Euro

Mediterranean

(**W**ater)

Information

System on know-how in the water sector

HANDY GUIDE

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0 FOREWORD

A project like EMWIS requires a lot of paper. Among all these documents, the *EMWIS handbook* you have now is a unique issue: it is the first and last time that this paper will be officially issued. From now on, the only available (updated) versions will be on the Technical Unit's server (http://www.semide.org/).

This guide is currently divided into four parts, namely:

1 CONCLUSIONS OF THE PRELIMINARY STUDY (NAPLES PAPERS)

2 THE NATIONAL FOCAL POINTS SYSTEM

3 THE TECHNICAL UNIT SYSTEM

4 MORE INFORMATION ABOUT EMWIS

Its title (*Handy Guide*) reminds of its objective: to be a guide (its size is of no significance) for EMWIS people, adaptable to their needs, providing useful, contrasted and exact information.

The small *EMWIS handy guide* is not only a guide but also a memorandum of aspects that shall have to be dealt with in the near future. This is why some items are only indicated as a reminder.

Sophia Antipolis, on 01-12-1999

1 CONCLUSIONS OF THE PRELIMINARY STUDY (NAPLES PAPERS)[1]

1.1 Introduction

Water management requires the best possible knowledge of existing actors, programmes, techniques and methods used, available tools and documentation, results of research, training opportunities, etc...

The information available on the above only exists, at either international or national level, in a fragmented, dispersed and heterogeneous way.

Therefore it is necessary to make an effort to rationalize and make this information readable, easily accessible and available.

This is the reason why, during the Marseilles Euro-Mediterranean Conference on Water Management (November 1996), **the representatives of the 27 countries, signatories of the Barcelona Convention (November 1995) and the European Union and Commission decided to study the setting up of an information system that would facilitate access to information by using modern communication means and networking already existing systems.**

"Documentation", **"Training"**, **"Research-Development"**, **"Institutions"** and **"Data management** (tools and methods)"** were chosen as **priority topics of exchange** that could strengthen a Euro-Mediterranean dialogue, with other topics that should be later integrated into such a system.

During the Marseilles conference (November 1996), a **working group of 10 countries** (Algeria, Cyprus, Spain, France, Italy, Jordan, Malta, Morocco, United Kingdom, the

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[1] T. U. Note: This first chapter is a copy, with slight corrections or typographic modifications to the conclusions of EMWIS preliminary study, approved at the Euro-Mediterranean Conference of 27 General Directors for Water Management (Naples, 1997-12-09&10). The footnotes (Technical Unit Notes or T. U. Notes) are placed where necessary.

Palestinian Authority), **coordinated by France**, proposed to carry out a preliminary study that mainly aimed at studying the conditions for the setting up of this system, called **"EMWIS: Euro-Mediterranean Information System on the Know-how in the Water sector".**

This working group carried out its work from January 1997 to November 1997. It met in **Amman** (Jordan) in April 1997 and in **Valencia** (Spain), on October 1, 1997 and will present its conclusions in **Naples** (Italy) in December 1997 during a conference that will regroup the water managers and other main operators of the 27 countries that could be involved in the project.

This document presents the conclusions of the preliminary study. It includes:

- ♦ A presentation of EMWIS

- ♦ An analysis of the present situation;

- ♦ Proposal for the structure and development of EMWIS;

- ♦ Cost estimate for the implementation and financing during the first 3 years.

1.2 Presentation of EMWIS

1.2.1 EMWIS objectives

EMWIS is a tool for **cooperation between Euro-Mediterranean countries,** that aims to:

- ♦ **Facilitate access to existing information** on know-how in the water sector;

- ♦ **Develop the sharing of information** while permitting everyone to make known its responsibilities, activities, concerns and topics of interest...;

- ♦ **Elaborate common outputs and cooperation programmes** to develop available information and promote the collection of missing information.

Its setting up implies an **active participation** and **the sharing of information and experiences of the partner countries** involved in the system.

1.2.2 EMWIS Description

From a technical point of view, the definition that may be chosen is as follows:

EMWIS is

a <u>Euro-Mediterranean</u> system

of <u>shared</u> and <u>approved</u> information

on <u>know-how</u> in the water sector.

This definition comprises 4 significant concepts:

1. <u>A Euro-Mediterranean</u> information system:

Above all, EMWIS is concerned with the information available in the 27 countries, signatories of the Barcelona Convention: the 15 countries of the European Union and the 12 countries of the Mediterranean.

2. Information is <u>shared</u>:

The word **"shared"** means that:

⇒ **information is provided by the various countries or by international information sources that participate in the system;**

⇒ **information remains at the level of the providers and is not centralized** in a central data base.

3. Information is <u>approved:</u>

Only the information sources having been granted a "quality stamp" by EMWIS managers**, will be accessible through this system.** The information quality, updating and reliability will be guaranteed by each information source.

4. Information relative to "<u>know-how in the water sector</u>":

The term **"know-how in the water sector" is the main characteristic of EMWIS.** It means that:

⇒ **EMWIS is only giving access to information on <u>"know-how"</u>**, for instance:

  - **Institutions and experts** that intervene in the water sector;

- **Documentation** in the water sector;

- **Research and development programmes;**

- **Training** opportunities:

- **Methods and techniques used for water resources management;**

-....

⇒ EMWIS **does not manage data on water resources or on uses. It is not planned that EMWIS could contain data on:**

  - surface water quality (for instance: pH, conductivity, dissolved oxygen...);

- quantitative aspects (examples: river flow rates, aquifer piezometry...);

- withdrawals and uses (examples: list of water intake points, irrigated areas...);

- discharges (discharge locations, quality of discharged water...);

-.....

Therefore EMWIS is neither a data base on water resources nor a tool for water resources management.

⇒ Generally speaking, **EMWIS manages information** and not data.

1.2.3 EMWIS status as regards the main international information programmes related to water in Europe and the Mediterranean

EMWIS, owing to its original approach towards "know-how" in the water sector, is complementary to many international actions that are carried out in the Euro-Mediterranean countries and that usually deal:

⇒ either with the management of data on water resources in particular (European Environmental Agency, MED-HYCOS[2]...);

⇒ or with a particular aspect of "know-how" (training, directories of local experts,...).

In order to develop a potential synergy, a **close collaboration with these international programmes is to be planned.**

1.2.4 Beneficiaries

EMWIS mainly **addresses public and private operators of the Water sector**: decision-makers and professionals (technicians, consulting firms, training centres, document draftsmen...).

However, as agreed at the Marseilles meeting "access to information made available through the system will be open to anyone who is interested in water management issues".

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[2] T. U. Note: MEDiterranean HYdrologic Cycle Observing System

1.3 Analysis of the present situation

1.3.1 Assessment of the situation of information search on Internet

Generally speaking, **access to information servers on Internet is nowadays the most used means for the search of information**. Navigating on the sites concerned with a given sector is a good work basis. The hypertext links often enable to discover other sites in the same sector of activity.

Discussion forums (News server via NNTP[3] protocol) offer an interactivity and a variety of subjects per topic: the forum is one of the keys for accessing to hidden information. Thus, navigating with the help of search engines is useful. Discussion forums are often access free.

