Diagnostic study at the regional/international level for the feasibility study on the development of a regional observation mechanism for water in the Mediterranean region

Final report

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Executive Summary

On the basis of the mandate assigned to EMWIS by the Euro-Mediterranean Ministers, the Euro-Mediterranean water directors agreed to "Study, with interested countries, the objectives and the feasibility of building up within EMWIS a regional water observation mechanism […]". As part of the 1st phase of this feasibility study with the overall objective of laying down the main orientations proposed for this mechanism, the current report presents the results of the diagnostic study at the regional/international level.

The **main objectives of this study** were to:

* analyze the operation and the difficulties encountered by the managers of the main collection processes in the Euromed countries;
* indicate possible synergies with other organizations/information collection processes;
* identify the potential expectations of regional/international institutions with respect to the water observation mechanism in the Mediterranean.

Therefore, experts of all relevant regional/international institutions were contacted, their input/opinions were collected based on two questionnaires (either through face-to-face Interviews, phone interviews or through e-mail) which then were checked/validated by them.

This pre-feasibility study identified and **investigated a large number of processes and institutions** involved with collecting and monitoring water-related data and information at the regional Mediterranean level. Many of these institutions and processes have their own objectives and work content as related to the Med level, linked to their overall objectives. Accordingly, the information collection processes differ according to their objectives, their specific geographical scope and their legal and institutional background.

The **main difficulties** encountered by the experts in their work are:

* The identification of and accessibility to basic data;
* The data collection processes itself;
* The heterogeneity, completeness and quality of data;
* Lack of clear information production processes and common technical language;
* Lack of metadata;
* Discontinuity in monitoring over time and/or geographically;
* Need for disaggregated data;
* Problems related to a sustainable financing of monitoring processes.

While a lot of work is already been done, the difficulties identified by the experts in their work shows that there still is considerable room for improvement regarding water-related information and data provision. As a reaction to this situation, a **number of bilateral/multilateral partnerships** have been created between different institutions and processes exploiting synergies, fostering cooperation and avoiding duplication of work. A significant number of these partnerships have either recently been set up or are currently under preparation.

At the same time and complementing these activities, the **large majority of experts welcome the plan to set up a Mediterranean water observation mechanism** that could fill a number of relay / interface functions. A number of valuable inputs were provided:

Regarding the **possible assignment and functionalities of the observatory**, the large majority of options presented in the frame of this study were considered to be important. The priority assignments and objectives for the observatory according the experts´ opinions are mainly focussed on relay / interface functions.

The widespread warning by the experts that the new mechanism should avoid implementing a new system or setting up a new institution but should aim at enhancing the existing and upcoming initiatives, taking into account their competences in order to **avoid duplication of work**, needs to be taken very seriously. Another important point to consider in the preparatory work for setting up the observatory is to ensure its **financial sustainability** as well as ensuring the commitment of involved institutions and countries.

Regarding the **main topics** that the mechanism should focus on, some highlighted topics where additional work and information is mostly needed are:
* Drinking water supply and sanitation services;
* Socioeconomic aspects and information;
* Inventory and characterization of water resources;
* Links of water to other policies and to sustainable development in general;
* Follow-up of IWRM implementation;
* Water quantity and scarcity as well as its consequences;
* Agricultural water use and esp. irrigation.

Concerning the **target audience** of the mechanism, it was stated by the experts that the mechanism should have a wide audience, focussing on international organizations, the stakeholders in water resource management at national and local level as well as the cooperation organizations intervening in water resource management.

For the **geographical scope** of the observatory regarding the potential participating countries, most interviewed experts identified the 35 Euromed countries of the Mediterranean basin and any other interested country of the Mediterranean basin as the preferred one.
At the same time, some experts preferred a more limited geographical scope for the mechanism, that is only the Euromed countries or the Euromed countries of the Mediterranean basin. In a number of occasions, it was mentioned that the start should be done with the Euromed countries of the Mediterranean basin and to expand the geographical scope from there.

Regarding the **geographical scope within the countries**, the overwhelming majority of experts stated that while it is preferable to have information and data structured according to river basins connected to the Mediterranean Sea (water resource management units), it is advisable to start with the whole countries and at a later stage move the river basin approach.

Based on these results, the next (2nd) phase of the feasibility study needs to **analyze in more detail** the specific functions of the observatory and content of work, synergies with existing related processes and institutions as well as clarify the financial sustainability of the mechanism in order to be able to support the provision of better water related information based on the needs of the Mediterranean counties.
Finally, the **current name proposal** faced quite some scepticism; therefore, it seems advisable to search for another name that is more suitable for the mechanism, focussing on the partnership aspect of the mechanism and less on “observation”.

List of Acronyms

AQUASTAT	FAO's global information system on water and agriculture
CEDARE	Center for Environment and Development for the Arab Region and Europe
CSD	Commission for Sustainable Development
DG Env	Directorate-General for the Environment, European Commission
EC	European Commission
EEA	European Environment Agency
Eionet	European Environment Information and Observation Network (EEA)
ENP	European Neighbourhood Policy
EMWIS	Euro-Mediterranean Information System on know how in the water Sector
ESA	European Space Agency
ESCWA	United Nations Economic and Social Commission for Western Asia
EUROSTAT	Statistical Office of the European Communities
EUWI-MED	European Union Water Initiative, Mediterranean component
EXACT	Executive Action Team, Multilateral Working Group on Water Resources, Water Data Banks Project, Middle East
FAO	Food and Agriculture Organization of the United Nations
GWP-MED	Global Water Partnership, Mediterranean component
IAH	International Association of Hydrogeologists
IAHS	International Association of Hydrological Sciences
ICID	International Commission of Irrigation and Drainage
IBNET	International Benchmarking Network for Water and Sanitation Utilities
IME	Institut Méditerranéen de l'Eau (Mediterranean Water Institute)
INFORAC	Information and Communication Regional Activity Centre (RAC) of UNEP/MAP
IPALMO	Institute for Relations between Italy & the countries of Africa, Latin America & the Middle & Far East
IPTRID	International Programme for Technology and Research in Irrigation and Drainage
IUCN	International Union for Conservation of Nature and Natural Resources
IWA	International Water Association
IWMI	International Water Management Institute
IWRM	Integrated Water Resources Management
JMP	Joint monitoring programme (WHO/UNICEF)
JP	Joint Process between the EUWI and the WFD
JRC	Joint Research Centre, European Commission
MAP	Mediterranean Action Programme (UNEP)
MCSD	Mediterranean Commission for Sustainable Development
MDG	Millennium Development Goals
MEDSTAT	Euro-Mediterranean Statistical Co-operation Programme
MEDPOL	UNEPMAP Programme for the Assessment and Control of Pollution in the Mediterranean Region

