction

4.3.6.3. Development of promotional material

To complement the online marketing and on the basis of the conclusions of the promotional plan a set of additional material will be prepared and disseminated:

- 4 pages annual EMWIS bulletin to inform decision makers on EMWIS progress
- A video-tape for TV shows and exhibitions
- Posters and flyers

4.3.6.4. Press releases

The major EMWIS events (Steering Committee meetings, topical events, Euro-Med Water Directors conference) will be supported by press releases sent to the general public and the water related media.

4.3.6.5. Participation in national and international events

EMWIS representatives will promote the system and its approach at “non-EMWIS” events identified in the promotion plan. One of the major water events in the coming year will be 3rd World Water Forum to be held in Kyoto in March 2003. During the Water Information days, it is planned to organise a session to present EMWIS as a good practice case study (Sharing knowledge in the water sector, a starting point for broader collaboration) that could be implemented in other region of the world.

4.3.7. Development of topical activities (analyses, summaries and events)

This involves the development of activities related to specific topics. Each topic will lead to:

- The opening of a specialised electronic forum
- The undertaking of a specialised study which will be available to the forum members
- The organisation of a dedicated session during an annual EMWIS conference with two proposes: dissemination and capacity building of the water stakeholders

As a working basis, two or three topics might be dealt with each year, selected among the areas of actions and the four horizontal themes of the Turin Action Plan as well as among themes identified by EMWIS community during the first phase:

- Areas of Action (Turin Action Plan)
 - Integrated management of local drinking water supply, sanitation and sewage;
 - Local water resources and water demand management (quantity and quality) within catchment's areas and islands;
 - Prevention and mitigation of the negative effects of drought and equitable management of water scarcity;
 - Irrigation water management;
 - Use of non-conventional water resources;
 - Preparation of national and local scenarios for the period until 2025 that enable precise objectives to be set and actions to be taken for sustainable water management.
- Horizontal Themes (Turin Action Plan)
 - Strengthening institutional capacities and training;
 - Exchange of information and know-how;
 - Transfer of know-how and technology;
 - Awareness raising, mobilisation and promotion of commitment of the population.
- Additional themes suggested:
 - Legal analysis and promoting rules of sustainable water management;
 - Promoting the concept of water as a natural resource into the environment;
 - Water and economics;
 - Local management of river basin (presentation of case studies in collaboration with the Mediterranean Network of Basin Organisations –MENBO)

The list of topics will be defined in concertation with NFPs and with the organization in charge of the monitoring of the MEDA-Water programme. A specific attention will be paid to the presentation of projects funded by the MEDA-Water programme during these events.

4.3.7.1. Topical studies and electronic forum

External experts will be assigned to undertake the specific studies, moderate the related electronic forum and act as rapporteur in the event that will be organised. As far as possible all experts will be selected during the first six months of the project and the forums will be open and will be maintained during the overall period of the project.

The selection of the topics that will be presented at the annual conference will be defined at the beginning of each year according to material already available and the foreseen results of the implemented MEDA-Water projects.

4.3.7.2. Organisation of an annual EMWIS conference

At the end of each year a two days event will be organised around the most developed themes during the year. As far as possible, we will try to establish synergies for joint organisation of these conferences together with other MEDA-Water events.

4.3.8. Dissemination of MEDA-Water information

EMWIS and its NFP offer an operational infrastructure to support the publication and the dissemination of the results of the projects funded under the MEDA-Water programme, to exchange best practices and to foster transfer of know-how. It may be the main vector for disseminating information and dialoguing with all the stakeholders concerned. Relevant information on this potential support has been included in the 'Guidelines for Applicants' for the last call for proposal of the MEDA-Water programme.

In addition, close cooperation will be established with the organisation in charge of the regional monitoring and support to the MEDA-Water programme (MW-RMS).

The main documents related to MEDA-Water will be available to the NFPs for local dissemination and a presentation of the programme will be included in the events organised by EMWIS. The table below is presenting the information exchanges between the various entities involved in the MEDA-Water programme.

The figure 2 below shows the links between, EMWIS and the different bodies involved in the MEDA-water programme. In order to foster cooperation and coordination with the Water Facilitators, guidelines for active cooperation will be jointly prepared with the MW-RMS and proposed to the EMWIS NFP and the existing Water Facilitators. It will be stressed that the NFP and the water facilitator should preferably be the same person or should work together on a daily basis.