The use of a Web navigator that integrates a client of electronic mail and forum management provides access to a considerable volume of information.

However, **the use of the above-mentioned services causes <u>quick disappointment,</u>** as:

⇒ **SOME SECTORS ARE STILL WEAKLY COVERED**

While computer science or finance are omnipresent on Internet, the number of WEB servers is much more limited on other topics, water in particular.

⇒ **ACCESS TO <u>USEFUL INFORMATION</u> REMAINS DIFFICULT**

The indexing made by standard search engines is not sufficiently intelligent and detailed for an in-depth search**. The results thus obtained are often disappointing, either due to the volume of poor information, or due to the lack of relevant sites**. The volume of poor information is such that it is usually necessary to resort to qualified staff to extract the really useful information.

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[3] T. U. Note: NNTP = Network News Transfer Protocol

⇒ **THERE IS NO QUALITY GUARANTEE ON THE INFORMATION THUS OBTAINED**

As Internet success is linked, for a large part, to its free access, either for consulting or dissemination, it is often difficult to assess information relevancy. In addition to the deliberate disinformation that is used in some sites as regards rival technologies, it is frequent to find Web sites whose information is not up-dated, or whose hypertext links lead to nothing (the link is not operational, the referenced page has disappeared...).

This is the reason why many, more or less, specialized services (financial and technical data, general news...) are, from now on, available on Internet, and, for a fee, offer better targeted contents than the public sites.

Having complete and good quality information available for the officers in charge of water policy and various operators, requires the use of a homogeneous and efficient institutional system: EMWIS

1.3.2 Analysis of expectations and available information per topic

During the Amman meeting (April 1997), the working group of the 10 countries decided to define EMWIS specifications, using thematic reflections in four fields which will be led by groups of partner countries that proposed themselves to do so.

4 thematic groups have thus been created:Table 1

Table 1 Topics and partners in thematic groups

TOPICS	Partners in thematic groups

TOPICS	Partners in thematic groups
1- Documentation	<u>France</u>* , Jordan, Morocco, Palestinian Authority
2- Training / research and development	Cyprus, <u>Italy</u>*, Malta
3- Institutions	Algeria, Cyprus, <u>Spain</u>*, Morocco
4- Data Management	Malta, <u>United Kingdom</u>*, Palestinian Authority

In liaison with **the International Office for Water,** each thematic group prepared questionnaires in order to mainly evaluate the expected information and the range of available information on each topic.

These questionnaires were sent to the other countries of the working group and to various specialized organizations. The replies obtained were summarized in reports presented in the appendices.

This chapter summarizes the orientations given by each group.

1.3.2.1 The "documentation" group

The replies sent by the 10 countries of the working group emphasize the following:

1. There is a strong interest for access to documentation on water in three main forms: global or aggregated information, precise and detailed information, synthesis of the art;

2. The potential users wish to have user-friendly and quick search tools with relevant replies;

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* Leader of the thematic group

3. The possibility of accessing basic documents is also requested;

4. The available information must be validated and updated by the concerned organizations.

1.3.2.2 The "training, research and development" group

The questionnaire of this group focused on the three following fields: potable water, irrigation and resources management. The analysis of the replies sent by 8 countries (out of 10) emphasizes the following:

1. EMWIS will be intended for, at least at the beginning, governmental institutions, research and training centres and universities in particular. The interest of the private companies and local water management organizations for EMWIS has not been thoroughly studied.

2. The future users of EMWIS expect, as regards system operation: the use of key-works and hypertext, the telematic transfer of data and documents and the automatic dissemination of information up-dates;

3. The most interesting sectors on which a lot of information is available are:

   ⇒ aspects related to water demand management (prevention and reduction of water losses, development of low water consumption irrigation techniques, wastewater reuse for irrigation and non-potable uses,...);

   ⇒ sustainable management of water environment (control of water quality, use of information systems for water resources management, environmental impact of water projects,...).

4. The exchange of information will favour not only the transfer of research results, knowledge of interesting events such as: congresses, seminars and training courses, but will also be a tool for the setting up of research networks and joint training programmes. The result, the most expected by EMWIS users, is, in fact, to get acquainted with the research and training activities that are jointly carried out by several countries or

international networks. Therefore, it is expected that EMWIS will favour the participation in joint activities of organizations of several countries and in cooperation programmes at governmental level on research and training topics. Very efficient actions will be undertaken for the transfer of knowledge.

To summarize, the study emphasized that EMWIS will be a very important communication tool for a Euro-Mediterranean dialogue by way of topics on Research and Development and Training in the water sector.

1.3.2.3 The "institutions" group

The replies, sent by 7 countries to the questionnaire of the "institutions" working group, emphasize the following:

1. The expectations as regards EMWIS mainly come from public institutions, research and training centres that wish to get access to information on equivalent administrations in the other countries;

2. The potential users of information on legislation are, above all, central, regional and local administrations.

1.3.2.4 The "data management" group

The questionnaire of the "data management" thematic group focused on the following fields: potable, industrial and irrigation water. The 10 countries of the group replied to the questionnaire. The replies obtained emphasize the following:

1. Most of the countries of the working group have detailed information on the management of data on potable water;

2. Information relative to the management of data on industrial water and irrigation water is less detailed, but will nevertheless be very useful for the potential users of EMWIS information system.

1.3.3 Synthesis of the study on communication networks

Following a series of visits in France, Morocco, Spain, Italy, Jordan, Cyprus, Malta, the United Kingdom and the Palestinian Authority and a meeting with representatives of DGXIII, the conclusions of the expert in charge of the study can be summarized as follows:

1. **The 27 countries are already connected to Internet** and the computer equipment used in the countries is relatively homogeneous (PCs under Windows with Office, Access, Oracle, Arc info software are most often used);

2. **The phenomenon of fast expansion which is at present the characteristics of Internet is originating many dysfunctionings:** for instance, it has been noted that the networks are often overloaded and this implies very long response times;

3. The improvement of the communication efficiency can be envisaged in three ways:

   - the use of commercial Internet networks with a service guarantee (Concert, Global One, World Partners) with line rental;

- the resort to research networks: Ten34[4] (funded by EU[5] at 40%) and Raitnet (UNESCO[6]);

- the use of environmental networks (EIONET[7], MED HYCOS[8]);

4. The yearly costs for connection to a WEB server are estimated as follows:(Table 2)

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[4] T. U. Note: From 1998-12-11 onwards, the network is called TEN-155. See
http://www.dante.net/ten-34/

[5] T. U. Note: European Union

[6] T. U. Note: See http:/:www.unesco.int

[7] T. U. Note: European Environment Information & Observation NETwork

[8] T. U. Note: See footnote 2

Table 2 Type of connection and estimated cost

TYPE OF CONNECTION	Estimated cost ECU[9]/year/site
- Connection with 64 kb/s	12,000 à 17,000
- Connection with 128 kb/s	30,000
- Connection to a commercial service provider with guarantee	to 120,000
- Connection to TEN-34	About 50,000 (1st estimate)

1.3.3.1 Conclusions

The use of research networks such as TEN-34 and RAITNET is recommended to improve communication between the partners of EMWIS network.