METAP	Mediterranean Environmental Technical Assistance Program of the World Bank
MINENV	Hellenic Ministry for the Environment, Physical Planning & Public Works, Greece
MSSD	Mediterranean Strategy for Sustainable Development
OECD	Organisation for Economic Co-operation and Development
OSS	Observatoire du Sahara et du Sahael (Sahara and Sahel Observatory)
SASS	Système Aquifère du Sahara Septentrional (NWSAS -North Western Sahara Aquifer System-)
PSI	Public Services International
Reportnet	Common tools for reporting (EEA)
ROD	Reporting Obligations Database (EEA)
UNEP-MAP	United National Environment Programme – Mediterranean Action Programme
UNICEF	United Nations Children's Fund
UNSD	United Nations Statistical Department
WB	World Bank
WFD	European Water Framework Directive
WG Groundwater	WG Groundwater of the EUWI-Med / WFD Joint Process
WG Monitoring	EUWI - Working Group Monitoring & Reporting
WHO	World Health Organisation
WISE	Water Information System for Europe
WMA	Water Monitoring Alliance (WWC)
WWAP	World Water Assessment Programme (UNESCO)
WWC	World Water Council
WWDR	World Water Development Report (WWAP)

I Background and Objectives of the report

The Mediterranean region consists of a variety of valuable and fragile ecosystems that to a large extent depend on sufficient water availability and quality. At the same time, water usage is crucial to economic development and related social well-being of the inhabitants of the region and has let in many cases to an over-exploitation and pollution of water resources. Therefore, sustainable water management based on the principle of integrated water resources management (IWRM) is needed on order to reach a balance of social, economic and ecological targets. A basic prerequisite for IWRM is the availability of sufficient and reliable water-related information and data, with so far is not guaranteed in most Mediterranean countries.
Since this situation is not unique only to the Mediterranean region, the principle of a global observation mechanism on water and sanitation has been brought up in international bodies. The European Union presented its vision at the Commission for Sustainable Development – CSD - of the United Nations in New York, April 2005. The final document published by the CSD integrates the key measures proposed by the EU to continue the progress made towards the objectives fixed by the international community: a global mechanism based on national and regional mechanisms, the improvement of data collection and the comparison of information.

On the basis of the mandate assigned to EMWIS (the Euro-Mediterranean Information System on know how in the water sector) by the Euro-Mediterranean Ministers at the Turin conference of Local Water Management, the Euro-Mediterranean water directors agreed in the resolution of the conference held in Rome, 24-25 November 2005, to

> "Study, with interested countries, the objectives and the feasibility of building up within EMWIS a regional water observation mechanism to monitor the indicators towards the achievements of the Millennium Development Goals related to water and sanitation (MDG 7) in the Mediterranean, as well as the implementation of the water related section of the Mediterranean Strategy of Sustainable Development, based on the information provided by the National Water Information Systems, whenever they exist."

The terms of reference of this study, validated in May 2006 by the EMWIS Steering Committee members, include a 1st phase to be carried-out in 2006 with the objective of laying down the main orientations proposed for this mechanism and a second phase (in 2007) to define more in details its functions, an implementation scenario and to validate the approach at a broader scale.
The first phase of the feasibility study for this observation mechanism is based on:

- A study of the expectations of the regional organizations and national partners concerned;
- An analysis of the systems for the collection and production of information existing both at the regional and national levels;

The first results of the feasibility study have been presented to the Euromed Water Directors (meeting in Athens, 6-7 November 2006) for approval before activating the second step of the study, who decided to carry out the 2nd phase of the study in 2007, including the first practical tests with voluntary countries and international organisations concerned.

The current report presents the results of the diagnostic study at the regional/international level[1]. The main objectives of this study are to:

1. analyze the operation and the difficulties encountered by the managers of the main collection processes in the Euromed countries;
2. indicate possible synergies with other organizations/information collection processes;
3. identify the potential expectations of regional/international institutions with respect to the water observation mechanism in the Mediterranean.

Therefore, all relevant regional/international institutions were contacted in the period between September and November 2006, their responses and willingness to cooperate was very positive. Their input/opinions were collected based on two questionnaires (the templates of which can be found in Annex 1 of this report). These questionnaires where filled-out either through face-to-face Interviews, phone interviews or through e-mail followed by additional contact for clarification where necessary. All filled-out questionnaires were then send to the experts and (except in two cases) checked/validated by them.
Some of the experts completed only one of the two questionnaires, depending on the work of their institutions and their own expertise.

The following table shows the institutions/processes contacted, the experts that provided the input and the interview method applied:

[1] At the national level, an analysis of the context and expectations took place in a similar way in 4 pilot countries: France, Jordan, Spain and Tunisia.