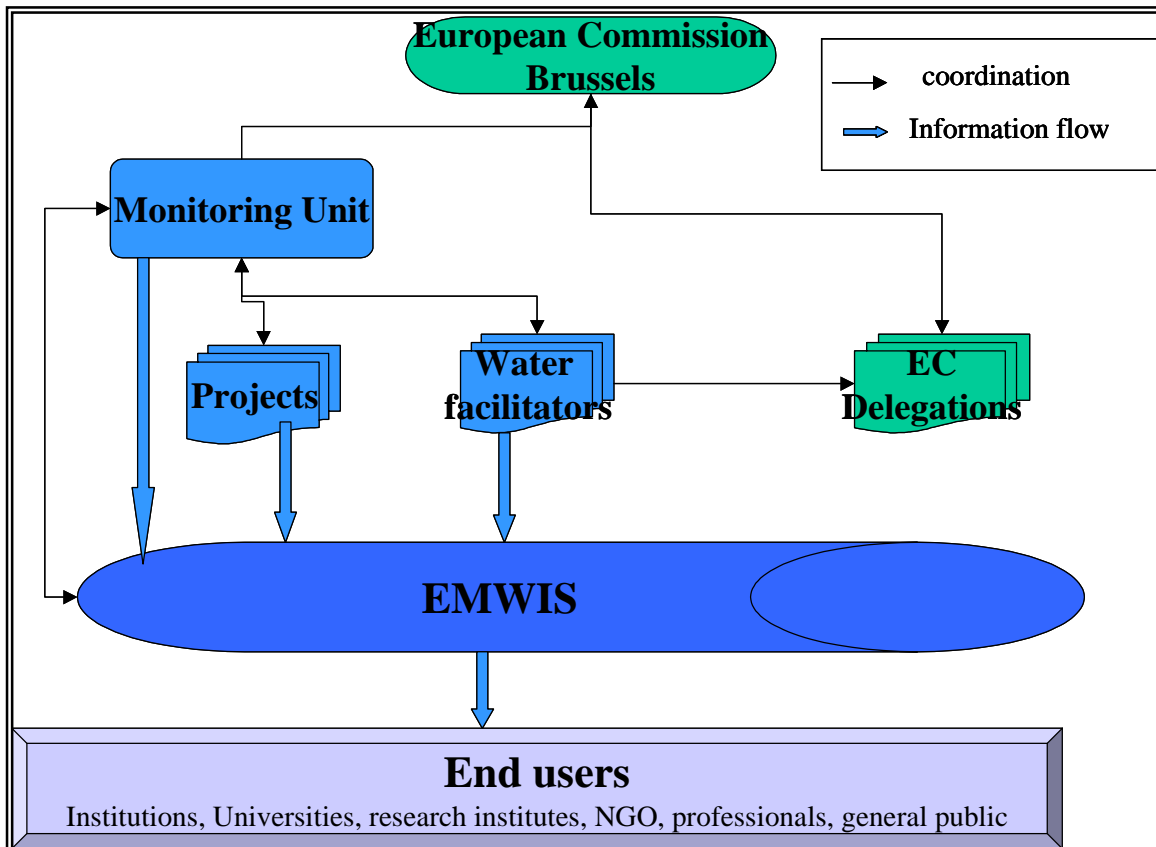


Fig 2. Relationships between EMWIS and the MEDA-Water stakeholders

4.3.8.1. Requirements and technical specifications

The definition of a specialised MEDA-Water within EMWIS will be defined together with the MW-RMS team and validated by the European Commission, relying on existing resources. This window could include the following:

- A MEDA-Water section in EMWIS electronic newsletter
- Consultation statistics
- Diary of MEDA-Water events (Commission, MW-RMS, funded projects)
- Electronic mailing list
- Forum on administrative issues (moderated by MW-RMS for example)
- Publishing of invitations to tender and the relevant official texts
- Publishing of public outputs of funded projects
- Questions/answers forum
- Tool for looking for partners: responsibilities, ideas for projects (entered in the on-line database by the users)

- Who's Who and project presentation sheets (linked to the topical directory)

4.3.8.2. Creation of dedicated web space and tools

On the basis of the technical specifications, a dedicated web section will be created on EMWIS web site.