TEN-34 is the trans-European network with 34 Mb/s. It is partly financed by the European Union to provide research and higher education centres with an effective network, while opening it to institutional and industrial partners.

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[9] T. U. Note: From 1999-01-01 the ECU became **euro**

Solutions for the connection of some countries (Cyprus, Israel, Malta, Turkey) that are not served by these networks will have to be studied on a case by case basis. Malta and Cyprus, owing to their geographical situation and their technological advance, could play an important role of relay between both shores of the Mediterranean by realizing high speed liaisons between TEN-34 and RAITNET.

It is recommended to the National Focal Points (a concept defined in Chapter IV[10]) to request a connection to one of these two networks.

> The **RAITNET** Network (Regional Arab Information Technology Network) was created by CERIST (Centre for Research on Scientific and Technical Information) in Algeria, IRSIT (Regional Institute for Computer Sciences and Telecommunications) in Tunisia, RITSEC (Regional Information Technology and Software Engineering Centre) in Egypt, NIC (National Information Centre) in Jordan, and the Kuwaiti Ministry of Communications, with the support of UNESCO and the International Telecommunication Union. This network is open to all the main actors involved in the development of information and communication systems in the Arab World.

1.4 Proposals for the setting up of EMWIS

1.4.1 Programme for the setting up and activities of EMWIS

The setting up of EMWIS can only be achieved by way of a **simple, pragmatic, progressive and feasible strengthening programme.**

This programme must emphasize from the start the advantage of the system and allow for a progressive integration of the partners. It could be broken down as follows:

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[10] T. U. Note: See 1.4 Proposals for the setting up of EMWIS

1.4.1.1 In the short term (1998[11]-2000)

♦ Organization of EMWIS's management structures.

♦ Development of access to information on **priority topics:**

 - Organization of the communication network;

 - Preparation of and access to directories (institutions, operators, people,...) and catalogues of information sources in the 27 countries;

 - Development of common accesses to existing information systems;

 - Development of access to information which is not yet digitized (paper files, microfiches...);

 - Extension of access processes to additional languages (other than French and English);

 - Elaboration of common programmes and outputs to develop available information;

Remark: the improvement of access to available information may, in some cases, be achieved by developing specialized tools for access, retrieval and dissemination of information.

1.4.1.2 In the medium term (3 to 5 years)

- Extension to **additional** and new **topics**;

- Creation of information systems on non-covered sectors with the organization of common work programmes (information collection, validation and dissemination) and the elaboration of common outputs to develop available information.

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[11] T. U. Note: The three years period actually started 1999-07-20

1.4.2 EMWIS organization

1.4.2.1 Overall structure

An overall structure was agreed to during the Amman meeting (April 1997) that relies on National Focal Points and on an International Coordination Unit.

During the Valencia meeting (October 1997), the management structure at international level was defined with the establishment of a **Management Committee**[12] and a **Coordination Committee.**

The following diagram (Figure 1) presents a draft structure for the organization of EMWIS which was agreed to in Valencia:

Figure 1

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[12] T. U. Note: Steering Committee

EMWIS ORGANIZATION
(provisional scenario)
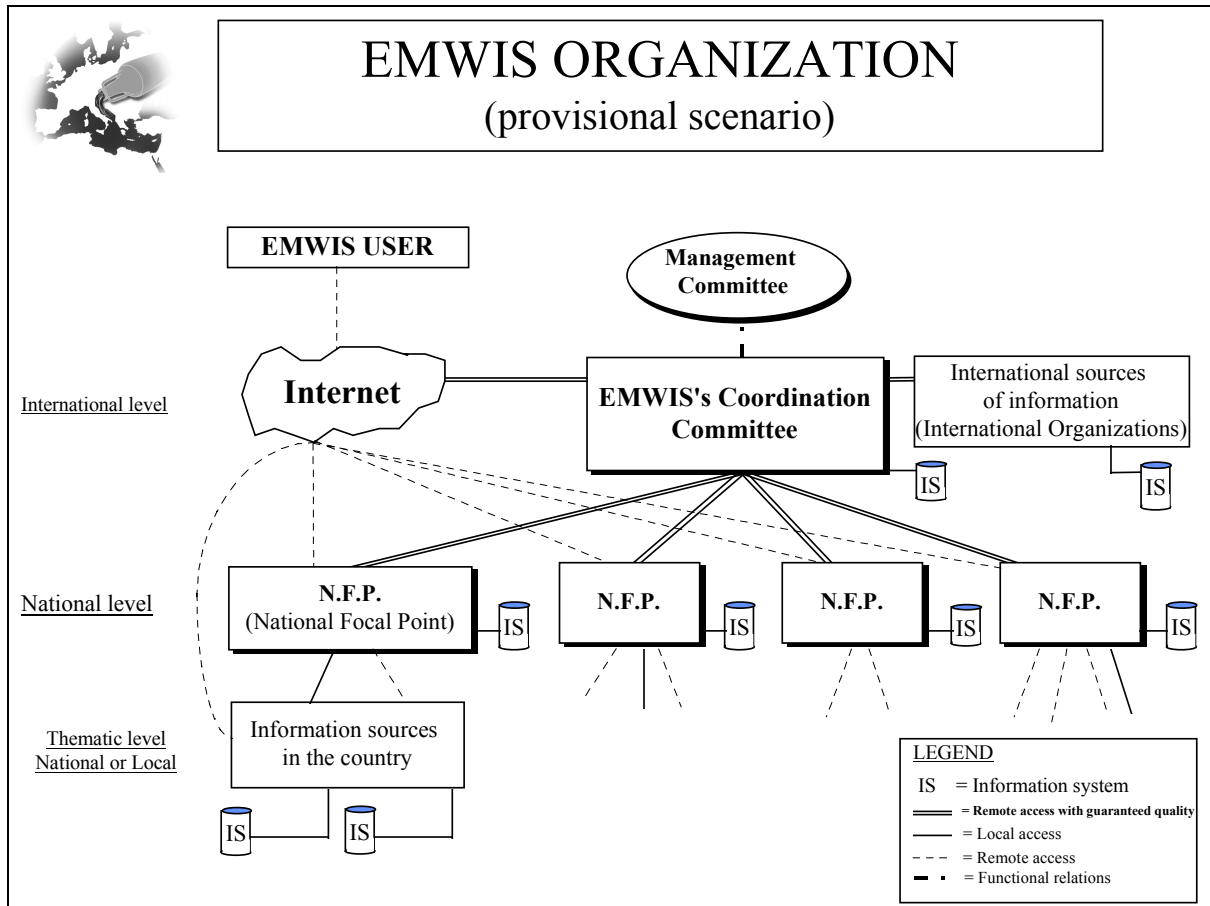
1.4.2.2 Proposed organization of the management structures at international level

1.4.2.2.1 The Management Committee[13]

The **Management Committee**[14] is composed of:

♦ The representatives of 10 countries (1 representative per country with the possibility of alternating countries from one year to another with the exception of the countries

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[13] T. U. Note: See footnote 12

[14] T. U. Note: Ibidem

which are members of the Technical Unit (see below) and which constitute the core of the Management Committee[15]);

♦ A representative of the European Commission

It is responsible for:

♦ Defining the main strategic orientations:

⇒ Legal aspects and the international status of EMWIS;

⇒ General economy of EMWIS in order to ensure its sustainable operation;

♦ Validating the results obtained in each phase;

♦ Validating EMWIS annual action plan and budget proposed by the Coordination Committee.