Institution	Expert(s)	Interview method	Questionnaires No.
MED POL	Abousamra, Fouad	Face-to-face interview	1
MEDSTAT/ EUROSTAT	Beaujean, Sandrine Roddier-Quefelec, Cécile	Face-to-face interview	2
INFORAC	Sensi, Alessandra	Face-to-face interview	3
EUWI-MED & WG Groundwater (DG Env)	Detoc, Sylvie	Face-to-face interview	4
WG Groundwater (MinEnv, Greece)	Tasoglou, Spyros	Face-to-face interview	5 (one questionnaire)
EUWI WG Monitoring (IPALMO)	Triulzi, Umberto	Face-to-face interview	6
EUWI-MED (MinEnv, Greece)	Peppa, Maria Papaioannou, Maria	Face-to-face interview	7
ENP & Horizon 2020 (DG Env)	Murphy, Andrew	Face-to-face interview	8
WISE, Reportnet-water / Eionet-water data flow (EEA)	Werner, Beate Uhel, Ronan Clark, Barbara	Telephone interview	9
WISE, Reportnet-water / Eionet-water data flow (EEA)	Jensen, Stefan	Telephone interview	10 (one questionnaire - not validated)
GWP-MED	Constantianos, Vangelis	Face-to-face interview	11 (one questionnaire)
MSSD (Plan Bleu)	Thivet, Gaelle Giraud, Jean-Pierre	Face-to-face interview	12
AQUASTAT (FAO)	Frenken, Karen	Face-to-face interview	13
JMP (WHO)	Sims, Jacqueline Hueb, José Bos, Robert	E-mail plus face-to-face interview with R. Bos	14 (one questionnaire)
WWAP (UNESCO)	Fernandez-Jauregui, Carlos	Telephone interview	15
OSS	Ould Baba Sy, Mohamedou	Face-to-face interview	16
IME	Kennou, Hachmi Roussel, Malika	Face-to-face interview	17
WMA (WWC)	Zimmer, Daniel	Face-to-face interview	18 (not validated)
IBNET (World Bank)	Danilenko, Alexander	E-mail	19 (one questionnaire)
WISE (DG Env)	D´Eugenio, Joachim	Telephone interview	20 (short interview summary)
UNEP-MAP	Mifsud, Paul	Face-to-face interview	21 (short interview summary)
CEDARE		No response	
EXACT		No response	

For details on the information summarized below, please refer to the detailed questionnaires that can be found in the Annexes 2 and 3 of this report.

II Summary of the water information collection processes in the Med

The first main task of this study and the related interviews was to provide an overview of the operation and the difficulties encountered by the experts of the main relevant collection processes in the Mediterranean as well as to summarize current and possible synergies with other organizations/information collection processes.
A summary of the detailed information collected on these issues during this study can be found in the sub-chapters below.

Summing up, a variety of processes and institutions are involved with collecting and monitoring water-related data and information at the regional Mediterranean level. Many of these institutions and processes have their own objectives and work content as related to the Med level, linked to their overall objectives.

Accordingly, the information collection processes differ according to:

* their objectives (e.g. specific focus on the MDGs indicators, more general water-related information, overall environmental information, information related to the Med sea itself etc.);
* their specific geographical scope (international including the Med countries, regional with a Med focus, regional including some Med countries, e.g. the Sahel region);
* their legal and institutional background (international, mainly within the UN-system, either working at the global or regional level; European, working on the Med European Union Member States or/and the Euromed countries).

The used information in most cases originally comes from the national level and are collected through various mechanisms (e.g. national focal points, field survey, bibliographical analysis, existing data bases, etc.), while a number of processes aims at interlinking, restructuring, improving and giving visibility to this information.

A number of bilateral/multilateral partnerships have been created between different institutions and processes in order to foster cooperation (thus improving the data collection itself as well as its harmonization) and avoid duplication of work. A significant number of these partnerships have either recently been set up or are currently under preparation.

Summing up the difficulties encountered by the experts in their work, main problems mentioned are:

* The identification of and accessibility to basic data;
* The data collection processes itself (too many intermediaries/different contact points within the countries, data producers overloaded by requests, too few updates and data series, expensive field investigations, etc.);
* The heterogeneity, completeness and quality of data;
* Lack of clear information production processes and common technical language;
* Lack of metadata;
* Discontinuity in monitoring over time and/or geographically;
* Need for disaggregated data (breakdown by river basin, eco-region etc.), need for information allowing regrouping or studies at basin level, according to functions/uses etc.;
* Problems related to a sustainable financing of monitoring processes.

II.1 Objectives and related processes / results

Details on the different processes / institutions and their objectives are given below based on the information provided in the questionnaires; they are grouped as follows:

1. UNEP-MAP and its regional activities;
2. EU-based processes, institutions and initiatives;
3. Further international and regional processes and organisations of relevance, mainly within the UN system but also beyond.

Ad 1.

The **UNEP-MAP** has the strategic objective of implementing its legal instruments that is the Barcelona convention and its protocols (of which most have been ratified). While there are provisions regarding monitoring and reporting within these protocols, it is only after the entry into force of the amendments to the Convention that these provisions are being enforced.

In this context, the UNEP-MAP has a variety of activities related to water in the Mediterranean region based on the different protocols in place, that are mainly implemented by the regional activity centers (RACs) and specific programmes. The main ones of relevance for this study are MEDPOL, INFORAC and Blue Plan, for which information can be found below.

UNEP-MAP Programme for the Assessment and Control of Pollution in the Mediterranean Region (MEDPOL): The MEDPOL Programme (established 1975) was initiated as the environmental assessment component of MAP. Its task is to assist Mediterranean countries in the formulation and implementation of pollution-assessment programmes (marine pollution trend monitoring, compliance monitoring and biological effects monitoring, see below). It also formulates and carries out capacity building programmes related to the analysis of contaminants and treatment of data and to technical and management training. MEDPOL - collected data and information directly contribute to the implementation of the Land Based Sources, the Dumping and the Hazardous Wastes Protocols. MED POL is also responsible for the follow up and the countries' implementation of the Strategic Action programme (SAP, launched 1997) for the reduction and elimination of land-based pollution.