4.3.8.3. Maintenance and joint operation of the related services

Once the MEDA-Water web section has been launched, the services will be operated jointly with the MW-RMS team. A provisional allocation of responsibilities is shown below:

Tasks	Responsibility
Design and technical maintenance (webmaster)	EMWIS Technical Unit
Nomination of information officers within MEDA-Water projects	MW-RMS
Information collection from projects	MW-RMS
MEDA-Water articles for the EMWIS electronic Newsletter	MW-RMS
Publication of projects outputs	Projects information officers (self-publishing facilities will be available)
Moderation of forums	MW-RMS
Who's who and project fact sheet	EMWIS Technical Unit
Consultation statistics	EMWIS Technical Unit
Diary of MEDA-Water events	ALL

4.3.8.4. Coordination with the MW-RMS

In order to ensure a sufficient level of coordination between EMWIS Technical Unit and the MW-RMS team, monthly meetings will be organised alternately in their respective premises. A representative of EMWIS Technical Unit will also take part in workshop and conferences organised by the MW-RMS to present EMWIS information tools and in particular the MEDA-Water dissemination tools.

4.3.9. Liaison with international initiatives

The contacts already made with international initiatives will go on to co-ordinate activities and prepare agreement protocols whenever possible. The main initiatives already identified are: the Mediterranean Water Institute (IME), the Global Water Partnership, the Mediterranean Action Plan, WaterNet project, International Network of Basin Organisation (INBO), the World Water Council (including the World Water Forum), the European Environment Agency, the MEDSTAT project, Med-Hycos project and UNESCO (World water portal).

Today a collaboration agreement has already been signed with the INBO and a draft one has been prepared with the Mediterranean Water Institute (IME).

4.3.9.1. Review of International initiatives in the Mediterranean area

The objective of this study will be twofold:

- Short description of International initiatives relevant for EMWIS and proposal of practical collaboration paths.
- Identification and description of the various initiatives at the level of the MPC supported by bilateral or multilateral agreements in order to avoid duplications and to try to rationalise and combine relevant investments in the region.

4.3.9.2. Preparation of agreements

On the basis of this study results, contacts will be established and as far as possible bilateral agreements will be prepared with the most significant International initiatives.

4.3.9.3. Set-up and operation of common tools

When necessary and according to the resource available on both sides, joint information tools will be set-up and operated.

4.3.9.4. WaterML initiative

The development of a XML vocabulary dedicated to the water sector as been pointed out during the first phase of EMWIS both by the independent technical evaluators mandated by the EC and by the NFPs. Such initiative requires the involvement of the international water community. Therefore the objective here is to prepare the launch of such initiative by organising two workshops with the major international initiatives to define in more details the WaterML concepts and an implementation plan.

5. External factors

5.1. Assumptions at Different Levels

5.1.1. At the level of each country

EMWIS relies on the set-up and operation of NFP with adequate means: dedicated skilled staff, equipment and annual budget. The political commitment of the countries involved must be translated into effective work-plans with related budget. The Technical Unit provides significant support to:

- Train NFP staff members (but as a prerequisite we assume that they already have a minimum level of skills)
- Limit the investment necessary (e.g. hosting web sites and other services)

In the second phase, much effort will be put on the development of national added value, by making the system responding to national needs and requirements of the MPC and by introducing state of the art and emerging Internet technologies for the EU countries.

The support to the MPC for designing national systems tailored to their needs and requirements (and therefore leading to a better long term sustainability) is based on the assumption that the NFP will help the experts mandated by EMWIS to fully analyse the existing and planned water information systems (even those not managed by them) as well as meeting with the key representatives of end users.

5.1.2. At the level of the Technical Unit

A key assumption here is that qualified staff will be found soon after the signature of the contract. But temporary solutions can be set-up with the support of the organisations members of the Technical Unit and some NFP for the support of the Arabic language. The same assumption applies for the availability of external short-term expert at reasonable prices.

The membership of a new country to the EMWIS Technical Unit will be based on the same modalities as for the existing three members. The activity work plan will then be reviewed taking into account the new resources available.