The Committee meets once a year with alternate organization of the meetings.

1.4.2.2.2 The Coordination Committee

The **Coordination Committee** comprises a Technical Unit and the representatives of the National Focal Points involved in the project.

The **Technical Unit** is composed of a consortium of operators of several countries. The provisional list[16] of these operators is as follows: IOW (France), CEDEX (Spain), Hydrocontrol (Italy), WRc (United Kingdom). These operators constitute a permanent structure which is responsible for carrying out the actions defined with the National Focal Points while respecting the general orientations defined by the Management Committee[17].

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[15] T. U. Note: See footnote 12

[16] T. U. Note: The final list includes CEDEX (Spain), SOGESID S.p.a. (Italy) and IOW (France)

[17] T. U. Note: See footnote 12

This Technical Unit is responsible for:

♦ Proposing to the Management Committee[18] the main strategic orientations, annual action plans and budgets, defined with the National Focal Points;

♦ Coordinating, driving, and should the case arise, providing a technical support to the activities of the National Focal Points:

⇒ Possible assistance for the detailed identification of human and equipment needs;

⇒ Organization of the necessary training programmes;

⇒ Assistance to the elaboration of the directories and references;

⇒ Organization of the information collection supervised by the National Focal Points;

⇒ Organization of the approval procedures of the national information sources;

⇒ Support to the organization of access to information on National Focal Points' servers

⇒ Assistance to the elaboration of common outputs;

♦ Carrying out the tasks of the "Focal Point of International Organizations":

⇒ Inventory and agreement of international data sources;

⇒ Translation of protocols of information access into the official languages[19] of EMWIS;

⇒ Development of access to international information sources;

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[18] T. U. Note: See footnote 12

[19] T. U. Note: The terms *official languages* must be understood as *working languages.*

♦ Developing and managing the information server of the Coordination Committee:

⇒ Development of access applications and procedures;

⇒ Entry and integration of the information foreseen at this stage;

⇒ Management of communications with the users and NFPs;

⇒ Development of specialized tools for research, access and dissemination.

1.4.2.2.2.1 Organization of the Technical Unit:

The Technical Unit should have a legal status allowing it to combine the competences of several organizations and to mobilize the funds necessary for its activities (see the list of tasks to be carried out in the preceding chapter).

Besides, it will have premises and necessary equipment means at its disposal for organizing meetings and developing the information system at international level.

The coordination with National Focal Points will be implemented by way of regular meetings and by intensive use of video-conferencing.

♦ Corresponding minimum human resources:

⇒ 1 full-time coordinator

⇒ 1 computer expert (engineer)[20]

⇒ 1 multilingual assistant

⇒ Several information managers who can be residents of various countries.

♦ Required equipment:

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[20] T. U. Note: Information Technology Expert

$\Rightarrow$ Adequate premises with a conference room;

$\Rightarrow$ Computer material (equipment of the permanent staff and Internet server);

$\Rightarrow$ Advanced communication means (high-flux Internet access, video-conferencing equipment...)

Remark:

The option aiming at providing the Technical Unit with sufficient premises for receiving full-time information managers from several countries, appeared to be too « heavy » for being chosen at this stage.

1.4.2.3 Organization of focal points

Each country controls the organization of its National Focal Point.

Generally speaking, the National Focal Points will be mainly responsible for:

♦ **Participating in coordination and information meetings** organized by the Coordination Committee (physical participation or by video-conferencing, depending on the case);

♦ **Making an inventory and approving**, according to the orientations defined by the Coordination Committee, the **sources of available information in the country**, that can be accessed through EMWIS;

♦ **Organizing the procedures of communication and access to approved information in the country;**

♦ **Ensuring that the protocols of access to information are translated and available in the official EMWIS languages[21]**

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[21] T. U. Note: See footnote 19

- **Developing, whenever necessary** and according to the standards defined by the Coordination Committee, **the tools and interface software which will facilitate access to homogeneous information in the country;**

- **Ensuring relations with the country's users** (analyses of the users' satisfaction, identification of new requirements...);

- **Contributing to the elaboration of the annual action programme of the** Coordination Committee's **Technical Unit** .

1.4.2.3.1 Organization recommended for an optimum operation of the National Focal Points

Remark: as the organization of the National Focal Points is the responsibility of the countries, this chapter only intends to provide some indications on the organization that would seem a-priori advisable for an optimum operation of the National Focal Point.

A small team (3 persons) assigned by the relevant authorities to the EMWIS project, within a public or parapublic organization in charge of gathering and disseminating documentation and information relating to the water sector in each country.

This team would have the means necessary for coordinating the tasks (premises, telecommunication, video-conferencing...) and for developing the information system used at national level.

- Corresponding human resources:

  ⇒ 1 full-time coordinator;

  ⇒ 1 computer expert (network-specialized engineer and webmaster) [22];

  ⇒ 1 multilingual assistant.

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[22] T. U. Note: See footnote 20

♦ Required equipment:

⇒ Adequate premises with a conference room and office space for receiving the partners;

⇒ Computer material (equipment for the permanent staff and specific Internet server);

⇒ Advanced communication means (access to Internet through specialized connections, video-conferencing equipment....).

1.5 Implementation cost and funding

The table hereafter[23] shows a first estimate of the necessary budgets to implement EMWIS project during the development period (1998-2000) and presents a cost distribution over three years.

This budget proposal includes 3 main components:

1. **The "International Level" component** covers the setting up and operating costs of the coordination structures at international level as well as the reinforcement of international communication links to enable exchanges on Internet with guaranteed quality;

2. **The "National Focal Points" component** covers the NFPs' investment and operating costs (estimated average value) that are directly incurred by the setting up of EMWIS (excluding premises and wages);

3. **The "Technical Assistance/Training/Evaluation" component** covers general expenses regarding the international level as well as NFPs: technical assistance, training, promotion of EMWIS in the countries.

The costs used to draw up this table are detailed in annex 10[24].

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[23] T. U. Note: The table is not included; see 2.3.3 Budget

[24] T. U. Note: The table is not included; see 2.3.3 Budget

As regards the "International Level":

◆ The budget of the **"Management Committee**[25] **Meetings"** should allow for the organization of annual meetings of the Management Committee[26];

◆ The **"Investment cost for the Technical Unit"** includes the hardware, software and office equipment necessary for its operation;

◆ The **"Operating costs of the Technical Unit"** cover:

⇒ Premises rental costs, communication costs (connection, subscription to Internet, telephone and fax), hardware and software maintenance, translation, organization of coordination meetings, travel expenses;

⇒ Salaries of the full time project manager, computer expert[27] and assistant.