The current MEDPOL Phase III (since 1996) focuses on managerial aspects of pollution control and on the implementation of the relevant Protocols.

Assistance to Mediterranean countries in the implementation of pollution-assessment programmes is ensured through the formulation and implementation of programmes addressing LBS pollution-control at both regional and national level.

The objectives of the monitoring activities implemented as part of MEDPOL Phase III are:

* To present periodical assessments of the state of the environment in hot spots and coastal areas (needed to provide information for decision makers on the basic environmental status of the areas which are under anthropogenic pressures);
* To determine temporal trends of some selected contaminants in order to assess the effectiveness of actions and policy measures, and
* To enhance the control of pollution by means of compliance to national/international regulatory limits.

The three main monitoring activities in the MEDPOL context are:

* Coastal water monitoring / measuring bioaccum. metals in the food chain. This trend monitoring takes place since 1999;
* compliance monitoring of effluents / microbiological quality monitoring (since 1992);
* information on point sources: a "first shot" on these took place in 2003; this work is currently being expanded and the first results will go online on the MED POL www-site within 2006.

In the monitoring context, MEDPOL provides financial and technical assistance to the national laboratories performing the monitoring; a common approach / "language" / methodology is being used for the monitoring activities,
As part of the MEDPOL Programme, the SAP activities started to be actively implemented in 2001. As a result, and keeping in mind the target to have by 2005 National Action Plans prepared and adopted by all countries, National Diagnostic Analyses were prepared in each country as well as national baseline budgets of pollution releases to serve as basis for the formulation of the Plans. As policy support information, a list of pollution Hot Spots was prepared and kept up-to-date as well as a list of existing sewage treatment plants.

INFORAC: Founded in 1991 as the Regional Activity Centre (RAC) for Environmental Remote Sensing of UNEP-MAP, in 2003 the Centre refocused its activities towards the application of Information and Communication Technologies (ICT) within the UNEP-MAP system. In November 2005, INFO/RAC-MAP redefined its name, mandate and activities towards strengthening information sharing and communication capabilities across UNEP-MAP and its regional network of users and beneficiaries. In this context, following recommendations ensuing from the COP 14, three focus-areas were identified for the Centre:
* Information and Communication Technologies (ICT), which is centred on the collaborative design, launched in 2006, and incremental development of InfoMAP – a common information (sharing) infrastructure/network to support the information and communication requirements (environmental, socio-economic, project related etc) of most relevance to UNEP-MAP, its stakeholders and the regional (user) community. The prototype of InfoMAP is currently under development and is expected to be finalised by 2007 (see more details under upcoming activities);
* Information, Education, Public Participation and Awareness: multiple and varied activities have been/are being organised in this area;
* Building of Partnerships and Cooperation: This field is essential for the successful implementation of the other two focal areas. Sustainable long-term partnerships and effective communication/awareness-building across sectors are strongly inter-related and complementary tasks.
While InfoRAC does not have a focus on water information, this issue is included in the activities under the upcoming InfoMAP system.

Blue Plan:
The Blue Plan is a regional activity centre of UNEP-MAP and was founded in 1979 in Sophia Antipolis, France. Its mandate as a prospective observatory on sustainable development is to provide the Mediterranean countries with information for the implementation of sustainable development. It adopts a systemic and prospective approach to Mediterranean environment and development issues using observation and evaluation tools and generating indicators. One of its main fields of activity is water.
Based on its expertise, Blue Plan has been commissioned to carry out the monitoring of the Mediterranean Strategy for Sustainable Development (MSSD) (the priority and complementary indicators can be found in the Blue Plan- questionnaire in the Annex) and more in-depth in 2006 - 2007 the priority field "integrated water resource and water demand management".
Since the MSSD was adopted just in November 2005, there has been no completed progress report (due every two year) so far. Currently, the first progress report on the water indicators of the MSSD is being conducted. In addition, national reports (in volunteering countries) are currently being prepared which also will examine the progress regarding the MSSD water indicators. The data will be mainly drawn from the existing international (FAO) database.

Ad 2.

In the context of the European Union and its Neighbourhood policy, a variety of processes and initiatives are in place that are related to water information and statistics in the Mediterranean region. These are mainly linked to the Euromed-partnership and the EUWI, but also based on European institutions / processes / Directives that are of relevance for the Mediterranean EU-Countries, while some of them are (or could be) expanded also to the entire Med region. Details on these processes and institutions (including MEDSTAT/EUROSTAT, EEA, the ENP, the EUWI, the Joint Process, the Horizon 2020-Initative, as well as WISE) can be found below.

MEDSTAT/EUROSTAT: In the context of the Euro-Mediterranean Partnership (the Barcelona Process), the Member States of the European Union and the Mediterranean partners stepped up their statistical relationships through the MEDSTAT regional statistical cooperation project, which is financed by the MEDA programme.
MEDSTAT was established in 1996 to meet the requirements set out in the Association Agreements with regard to free trade, sustainable development, including environmental sustainability, and social development. It provides access to statistical information that is helpful for tracking progress made in Euro-Mediterranean cooperation.
The objective of the project is to bring statistical methodology into line with European and international standards and to improve data consistency in the Mediterranean partner countries, as well as comparability with statistical data from the EU countries.
The MEDSTAT project is also intended to improve the quality of the services that the national statistics offices and other partner organisations involved in the production of statistics provide to users. Up-to-date, reliable, relevant and high quality data are critical for political decision-making and good governance.
The practical implementation of the project started with MEDSTAT I, the first phase running from December 1996 to March 2003, which covered several statistical sectors. Among these sectors, the environment was the subject of a new project called MEDSTAT-Env II, implemented between 2003 and 2006.
The second phase of the MEDSTAT project, called MEDSTAT II, started in January 2006. It will run for three years and has a total budget of 30 million euros.
The project is currently working with the National Statistics Institutes of the 10 partners: Algeria, the West Bank and the Gaza Strip, Egypt, Israel, Jordan, Lebanon, Morocco, Syria, Tunisia and Turkey.