5.1.3. At the level of MEDA-Water programme

It is assumed that effective collaboration will be formalised between the EMWIS Technical Unit and the MW-MRSU on one hand and between the EMWIS NFP and the MEDA-Water Facilitators on the other hand. It is also expected that the projects funded will regularly provide quality information for dissemination.

Key indicators here are the signature of agreements (models will be proposed jointly by the EMWIS and the MW-RMS for the NFP and water-facilitators) and the effective information flows between the various organisations.

Some provisional resources have been reserved for this activity (action line N°8 of the action plan): i.e. specification and design, creation of web services and operation of services. The requirements of the MW-MRSU and the MEDA-Water projects may involve additional set-up and running costs (e.g. dedicated server or additional bandwidth), in this case the Commission will be informed in order to find-out a proper solution.

5.2. Risks and Flexibility

EMWIS is a regional cooperation initiative of the Euro-Med partnership involving the 12 MPC even those who are involved in the Middle East conflict. Therefore any deterioration in the conflict may impact the work plan. The negative impact of the conflict has already been noticed during the first phase with enormous travelling difficulties (linked to significant additional costs) for the Palestinian representatives, a lower development of the Palestinian web site, travelling difficulties for the Syrian representatives and lower priority for the Israeli authorities.

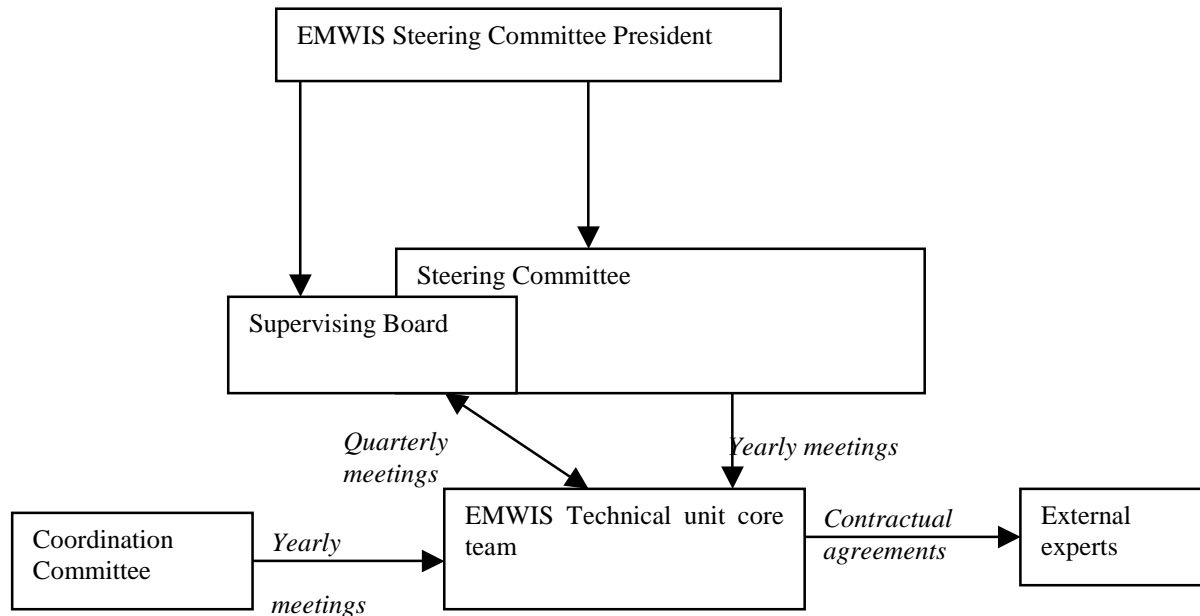
In order to limit the effect of the conflict, the Steering Committee can decide on the organisation of tailored training or support for the country concerned.

The main indicator to illustrate the evolution of the conflict impact on EMWIS is the participation of the NFP concerned in the meeting organised by the Technical Unit.

6. Implementation

6.1. Methodology and Implementation Set-up

The organisational chart below presents the management structure that will be used to improve the efficiency in service



delivery and the clarity of responsibilities. The core team of EMWIS Technical Unit (composed of permanent technical staff members –see below- and an administrative assistant) will implement the work-programme with the support, when necessary, of external experts (Technical assistance assignments). The Technical Unit will report to the Supervising Board through out quarterly coordination meetings. This Board will be composed of representatives of the organisation members of the EEIG (called supervisors), the President and the honorary President of the EMWIS Steering Committee, and a non-voting observer member from the EC.