◆ The budget of the **"International Communication Network with guaranteed quality "** is meant to facilitate, on one hand, the development of Internet links between TEN34 and RAITNET networks and, on the other hand, to connect some countries to one of these two networks;

Regarding the "National Focal Points", the total amount has been calculated while taking for granted that ten countries will join EMWIS within the first year and ten other countries within the second year (meaning a total of twenty countries). The indicated mean unit costs will have to be revised for each country on a case by case basis. They include:

◆ **Investment costs** which correspond to the hardware and software equipment considered as necessary for the good running of NFPs;

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[25] T. U. Note: See footnote 12

[26] T. U. Note: Ibidem

[27] T. U. Note: See footnote 20

♦ **Operating costs** which cover communication expenses (connection costs, subscription to Internet, telephone and fax), hardware and software maintenance, translation, organization of coordination meetings, travel expenses, specifically to participate in training courses and coordination meetings.

Regarding the item "Technical Assistance/Training/Evaluation":

♦ The Technical Assistance budget has been planned to finance the intervention of experts to give technical assistance for the following in particular:

⇒ Organization and setting up of the international communication network;

⇒ Organization of directories and catalogues (directory structure, definition of references, references used, organization of data collection, defining quality references, defining validation procedures);

⇒ Back-up for developing access to available information (thesaurus organization, dictionaries harmonization and standardization, defining exchange formats, developing exchange interfaces...)

⇒ Back -up for organizing access to information not yet digitized;

⇒ Back-up for developing research tools;

⇒ Back-up for preparing common products for information development;

⇒ ...

♦ Regarding the "Training" budget, the following organization has been planned:

⇒ A one-week training course per year for the computer scientists[28] working in National Focal Points and in the Technical Unit;

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[28] T. U. Note: See footnote 20

⇒ A training course about quality concepts (one week) for the National Focal Points Managers[29];

⇒ A One-year[30] training programme for the coordination of Focal Points Managers[31] regarding information collection, management and discussions.

♦ The budget for an "Information Seminar in the Countries" should cover the organization of an awareness raising meeting for national operators in each country; at least two representatives of the Coordination Committee should participate in this meeting in order to inform about and analyze the expectations towards EMWIS.

♦ The budget for a "final evaluation of the 3-year program" will cover a technical and financial assessment of the operations carried out during the development period and the identification of a series of proposals to continue EMWIS activities. This assessment will be undertaken by an operator who is outside the system.

The conditions for funding this program will be defined later on.

The following principles could then be taken into consideration:

1. Each country takes charge of the funding of its national focal point;

2. International expenses will be taken care of by sharing the cost between the countries of the European Union involved in EMWIS's Technical Unit and the European Commission.

---

[29] T. U. Note: National Focal Point Coordinators

[30] T. U. Note: Once a year

[31] T. U. Note: See footnote 29

2 THE NATIONAL FOCAL POINTS SYSTEM

2.1 National Focal Points Functions

The functions have been described at 1.4.2.3 National Focal Points Functions

2.2 Working programme for the National Focal Points. Year one[32]

2.2.1 Setting-up of National Focal Points (NFP)

Right from their settling, the Technical Unit's members will get in touch with NFP managers[33] and a two-day seminar will be organized in Sophia Antipolis to inform them on:

- EMWIS implementation programme;

- the tasks to be undertaken by NFP;

- the recommended profiles of NFP computer scientists[34] and data managers[35];

-...

NFP managers[36] will then have all necessary information for their effective setting-up.

---

[32] T. U. Note: Naples Papers. See footnote 1

[33] T. U. Note: See footnote 29

[34] T. U. Note: See footnote 20

[35] T. U. Note: Webmaster / Data manager

[36] T. U. Note: See footnote 29

2.2.2 Organization of the communication network

The organization of the communication network aims at developing "guaranteed quality connections" between EMWIS main operators (mainly the Technical Unit and National Focal Points).

This organization requires:

2.2.2.1 A detailed study

EMWIS preliminary study defined the main orientations to be chosen for organizing the communication network. Communication equipment and procedures now have to be determined. Besides, this study shall:

take into account possible advance in communication technology and networks developed since the preliminary study;

make recommendations on videoconference;

assess basic training needs of NFP computer scientists[37].

Once specifications are drawn up, this study might include:

1. An assessment of needs at national level and in each Technical Unit;

2. An analysis of needs at international level (modes of TEN34/RAITNET interconnection, once this formula is confirmed).

---

[37] T. U. Note: See footnote 20

2.2.2.2 Presentation of the communication network's organization to NFP computer scientists[38]

A one-week training course for NFP computer scientists[39] will be organized in Sophia-Antipolis[40]. It will be the opportunity to:

- Present technical options chosen for the communication network;

- Provide additional technical training according to needs identified during the study;

- Discuss possible implementation difficulties in each country;

- Standardize technical means of communication (E-Mail, Videoconference);

- Organize the following phase, i.e. the setting-up of connections and equipment of each NFP.

2.2.2.3 Setting-up of necessary connections and equipment of NFP and EMWIS Technical Unit

NFP computer scientists[41] will be in charge of setting up necessary connections and equipment in their own country.

If necessary, the Technical Unit might provide remote technical assistance.

---

[38] T. U. Note: See footnote 20

[39] T. U. Note: Ibidem

[40] T. U. Note: The place is provisional

[41] T. U. Note: See footnote 20

2.2.2.4 Strengthening of connections between networks at international level

The strengthening of interconnections between Internet networks will permit guaranteed quality connections between all focal points and EMWIS *Technical Unit*[42].

Strengthening procedures will depend on the result of the study, respecting the allocated budget. They will probably require "political" contacts with network managers and countries that could act as links between networks.

2.2.3 Setting-up of directories and catalogues of information sources

The setting-up of directories and catalogues of information sources will be the first concrete action of information sharing. It will also be implemented since the start of the project. In the long term, it should allow EMWIS users to know "who does what" in terms of data collection, management and use, among main organizations (institutions, operators...) and experts of the water sector in EMWIS member countries.

As first action of information sharing between NFPs, this phase will require an important coordination of management methods, national servers and access procedures.

2.2.3.1 Preparation of structures/references and collection methods for directories and catalogues

This phase of directory and catalogue preparation will aim at:

1. Structuring directories and catalogues;

2. Defining references to be used (directories on technologies, methods, equipment, financial sources...);

3. Defining data collection methods;

---

[42] T. U. Note: the words in italic not in the original.

It will have to be approved by NFP managers[43].

This preparation will take into account structures, references and methods used in existing catalogues, at international level in particular.

At the end of this phase, a seminar will be organized in Sophia Antipolis with all national focal points' managers[44]. This meeting will be the opportunity to:

- Present selected options for the preparation of directories and catalogues;

- Provide necessary information on the organization of data collection in the different countries;

- Discuss possible implementation difficulties in each country;

- Organize the following phase, i.e. data collection on organizations, persons and existing information sources.

2.2.3.2 Elaboration of directories on organizations and persons

These directories will be the first products to be made available within EMWIS framework.

2.2.3.2.1 Data collection

Data collection will be organized in each country and at international level according to the orientations defined in the previous phase.

---

[43] T. U. Note: See footnote 29

[44] T. U. Note: Ibidem

2.2.3.2.2 Validation

The purpose of validation will be to check that collected data comply with these orientations.

Note: as data collected correspond to "structured data", data dictionaries developed will therefore have to be quite exhaustive in order to allow validation without any ambiguity.