EUWI-MED / Joint Process: While both processes do not at this stage have own information collection processes so far, they are of crucial importance for the Mediterranean region.
Overall, the **MED-component of European Water Initiative (EUWI)** aims to:
* assist design of better, demand driven and output oriented water related programmes;
* facilitate better coordination of water programmes and projects, targeting more effective use of existing funds and mobilization of new financial resources and,
* enhanced cooperation for project's proper implementation, based on peer review and strategic assessment.

The Component is led by the Government of Greece (Ministry of Environment, Physical Planning and Public Works and Ministry of Foreign Affairs) while the MED EUWI Secretariat is facilitated by the GWP-Mediterranean Secretariat.
A main activity of the Med-EUWI currently taking place that will be producing specific information on water-related issues in partner countries is the "Country Dialogues" process.
Moreover, the "country status assessments" currently under preparation will include key water policies and status of water reform, basic country WSS and IWRM profile, governance and institutional capacities, gaps, emerging deficiencies and bottlenecks, major on-going water programmes, mapping of stakeholders and information on national investment and bilateral/multilateral water aid and identification of Med-EUWI intervention.
The country dialogues process has been initiated with two countries (Egypt, Lebanon) so far.

Linked to the EUWI-MED, the **Mediterranean Joint Process** is a collaboration between the Med-component of the EU Water Initiative and the Common Implementation of the EU Water Framework Directive (WFD).
The objective of the process is to produce recommendations for water management based on the WFD. For EU countries, these recommendations could be used as guidance when implementing the directive and as technical elements for the convergence of legislation for non-EU countries. This is the case of the European Neighbourhood Policy, which - through the implementation of Actions Plans agreed between the EU and partner countries - aims in particular at the gradual approximation of policy, legislation and practice. The issues of sustainable development and environment are included in each of these Action Plans.
Three topics were identified by Mediterranean experts in September 2004 that have led to three working groups:
* Groundwater management (lead: Greece);
* Water scarcity (lead: France);
* Linking rural development with water management (lead: Ispra Joint Research Centre).
The Joint process work does not have specific aims linked to indicators, but focuses its work on the specificities of the Med region. Thus, main issue influencing its work is water scarcity (both its technical and political/management dimension).
The first phase of the Joint process was based on information and knowledge (experts) of existing case study work, e.g. through the Mediterranean Pilot River Basins of the WFD-CIS process.

EUWI – WG Monitoring: The Monitoring and Reporting (M&R) working group is active since September 2004 under the lead of Italy and the EU-Commission.
The objective of WG is to outline an effective M&R system for monitoring progress made in implementing the EUWI's set objectives and measuring the contribution of the EUWI towards the water-related MDGs. Therefore, monitoring here does not refer to the "traditional" information collection, but to a policy process monitoring, which represents an important new approach.
The starting point was M&R in the water sector, but also M&R methodologies used in other policy sectors where utilized. The result of the WG is a structural methodology for assessing EUWI, including some examples on how to use the methodology. It aims at linking the different levels of policy in a coherent way, with the final and most important level the (local) one of realizing projects on the ground.
For each of the three first policy levels, quantitative and qualitative indicators have been developed and it has been attempted to develop an exemplary application of this methodology for the African Component of the EUWI in order to assess the consistency of the different policy levels. These levels are:
1. Global goals (MDGs etc.)
2. Objectives of the EUWI
3. Objectives of a specific EUWI regional component
4. Local implementation (project level); not dealt with in the exemplary application for the EUWI African component.

In this way, elements of existing monitoring projects are utilized for monitoring the EUWI-policy process. The methodology is awaiting endorsement by the steering group of the EUWI.

ENP - Horizon 2020 Initiative: The Mediterranean part of the European Neighbourhood Policy is closely linked to the EuroMed Process/Barcelona convention. Related to this, the recent Horizon 2020-initiative will seek to increase collaboration for the depollution of the Mediterranean.
The Communication from the EU Commission: "Establishing an Environment Strategy for the Mediterranean" (5.9.2006, COM(2006) 475 final) describes the overall environment

strategy concerning the Med. In addition, it describes the financial assistance instruments that could be used to support the aims of the strategy. The “European Neighbourhood and Partnership Instrument” (ENPI) plays a central role (replacing MEDA, TACIS etc. programs from 2007 onwards. It is composed of national as well as regional (Me) components with the national budgets making up the bulk of the assistance. On the Horizon 2020 initiative, a proposal for a "feasible timetable" is presented in the Annex to the Communication.
A key element of the European Neighbourhood Policy are the bilateral “ENP Action Plans” mutually agreed between the EU and each partner country, of which 5 have been completed in the Med region and currently implemented; an additional 2 are under preparation.
They include general objectives also on environmental issues, in which water plays an important role. As an integral part of the political dialogue of the EU-Commission with the partner countries, a formal structure of sub-committee meetings under the bilateral Association Agreements has been developed. One of these sub-committees in each dialogue is dedicated to the Environment.
These sub-committees will also promote and monitor implementation and the Commission will report on ENP progress by the end of 2006.