The Steering Committee is composed of the Water General Directors of 9 countries plus a non-voting observer member from the EC. The Coordination Committee is composed of the coordinators of all the NFP.

In addition, half-yearly progress reports will be delivered to the EC, including the relevant indicators of the logical framework matrix.

Financial and accounting control are carried out for the Annual General Meeting of the EEIG by a certified auditing company while an analytical accounting system is maintained by a professional accountant on a monthly basis.

6.2. Project Duration

The duration of the project will be 36 months.

6.3. Action Plan

ID	WBS	Task Name	1st Half		2nd Half		1st Half		2nd Half		1st Half		2nd Half		1st H	
			Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1	1	Co-ordination with political structures & project management														
2	1.1	Supporting the Steering Committee														
6	1.2	Technical Unit coordination														
19	1.3	Coordination Committee seminars														
23	1.4	Euro-Med conference of Water Directors														
24	1.5	Operation of the Technical Unit and project administration														
31	2	Reinforcement of NFP														
32	2.1	NFP training seminars														
36	2.2	Review of national needs and requirements														
37	2.3	Ad-hoc technical support to NFP														
38	2.4	Development of good practice examples														
43	2.5	Managing financial support to the NFP (MPC only)														
49	3	Expansion and development of services														
50	3.1	Introducing the Arabic language into the System														
51	3.2	Definition and set-up of new services														
52	3.3	Definition and set-up of a meta-crawler														
53	3.4	Syncronising calendar of events														
54	4	ICT architecture review and upgrade of the existing system														
55	4.1	Translating user needs and requirements into technical specification														
56	4.2	Review of the technical architecture and migration roadmap														
57	4.3	Progressive deployment														
58	5	Directing and operating Euro-Med water information services														
59	5.1	Updating and upgrading EMWIS websites														
60	5.2	Exploitation of the thematic directory														
61	5.3	Multilingual access														
62	6	Fostering the promotion of the system														
63	6.1	Promotional plan														
64	6.2	Electronic marketing														
65	6.3	Development of promotional material														
69	6.4	Press releases														
73	6.5	Participation in national and international events														
74	6.5.1	EMWIS session WWF3, Osaka - Kyoto														
75	6.5.2	Participation to other identified events														
76	7	Development of topical activities														
77	7.1	Topical studies and forum animation														
84	7.2	Organisation of an annual EMWIS conference														
88	8	Dissemination of MEDA-Water information														
89	8.1	Requirements and technical specifications														
90	8.2	Creation of dedicated web space and tools														
91	8.3	Maintenance and joint operation of the related services														
92	8.4	Coordination with the Monitoring Team (MW-RMS)														
93	9	Liaison with international initiatives														
94	9.1	Review of International initiatives in the Mediterranean area														
95	9.2	Preparation of Agreements														
96	9.3	Set-up and operation of common tools														
97	9.4	WaterML initiative														

6.4. Supervision, Monitoring and Evaluation

The internal supervision and monitoring of the project will be ensured at several levels using technical and financial reports as well the logical framework matrix with the associated indicators:

- Quarterly meeting of the supervision board reviewing program progress and plans
- Six monthly reports to the European Commission (technical and financial) together with requests of advanced payments of the maximum 80% of the budget necessary for the next 12 months. Similar requests for advanced payment will be addressed to the organisations member of the Technical Unit.
- Annual review of the programme implementation and budget by the Steering Committee members and definition of annual work plans and associated budget