2.2.3.2.3 Translation

The purpose will not be to translate all collected data. Yet, it might be necessary to translate specific items in order to facilitate query. These items will have to be defined during the preparation of directories.

2.2.3.2.4 Development of the information server

The purpose will be to study, develop and set up the structures of files and software that will allow EMWIS users to have access to this information.

2.2.3.2.5 Data entry into the system

Collected and validated data will be entered into the system and accessible according to the procedures previously defined.

2.2.3.3 Setting-up of the catalogue on existing information sources

The catalogue on existing information sources should allow EMWIS users to know "who collects and who manages which information".

This catalogue, which will be a key database for EMWIS, will be developed according to the method used for directories (see section b[45]).

2.2.4 Development of common access to available information

After developing directories and catalogues, it will be necessary to:

- Define quality standards which will be used as references for validating information sources made available within EMWIS framework;

- Identify information provided by member countries to EMWIS.

2.2.4.1 Study and information of NFPs on quality standards

A study aiming at defining possible procedures for the validation of non structured information will be carried out.

This study will lead to recommendations which will be presented and discussed by NFP managers[46] during a one-week seminar in Sophia-Antipolis[47].

2.2.4.2 Directory of available information

On the basis of the catalogue on existing information sources, and according to the criteria chosen for validating information sources, managers of information sources will have to be contacted in order to define, for each source, the categories of information which will be made available within EMWIS framework (agreements between managers).

Information sources really available will then have to be validated.

2.2.4.3 Development of a common language for description and exchange

The sharing of information provided by various sources will require the development of a common language for its description.

---

[46] T. U. Note: See footnote 29

[47] T. U. Note: The place is provisional

For each information source, the development of this common language will involve:

1. An analysis of dictionaries describing information and thesauruses used;

2. An harmonization and standardization of dictionaries and thesauruses;

3. The definition of standard exchange interfaces for structured data.

According to the planned programme, only the first part will be carried out during the first operation period. It includes:

\#   Preparation of collection methods of information systems' characteristics (dictionaries, thesaurus …)

\#   Information of NFP managers[48] on this collection

\#   Collection of the characteristics of available information systems

2.2.4.4 Standardization of access to available information[49]

On the basis of the characteristics of available information systems, standardized access to available information will be organized through:

1. A detailed analysis of needs and current specialized tools for retrieval, access and dissemination of information;

2. Interfaces between EMWIS and approved information sources. These interfaces will have to take into account standards for describing selected information and the possible specificity of selected retrieval tools.

---

[48] T. U. Note: See footnote 29

[49] T. U. Note: Points 2.2.4.4 to 2.2.4.6 are not included in the french version; by the contrary, the point 2.2.5 lacks in the english version.

3. The implementation of retrieval tools and interfaces.

This phase will not be carried out during the first year.

2.2.4.5 Organization of access to non digitized information

Non digitized information will be structured using standards of information description defined in the previous phases.

This phase will not be carried out during the first year.

2.2.4.6 Development of common products enhancing information

The development of common products mainly aims at strengthening partnership and cooperation between EMWIS partners.

It will allow to assess in concrete terms information availability and homogeneity.

These products, available in various forms (maps, catalogues, multimedia software...), will enhance the work of producers and will be an incentive to guarantee the sustainability of information production.

This phase will include:

1. Identification of needs and target public;

2. Definition of specifications of products to be developed;

3. Collection of necessary additional data;

4. Development of applications or corresponding projects;

5. Promotion and dissemination of already developed products.

It will not begin during the first year.

2.3 National Focal point composition

The composition has been described at 1.4.2.3.1 Organization recommended for an optimum operation of the National Focal Points. Here on try to go deeper into the equipment

2.3.1 Human resources

Coordinator. See the complete list at 4.1.3 National Focal Points

Webmaster

Information Technology Expert

Multilingual assistant.

2.3.2 Equipment

2.3.2.1 IT system

2.3.2.1.1 Hardware subsystem

Hardware of the staff and dedicated Web server.

It is recommended that each country register the domain name as follows

http://www.semide.country_code

http://www.emwis.country_code

For the country code see the Table 3 and http://www.itu.int/net/cctlds

Table 3 The EMWIS countries and its ISO 3166 codes

COUNTRY	CODE	COUNTRY	CODE	COUNTRY	CODE
Algeria	DZ	Greece	GR	Netherlands	NL
Austria	AT	Ireland	IE	Palestinian Territory, Occupied	PS

COUNTRY	CODE	COUNTRY	CODE	COUNTRY	CODE
Belgium	BE	Israel	IL	Portugal	PT
Cyprus	CY	Italy	IT	Spain	Es
Denmark	DK	Jordan	JO	Sweden	SE
Egypt	EG	Lebanon	LB	Syrian Arab Republic	SY
Finland	FI	Luxembourg	LU	Tunisia	TN
France	FR	Malta	MT	Turkey	TR
Germany	DE	Morocco	MA	United Kingdom	UK

2.3.2.1.2 Software subsystem

2.3.2.2 Communications system

2.3.2.2.1 Data subsystem

2.3.2.2.2 Image subsystem

2.3.2.2.3 Voice subsystem

2.3.2.3 Another systems

2.3.3 Budget

Figures in euros.

2.3.3.1 Investments

Table 4 National Focal Points investment costs

Items	Sub-items	Cost
Premises[50]		
IT system	Hardware	
	Software	
Communications system	Lines - Hardware - Software	
	Data	
	Image	
	Voice	
	Services[51]	
Other systems	Printing	
	Photocopying	

2.3.3.2 Running costs

Table 5 National Focal Points running costs

Items	Sub-items		Cost
Staff	Salaries[52]		
	Travels and perdiem[53]		5.550
Amortization			
Maintenance (contracts)	Fungible material		
	Energy		

---

[50] Two or three offices and a meeting room

[51] Internet: FTP, Gopher, e-mail, Telnet, Usenet News, WAIS, WWW

[52] (coordinator + IT expert + bi/trilingual assistant)

[53] (coordinator + IT expert)

Items	Sub-items		Cost
	Premises		
	IT system		
	Communications system	Lines - Hardware - Software	
		Data	
		Image	
		Voice	
		Services	
Other	Organisation of national meetings		
	Information access protocol translation		3.077

3 THE TECHNICAL UNIT SYSTEM

3.1 Technical Unit functions

The Technical Unit Functions have been described at 1.4.2.2.2 The Coordination Committee (paragraph 4 and following)

3.2 Technical Unit composition

The Technical Unit composition has been described at 1.4.2.2.2 The Coordination Committee (paragraph 2)

3.3 Technical Unit organisation

The Technical Unit organisation has been described at 1.4.2.2.2.1 Organization of the Technical Unit: Here on try to go deeper into the equipment.

3.3.1 Human resources

Concerning people, see 4.1.4 Technical Unit

Manager

Coordinator

Webmaster / Data manager

Information Technology Manager

Multilingual assistant

3.3.2 Equipment

Premises with meeting room and partners' hosting: five offices in the north wing (first floor) at the Blue Plan building (Regional Activity Centre of the Mediterranean Action Plan) in the Parc International d'Activités Valbonne Sophia Antipolis.