WISE, Reportnet-water / Eionet-water data flow (EEA – EU Commission): The overall objective of the WISE-process (as the water-related component of INSPIRE on European level) is the “development of a new, comprehensive, shared European data and information management system for water, including river basins (WISE)”. The system should be fully implemented by 2010. The WISE set-up is currently finalized and the first public version is expected to be launched in March 2007 (www.water.europe.eu, see for a prototype version: http://dataservice.eea.europa.eu/wise/).
WISE is an information organization and IT-based implementation project for harmonized water related - data collection and reporting based primarily on WFD-implementation requirements. The philosophy of WISE is to start with a “core” set of water-related information as a basis, combining information collected in the Member States in the context of WFD-implementation, reporting for the European Waste Water Directive as well as EEA-data (European environment information and observation network (Eionet), Eurowaternet, see below).
Based on this, it is planned to expand the scope of water-related information under WISE to reported information for other legally-binding current European Directives (e.g. Bathing Water, Drinking Water, Nitrates Directives), but at a later stage also of information flows related to future EU-Directives (Marine Strategy, Floods Directive).
It is also planned (but not specified yet to a full extent) to expand WISE to information of Non-EU-Countries reported in the frame of international River Basins / WFD-implementation (Danube etc.) as well as in the frame of regional agreements (OSPAR, inclusion expected for 2007/08 etc.) on a voluntary basis by 2010.
In this context and as it is planned to expand WISE to a “single-entry point” for all water information, it will be expanded also to neighbouring countries in the future, also include water-related information from the Mediterranean region.

Beyond the current work on WISE but closely linked to this, the main water information collection processes / networks / databases coordinated by the EEA are:
* Reportnet-water / Eionet-water data flow:
Eionet-water is built upon the framework of Reportnet, the electronic infrastructure and web-tools for streamlining flows of environmental information in Europe. The information provided through Eionet-water (based e.g. on the WFD-requirements and monitoring stations but also data from other international sources) is collected in the Watbase database and is used for the construction of a core set of water indicators and fact sheets, used e.g. for the EEA “State of Environment” and Outlook reports as well as thematic reports focused on water issues.
As part of Reportnet, the EEA's reporting obligations database (ROD) contains records describing environmental reporting obligations that countries have towards international

organizations. Reporting obligations are requirements to provide information agreed between countries and international bodies such as the EEA or international conventions. Reporting obligations provide the basis for most environmental information flows. ROD covers all environmental reporting obligations that EEA member countries have towards DG environment, European marine conventions, Eurostat, OECD, UN, UNECE, as well as the EEA itself.
* Eionet is a collaborative network of the European Environment Agency and its member countries, connecting National Focal Points in the EU and accession countries, European Topic Centers, National Reference Centres, and Main Component Elements. These organizations jointly provide (on a voluntary basis) the information that is used for making decisions for improving the state of environment in Europe and making EU policies more effective. Eionet is both a network of organizations and a electronic network (e-Eionet). There is a specific part of Eionet dedicated to water with the Eionet-water community (National Reference Centres for water) and the respective data flow.

Ad 3.
Finally, there is a number of international and regional processes and organisations, mainly within the UN system but also beyond, that are of relevance for water information in the Mediterranean. A specific focus of these is the monitoring of the MDGs. These are:

AQUASTAT is FAO's global information system on water and agriculture developed by the Land and Water Development Division. It collects, analyses and disseminates data and information by country and by region. Its aim is to provide users interested in global, regional and national analyses with comprehensive information related to water resources and agricultural water management across the world, with emphasis on countries in Africa, Asia, Latin America and the Caribbean.
1. The main information collection process of Aquastat leads up to the country database: includes information on approx. 50 variables (with data of varying quality) for about 138 countries with a focus on irrigation; the information is ideally updated every 5 years.
The information collected does not contain primary (field) data, but a collection of secondary data. For certain variables information is used from other agencies considered to be the lead agencies for these variables: Faostat (total area, cultivated areas, population); World Bank (GDP and agricultural GDP); UNDP (Human development index), WHO/UNICEF Joint Monitoring Programme (access to improved drinking water sources and sanitation).
The main products resulting are the database as well as country profiles (these also include more qualitative information on the main water management problems), regional profiles (also including more qualitative information).
2. Further information collection process of Aquastat of interest are:
* Work on water resource statistics, which is updated whenever new information comes available and during the updating of the country information; setting up overall long term average water balance for a country.
* Information on agricultural water use per country: no reliable information based on direct measurement exists in most countries on agricultural water use & productivity; aim here is to produce comparable data; therefore, model – based information is developed, cross-checked with Faostat data and Aquastat main country database and country reviews.
* Production of global information on irrigation areas: A mixture of sources is used here: remote sensing information, Google Earth, statistics, information collection on the ground.

JMP (WHO): The JMP is a UN programme jointly implemented by WHO and UNICEF with 3 main objectives:
- Monitor trends and progress within the water supply and sanitation sector, including MDG7 targets
- Build national capacity for monitoring
- Inform policy-makers and civil society on the status of the sector

The main information output of the JMP is the JMP database with 3 types of indicators: Population, water and sanitation coverage, including a breakdown between urban and rural plus household connection and total population.
The JMP has a Technical Advisory Group providing technical and strategic advice. The members are: individual sector experts; representatives of sector organizations and major survey organizations.
The JMP web site includes all the summaries of country surveys as well the calculations of coverage figures. Details of the household surveys themselves (raw data) should be obtained directly from the survey institutions.

WWAP (UNESCO): The UN- based "World Water Assessment Programme" involves a broad variety of stakeholders in order to obtain a global picture of the water situation, since focusing on what is available might lead to certain biases/distortions based on the fact that currently no world-wide database on the word water's status exists. It forms an umbrella programme pooling the unique perspectives and expertise of the 24 UN agencies that comprise UN-Water, in partnership with governments and other entities concerned with freshwater issues.
The main output is the "World water development report" (WWDR) that is produced every 3 years, the last one presented at the Mexico World Water Forum in 2006. The WWDR summarizes water-relevant indicators (from 18 in the past to currently 110 in the last of 2006) in order to capture the status, the main water-related problems and trends in their development. These indicators have been linked to the different water-related targets of the MDGs. Based on this information collection, 3-4 indexes will developed for the next WWDR in 2009, tailor-made based on the needs of the end-users that will be neutral and objective.
A main issue in this process is work done on water availability based on water balances (which is an objective approach). For many indicators, there are no "design" difficulties; an important exemption is the value of water that needs to capture the economic, but also its ecological, social and cultural value of water.
It needs to be underlined that there is the danger of remaining too theoretical; therefore, 42 case studies have been elaborated in the last WWDR which is the only way to test the indicators.