LIST OF ANNEXES

Annex A - Glossary

ABHCSM	Agence de Bassin Hydrographique : Constantinois - Seybousse - Mellegue
AGM	Annual General Assembly
AMINAL	Afdeling Europa en Milieu (<i>Belgium</i>)
C.E.	Commission Européenne (<i>French</i>)
CEDEX	Centro de Estudios y Experimentación de Obras Públicas (<i>Spain</i>)
DSI	Directorate General of State Hydraulic Works
E.C.	European Commission
E.U.	European Union
EEIG	European Economic Interest Group
EMWIS	Euro-Mediterranean Information System on the know-how in the Water Sector
EWRB	European Water Regulation Bank
FAQ	Frequently Asked Questions
GEIE	Groupeement Européen d'Intérêt Economique (<i>in French</i>)
GIS	Geographic Information System
GWP	Global Water Partnership
HIS	Hydrological Service of Israel
HISPAGUA	Spanish National Information System on Water
I.T.	Information Technologies (computing, networking, telephony, etc.)
IFP	International Focal Point
IIS	Internet Information Server (<i>Microsoft</i>)
IME	Institut Méditerranéen de l'Eau
INAG	Instituto de Agua (<i>Portugal</i>)
IS	Information System
ISO	International System
LAN	Local Area Network
MPC	The 12 Mediterranean Partner Countries of the Barcelona process
MWI	Mediterranean Water Institute (IME in French)
MW-RMS	MEDA-Water Regional Monitoring and Support
MWRI	Ministry of Water Resources and Irrigation
NFP	EMWIS National Focal Point
NGO	Non-Governmental Organisation
NWIS	National Water Information System
OIEau	Office International de l'Eau (<i>in French</i>)
PFN	Point Focal National du SEMIDE (<i>in French</i>)
PWA	Palestinian Water Authority
RTD	Research and Technological Development
S.C.	EMWIS Steering Committee
SAWINET	Southern Africa Water Information Network
SEMIDE	Système Euro-Méditerranéen d'Information sur les savoir-faire dans le Domaine de l'Eau (<i>in French</i>)
SOGESID	Societa Gestione Impianti Idrici (<i>Italy</i>)
T.U.	EMWIS Technical Unit (<i>in Sophia Antipolis, France</i>)
ToRs	Terms of Reference
U.T.	Unité Technique du SEMIDE (<i>à Sophia Antipolis, France</i>)
UNICODE	UNIversal CODing off alphabets (very important for an international application)
WDD	Water Development Department
WSC	Water Services Cooperation
XML	eXtensible Markup Language: emerging standard for the new generation of the WWW

Annex B - Logical Framework, Problems, Objectives and Strategy Analysis

LOGICAL FRAMEWORK EMWIS Phase II 2003-2005

	Intervention logic	Objectively verifiable indicators of achievement	Sources and means of verification
Overall objectives	To increase the cooperation between the Euro-Mediterranean countries in local water management	Increased number of collaboration projects and programmes by 2010	
	To improve local water management		
Project purpose	Enhancing EMWIS operation / Sharing information on know-how	Creation of NFP Amount of information sources identified Access to information sources Operation of NFP websites	Number of NFP Amount of links, entries in the thematic directory Amount of indexed information sources Amount of visitors (statistics)
Expected results	1, Co-ordination with political structures	Meetings organised: 3 Steering Committee meetings; 3 Coordination Committee seminars; 1 meeting of the Euro-Med Water Directors	List of participants, agenda and conclusions
	2, Reinforcement of the NFPs	Creation and operation of NFP: 14 NFP websites online in 2003, 17 in 2004, 18 in 2005 NFP training seminars Review of national needs and requirements	List of participants, agenda and conclusions Report on each MPC
	3, Expansion and development of services	Launch of one new service per year Synchronised event calendar, updated 6 times a year Operation of a MetaCrawler	Statistics of use Statistics of use Statistics of use
	4, Technical review and upgrade of the existing system	Report on the upgrade of the technical architecture; Migration roadmap	
	5, Operation of Euro-Med water information services	Number of yearly updates of EMWIS website: 12 Yearly visits to EMWIS sites: 25000 Access to EMWIS website in Arabic Number of records in the thematic directory: 2000 organisations	Statistics of consultation Statistics of consultation % of pages with access in Arabic

LOGICAL FRAMEWORK EMWIS Phase II 2003-2005

	Intervention logic	Objectively verifiable indicators of achievement	Sources and means of verification
	6, Fostering the promotion of the system	Promotional plan Publication of 3 press releases per year Presentation of EMWIS at 2 events per year	Report Annual press book List of events
	7, Development of topical activities (analyses, summaries and events)	1 event organised per year Publication of 2 analysis per year	List of participants, agenda and conclusions Statistics on the consultation of the publications
	8, Support to the MEDA-Water Programme	Creation and operation of a MEDA-Water web pages: 6 updates per year	Statistics of consultation
	9, Liaison with international initiatives	Signature of 2 international agreements per year Organisation of 2 workshops	Text of the agreements