3.3.2.1 IT system

3.3.2.1.1 Hardware subsystem

Hardware of the staff and dedicated Web server (See Table 6).

Table 6 The EMWIS Technical Unit computers

Name	Pcalessandro	Pceric	Pcjuan	Pclidy	Server
Manufacturer	Compaq	Compaq	Compaq	Compaq	Compaq
Model	Prosignia Desktop	Armada 1500c	Armada 1500c	Prosignia Desktop	Proliant 5500
Processor[54]	Pentium II MMX	Celeron	Celeron	Pentium II MMX	Xeon P3 500
RAM (MiB)	64	32	32	64	256
Disk (GiB)	6	4	4	6	3x9 (RAID 5)

---

[54] T. U. Note: Intel processor

Server: http://www.semide.net and http://www.semide.org/

http://www.emwis.net and http://www.emwis.org

3.3.2.1.2 Software subsystem

See Table 7

Table 7 The software subsystem

PC	Server
Microsoft Windows 98	Microsoft Windows NT Server 4.0 US
Microsoft Office 2000 Premium	Microsoft Windows Internet Information Server 4
Winzip 7.0	

3.3.2.2 Communications system

3.3.2.2.1 Data subsystem

Service provider (ISP[55]):

Eurecom (http://www.eurecom.fr/): hosting/lodging facilities and RENATER access

Groupe CX (htpp://www.competences.com/groupecx)

Hardware:

Router (ISDN[56]): Netopia R-3100 IN-S (Serial number 7 376 764)

Line: 1 T0[57]

---

[55] Internet Service Provider

[56] Integrated Services Data Network

3.3.2.2.2 Image subsystem

Hardware: See Table 8

Table 8 The EMWIS Technical Unit image hardware

Description	Manufacturer	Model	Number
Fax	Brother	MFC-9050	1

Line: shared with voice subsystem's

3.3.2.2.3 Voice subsystem

Service provider:

FranceTelecom

RSLCOM

Hardware: See Table 9

Table 9 The EMWIS Technical Unit voice hardware

Description	Manufacturer	Model	Number
Switch (PBX[58])	Matra Nortel Communications	MC 6501-C6	1
Telephone set	Matra Nortel Communications	MC 405 E	4
Switchboard	Matra Nortel Communications	MC 520	1

---

[57] T0 (zero) id the name of the basic access to ISDN. The basic access has two B channels (64 kb/s each) and a signaling D Channel (16 kb/s).

[58] Private Branch eXchange

Line: 2 T0[59]

3.3.2.3 Another systems

Printing: Hewlett Packard LaserJet 4050 TN with duplex printing accessory and network connection

Photocopying: Not available

3.3.3 General information

Physical address:

> 35, rue Ludwig van Beethoven
>
> Parc International d'Activités Valbonne Sophia Antipolis
>
> 06152[60] Valbonne
>
> 06 Alpes Maritimes
>
> Provence-Alpes-Côte d'Azur
>
> FRANCE

Postal address:

> UnitéTechnique SEMIDE/EMWIS Technical Unit
>
> BP 23
>
> 06901 SOPHIA ANTIPOLIS
>
> FRANCE

---

[59] See footnote 57

[60] INSEE (Institut National de la Statistique et des Études Économiques) number

Answering machine: Available

Fax: +33 (0)4 97 23 10 39

Working time (Central Europe):

08:30 à 17:30 (Monday to Thursday)

08:30 à 16:30 (Friday)

Summer[61]: U.T.C.[62]+2; winter: U.T.C.+1

3.3.3.1 How to get the Technical Unit?

Cartographical information: see Table 10.

Table 10 Cartographical information

Series	TOP 25	Orange	TOP 100	TOP 250	Départementale
Reference	3643 ET	3643	68	115	06
Scale	1:25.000	1:50.000	1:100.000	1:250.000	1:125.000
Name	Cannes Grasse	Grasse	Toulon / Nice	Provence / Côte d'Azur	Alpes-Maritimes

More information at: http://www.ign.fr/

3.3.3.1.1 Far

Table 11 Getting the Technical Unit

---

[61] Winter time from the last Sunday of March until the last Sunday of October

[62] U.T.C. = Universal Time Coordinated

You come by	Your landing point is	And then	To know more
Plain	Nice Côte d'Azur Airport	See 3.3.3.1.2 Nearby	http://www.nice.aeroport.fr/
Train	Antibes rail station	See 3.3.3.1.2 Nearby	http://www.sncf.fr/
Car	Exit 44, Highway A 8-E 80 Esterel Côte d'Azur	Take the road D 35 GRASSE XXX Sophia Antipolis Take the road D 103 until Carrefour Albert Einstein/Les Lucioles 1 Rue Albert Einstein that meets (keep to the right) Rue Ludwig Van Beethoven Look for number 35 and the PLAN BLEU panel You are here!	

3.3.3.1.2 Nearby

Bus

You have come by plane:

Company: S.T.C.A.R. Tel: +34 493 206 057/+34 492 389 638

Sophia Express. Bus Stop Place Sophia Laffitte

You have come by train:

Company: S.T.G.A. http://www.stga-transport.fr/

Table 12 Train-bus connections

1	You have got down at	Cannes	Antibes[63]	Biot	Nice
2	You take the bus	5VB	2VB	4B	
3	At bus stop	Gare SNCF	Gare SNCF	Gare	
4	You get down at bus stop		Beethoven		

Taxi: Be ready to explain the driver the box *Car And then* in Table 11

Car: See Car in Table 11

4 MORE INFORMATION ABOUT EMWIS

4.1 EMWIS people

4.1.1 Co-ordination Committee

The Coordination Committee comprises (See 1.4.2.2.2) the National Focal Points representatives (Table 14) and the Technical Unit (Table 15)

4.1.2 Steering Committee

See the Table 13

Table 13 The EMWIS Steering Committee

COUNTRY	NAME, FIRST NAME	PHONE	FAX	ELECTRONIC MAIL

[63] Recommended

COUNTRY	NAME, FIRST NAME	PHONE	FAX	ELECTRONIC MAIL
Algeria	Bengueddach, Benhenni			
Cyprus	Tsiourtis, Nicos			
Spain	Santafé Martinez, José M.			
France	Roussel, Pierre			
Italy	Mazzitti, Walter			
Jordan	Taha, Suzan			
Malta	Azzopardi, Denis			
Morocco	Jellali,			
Palestinian Authority.	Gharbiyeh, Abu			
European Union	Laurent, Patrick			