OSS: The OSS works for the rational management of the underground water resources of transboundary basins in Africa. The Euro-Med countries concerned by the OSS are: Morocco, Algeria, Tunisia and Egypt.
The activities of OSS are undertaken in the form of projects limited in time. For example, the North Western Sahara Aquifer System project (Algeria, Tunisia and Libya) was carried out between 1999 and 2006. It led to the establishment of a dialogue mechanism between the countries and common tools in order to monitor the water resource.
The elaborated information products are diffused by the OSS only after authorisation by the countries.
Common data base and models are elaborated in cooperation with the countries. The resulting tools are installed in the countries. They are exclusively for internal use by the institutions involved in the projects. All the countries involved in a project all receive the same tools including the full set of data.

IME: The IME is an international NGO promoting co-operation in the field of water management in the Med region through exchange and sharing of information. It is linked to a variety of stakeholders in the Med countries.
It does not directly lead an information collection process, but in case water-related information is needed, it has the networks and experience to obtain it.

WWC-WMA: The Water Monitoring Alliance, an initiative of the World Water Council, is made up of organisations involved in the collection, analysis, reporting and dissemination of information on water in all its uses. Its objectives are to enhance a greater exchange and sharing of information amongst the organisations and programmes involved in the collection and dissemination of water data and to provide a better access to the information for the decision makers, the media and the public at large. The Alliance is a cooperative partnership among organisations working at the international, regional, national and local levels.
The Water Monitoring Alliance does not produce new information, but aims at enhancing interlinking of and exchange between monitoring programs at all levels and to facilitate access to their outputs for a variety of users.
Therefore, it offers a Web portal/database with a compilation of information on a variety of monitoring programs from a variety of institutions/initiatives. It specifically aims at interlinking monitoring programs providing information on the water related Millennium Development Goals (MDGs).

IBNET: The International Benchmarking Network for Water and Sanitation Utilities (IBNET) has been initiated in the 1990 by the World Bank and is at present the world's largest data-base of cost and performance information for water and sanitation utilities around the world. Purpose of the IBNET is to improve performance of water supply and sanitation utilities by means of an integrated benchmarking system. The demand for improvement derives from increased expectations from costumer as well as from government side. It relates to water quality, sustainability, efficiency (in the sense of cost-performance ratio) as well as quality of costumer service.
As water supply and sanitation is a local service, comparison with other utilities is rather difficult. Therefore, IBNET has been developed as a standard set of performance indicators used to make the functioning of water supply and sanitation facilities more transparent.
Information published by IBNET is based on comparative data and gives water utility managers as well as those charged with regulatory or oversight responsibilities the opportu-nity to know how well the utilities are performing in the real world. They also give the opportunity to set targets for improvement, and to access knowledge on best practices of other utilities that will support improvement programmes.
The IBNET database contains information from 1900 utilities from 74 countries, including 5 Mediterranean countries.

II.2 Summary analysis of difficulties encountered

In detail, the following difficulties were mentioned by the different institutions in the context of monitoring / information collection as related to their activities:

MEDPOL:
* lack of information about the different ecoregions (the Mediterranean is not divided yet into ecoregions) within the broader Med marine ecosystem (which are useful geographical areas for management issues);
* at the national level: capacity problems of the national institutions involved; while there are QA processes in place, there are problems in the implementation details;
* for the EU-states of the Med: no constant provision of data. Since there are higher monitoring requirements based on EU legislation, it is not so easy to extract the Med-relevant data from the large databases in place.

MEDSTAT/EUROSTAT:
The "entry points" of Medstat are the focal points situated in the statistical institutes/offices of the respective countries (not in the environment ministry); these institutions do not produce primary information (in the case of water-related information, this comes for the water authorities/ministries of environment);
This situation creates problems e.g. if the water-related information has different definition than the standard ones promoted by MEDSTAT: knowledge in the statistical institutes/offices is missing for converting it in order to "make it suitable" for the required data structuring; so, stat. institutes need to improve their environmental knowledge (through training etc.) in order to be able to reduce inconsistencies.
Main problems faced in the information collection process:
* loose information;
* limited/no information on the specific production methods of the data;
* the links between institutions within the country producing and providing information are not always formalized;
* under the country level (within the countries): no homogeneity exists in many cases for calculating indicators
Main missing information:
* available water resources (e.g. often only 1 year information, no 30 year-averages etc.), no/very limited information on groundwater;
* on the water use of different sectors, esp. on agricultural water use (better situation on household water uses: from water departments);
* on self-supply in general (all uses).

INFORAC:
The main difficulty relating to water information collection in the Med region is the large number of not-coordinated, fragmented information collection processes, including validation, at national and regional level.

Blue Plan / MSSD:
* the indicators found in the MSSD regarding water are complex, there are differences at the national level regarding the definition of the indicators, so there are problems of homogeneity;
* the differences in the national focal points of the different processes and institutions (BP/UNEP-MAP/MCSD, EMWIS, AEE, MEDSTAT, FAO…) also create homogeneity difficulties of the information collected;
* missing information for some indicators.