4.1.3 National Focal Points

See Table 14

Table 14 The EMWIS National Focal Points representatives

COUNTRY	NAME, FIRST NAME	PHONE	FAX	ELECTRONIC MAIL
Algeria	Kherraz, Khatimi	+213 4 92 33 59	+213 4 92 33 59	kherraz@www.caramail.com
Austria	Hudik, Michael	+43 13 19 30 50	+43 13 19 30 90	austrianwater.mhudik@aon.at
Belgium	Smet, Kon de	+32 2 25 53 76 84	+32 2 25 53 76 85	koen.desmet@lin.vlaanderen.be
Cyprus	Tsiourtis, Nicos	+357 2 80 31 41	+3 572 445 019	tsiourti@dial.cylink.com
Egypt	Shalaby, Abd El Raman	+202 3 12 92 57 / 32 48	+202 3 10 95 91 / 2 32 57	---
Spain	Martinez, Leticia	+34 9 13 35 72 62	+34 9 13 35 72 49	Leticia.MartinezEtayo@cedex.es
France	Furbeyre, Nathalie	+33 (0)5 55 11 47 80/1	+33 (0)5 55 77 72 24/11 47 48	n.furbeyre@oieau.fr
Greece	Lazarou, A.	+30 16 41 06 41	+30 18 66 29 68/6 44 76 08	---
Israel	Ben-Zvi, Meir	+97 225 381 101	+97 225 388 704	meirali@vms.huji.ac.il
Italy	Nola, Francesco	+39 06 44 26 74 01/124 339/267 279	+39 06 44 26 73 62/401	francesco.nola@mail-gw.llpp.it

COUNTRY	NAME, FIRST NAME	PHONE	FAX	ELECTRONIC MAIL
Jordan	El-Naser, Hazim	+962 65 68 31 00	+962 65 68 00 75	LSuha-Bakir@mwi.gov.jo hazim_el-naser@mwi.gov.jo
Lebanon	Hachem, Hassan Comair, Fadi		+961 1 56 55 55	ministry@hydro-electric.gov.lb
Luxembourg	Ries, Jean-Marie	+352 405 656 422	+352 49 18 84	jean-marie.Ries@aev.etat.lu
Malta	Riolo, Antoine	+ 356 23 41 30	+356 22 30 16	water@maltanet.net
Morocco	Belkheiri, Ahmed	+212 7 77 90 28	+212 7 77 86 96	belkheiri@mtpnet.gov.ma
Palestinian Authority	Kawash, Fadel	+972 22 90 22	+972 22 98 13 41	---
Portugal	Gonsalves Henriquez, Antonio	+351 18 43 00 50	+351 18 47 35 71	agh@inag.pt
Syrian Arab Republic	Al Masri, Abdul Aziz	+963 1 12 20 14 00	+963 1 12 24 68 88	Irrigation.min@net.sy
Tunisia	El Batti, Djemili	+216 1 39 93 20	+216 1 39 15 49	el-batti-dj-tn@excite.com
Turkey	Turan, Fayik	+90 31 24 18 33 92	+90 31 24 18 33 85	---

4.1.4 Technical Unit

See Table 15

Table 15 The EMWIS Technical Unit team

NAME, FIRST NAME	POSITION	PHONE	ELECTRONIC MAIL
Haener, Paul[64]	Manager	+33 497 231 034	p.haener@semide.org
Mino, Eric	Co-ordinator	+33 497 231 031	e.mino@semide.org
Pischedda, Alessandro	Information Technology Expert	+33 497 231 032	a.pischedda@semide.org
Thomas, Lidy[65]	Administrative Officer	+33 497 231 030	l.thomas@semide.org
Vera, Juan Antonio	Webmaster /Data manager	+33 497 231 033	j.a.vera@semide.org

4.2 EMWIS countries

The maximum number of countries participating in the project is twenty-seven, the countries that are signatories of the Barcelona Convention (1995-11-27&28): the fifteen countries of the European Union and the twelve mediterranean partners. All of them are in the Table 16, grouped in five regions as defined by the United Nations.

Table 16 The EMWIS countries

North Africa	Western Asia	Northern Europe	Southern Europe	Western Europe
Algeria[66]	**Cyprus**	*Denmark*[69]	*Greece*	*Austria*

---

[64] Part time

[65] Half time

[66] The countries in **bold** are members of the Steering Committee

North Africa	Western Asia	Northern Europe	Southern Europe	Western Europe
Egypt[67]	Israel	*Finland*	***Italy***	*Belgium*
Morocco[68]	**Jordan**	*Ireland*	**Malta**	***France***
Tunisia	Lebanon	*Sweden*	*Portugal*	*Germany*
	Palestinian Authority	*United Kingdom*	***Spain***	*Luxembourg*
	Syrian Arab Republic			*The Netherlands*
	Turkey			

Partial Source: www.un.org/Depts/unsd/methods/m49region.htm

4.3 EMWIS history

The abridged EMWIS history is displayed in Table 17.

Table 17 The EMWIS history

DATE	PLACE	EVENT
1999-12-06	Sophia Antipolis (FR)	Third meeting of the Steering Committee
1999-12-02&03	Sophia Antipolis (FR)	First meeting of the Coordination Committee
1999-10-18&19	Torino (IT)	Euro-Mediterranean Ministerial Conference on Local Water Management
1999-12-06	Sophia Antipolis (FR)	
1999-12-02&03	Sophia Antipolis (FR)	
1999-09-16	Sophia Antipolis (FR)	Third meeting of the Technical Unit

---

[67] The underlined countries have shown an interest in creating a National Focal Point

[68] The countries in normal type are Mediterranean partners

[69] The countries in *italic* are members of the European Union

DATE	PLACE	EVENT
1999-07-20	---	Signature of the grant request for EMWIS by the Technical Unit members. EMWIS starting date
1999-07-07	Brussels (BE)	Signature of the grant award contract with the European Commission
1999-06-23	Sophia Antipolis (FR)	Second General Assembly of the GEIE[70] UT-SEMIDE[71]
1998-07-09	---	Signature of the Agreement Contract between IOWater, SOGESID S.p.a. and CEDEX
1998-07-06	Rome (IT)	Second meeting of the Steering Committee
1998-06-25&26	Sophia Antipolis (FR)	Second meeting of the Technical Unit
1998-06-15	Paris (FR)	Signature of the Groupement Européen d'Intérêt Économique Unité Technique du SEMIDE (GEIE UT-SEMIDE) statutes
1998-03-17	Paris (FR)	First meeting of the Steering Committee
1998-01-29	Paris (FR)	First meeting of the Technical Unit
1997-12-09&10	Naples (IT)	Euro-Mediterranean Conference of the 27 General Directors of Water Management
1997-10-01	Valencia (ES)	Second meeting of the working group
1997-09-18	Sophia Antipolis (FR)	
1997-06-19	Paris (FR)	Co-ordination meeting of the working groups
1997-04-08&09	Amman (JO)	First meeting of the working group
1996	Marseilles (FR)	Euro-Mediterranean Conference on Water Management. Official birth of EMWIS
1995	Barcelona (ES)	(First) Euro-Mediterranean Conference

---

[70] GEIE = Groupement Européen d'Intérêt Économique = European Economic Interest Group

[71] UT-SEMIDE = Unité Technique du SEMIDE = EMWIS Technical Unit

4.4 Quality

4.4.1 Data quality

According with ISO 2382/8: 1986 Information and processing systems- Vocabulary-Part 08: Control, integrity and security, data quality (08.01.03) can be defined as the correctness, timeliness, accuracy, completeness, relevance, and accessibility that make data appropriate for their use

Data integrity (08.01.04)

Data check (08.01.05)

4.4.2 EMWIS Quality Manual

ISO 9000 family/series and ISO 8402

4.5 Definitions of some concepts used in this Guide

4.6 Glossary

    N.F.P.   National Focal Point

    T.U.   Technical Unit

4.7 Analytical Index

...END...