Joint Process / WG Groundwater:
The Joint Process has shown that there are considerable gaps on data about the impacts of droughts/water scarcity in the Med region.
Overall, the work of the WG groundwater showed that a main information gap in the Med region concerns groundwater quality data. The WG concluded that there is inadequate knowledge of both the groundwater resources and the present and forecasted demand for water. The existing monitoring data is not sufficient and suffers under aggregation difficulties of existing monitoring data as well as a set-up of monitoring systems that has different aims from an overall understanding of the groundwater situation. More specifically:
* There is a lack of detailed and reliable information on many aquifers (e.g., dimensions, hydraulic relations, volumes of water stored in both saturated and unsaturated zones, recharge rates, chemical composition of water, etc.);
* For many aquifers, water quantity and water use data are available but there is a significant lack of information on groundwater quality;
* Consistent and large data gaps can be identified both temporally and geographically;
* Monitoring of groundwater and surface water, of water quality and of quantity are often performed by different authorities, so the resultant information needs to be assessed in combination;
* Moreover, for many aquifers, the existing data are unsuitable, or poorly suited, for regulatory or planning use and irrelevant to the management process.

EUWI – WG Monitoring:
The elaboration of the methodology was complicated; linking the quantification of "initiatives" to single indicators (that have to be transparent, measurable, not too complicated and readily available / not too expensive to obtain) has been a major issue.
Also the experimental implementation of the developed methodology within the regional components of the EUWI has faced quite some difficulties.

EUWI-MED:
The work of the EUWI-MED so far has identified some main information gaps with regard to the achievement of the overall EUWI objectives:
* lack of verified information on actual water-related financing and expenditure in partner / recipient countries;
* lack of information on the investments needed in the water sector in the partner countries in order to reach the MDGs.
Furthermore, on a more technical level, information gaps are identified on:
* water supply and sanitation situation in rural areas;
* information related to the different water uses and esp. irrigation;
* data, on a transboundary basis, in the case of shared water bodies.

Reportnet-water / Eionet-water data flow (EEA):
With a view on Med-related water information - since the current information collection requirements and obligations towards the EEA focus on water quality issues - there is limited information available on the issues of water quantity / scarcity / droughts. Limited information is also available on specific water uses and their efficiency (here mainly irrigation). A further issue for which only limited information is available so far is the linkage between climate change and water, esp. the integration of CC in the development of RBMP.

AQUASTAT:
Main problems faced in the context of Aquastat information collection processes are:
* non-availability or unreliability of some major indicators;
* lack of sub-national level information;
* lack of information by river basins;

* inconsistent definitions of variables / methodologies (strongly linked to the specific reference used);
* time-consuming process of data validation / quality check;
* update and update frequency of information;
* lack of time series;
* sustainability of monitoring processes needed in relation to the national capabilities and resources.

JMP (WHO):
* The definition of safe, or improved, water-supply and sanitation facilities can differ between countries and within countries over time;
* Assessing water quality through national health and demographic surveys, until now, is considered too costly and time consuming to be practical;
* Household surveys do not address: water quality, used water quantity per capita, reliability/continuity of service, seasonal variations in use of source, how protected an improved facility is and its affordability;
* Figures provided by the JMP are often different from national figures because of the different methodologies used.

WWAP (UNESCO):
Main difficulties regarding the collection of water related information are:
* Language problems (e.g. some of the relevant information is only available in the local language) which is a problem of international cooperation in general distorting the picture on available information;
* Lack of common standards/language (e.g. within the natural science scope of water availability in a country/basin related to the definitions of atmospheric – groundwater-surface water availability);
* Lacking information on water demands for the different uses (human, transport, food production, energy, environment etc.);
* Dissagregation of social data relevant for the water issue (structured round the countries and not according to river basins).

OSS:
* Harmonization, discontinuity of datasets (monitoring gaps). Some difficulties are also related to the lack data and its heterogeneity;
* Lack of environmental and socio-economic information on water uses.

IME:
Some important difficulties related to water information collection in the Med are:
* disparities between the information found and the realities on the ground;
* difficulties in validation of the information provided by National Authorities.
Esp. for the irrigation sector:
* missing data
* information not updated regularly
* different quality of data in different regions of the same country;
* in some cases, information is available but scattered within the national/regional administration, so it is not publicly available/visible.

WWC-WMA:
Most of the existing monitoring programs (including the UNWater-approach) are based on a “top-down” approach, having a “birds-eye view” on monitoring information. This approach can lead to a loss of ownership and be based on and aggregation of more local information that does not have sufficient quality. In this context, trying to develop uniform indicators for

monitoring information is useful, but does not solve the problem of insufficient local information.

II.3 Main upcoming activities / synergies of processes

In detail, the existing synergies and upcoming activities mentioned by the experts are:

MEDPOL:
Strong links are in place with the EEA and will be strengthened further in the future.
Regarding future activities, a new phase of MEDPOL (Phase IV, 2006–2013) is currently being formulated and a new programme of activities will be proposed. The main objective of the new phase of MEDPOL is to present to the Contracting Parties tools and means to ultimately achieve and monitor concrete reduction of pollution as one of the main elements towards sustainable development and consequently implement the legal instruments.
Thus there is clear convergence of the whole process MED POL/SAP/NAP with the MSSD objectives and the recent EC Initiative "Horizon 2020". Synergies and linkages are therefore being established.
In addition, based on the objectives of the EU-marine strategy, harmonized approaches are being developed in order to implement the strategy through the different regional conventions (Barcelona convention for the Med, but also HELCOM, OSPAR etc.). While the commitments are similar (thus the Barcelona convention being in line with EU Directives), different approaches are being used. The Barcelona convention protocols have focused so far on sources of pollution (direct intervention) and do not include quality aims based on the ecosystem approach.
Therefore, a policy paper (under the lead of MED POL) is currently being prepared in order to move UNEP-MAP towards the ecosystem approach (in cooperation of experts from other regional conventions e.g. HELCOM, OSPAR). A draft of the paper will be available in April 2007. Linked to this, the MED POL monitoring activities have so far been centred around specific parameters; recently, indicators are being developed based on the “state-impact”-link of the DPSIR-approach in order to assess the quality of the marine environment. These indicators will merge information form different RACs of UNEP-MAP and will be used for the assessment reports. At the UNEP-MAP-Contracting Parties (COP) meeting in November 2007 the core set of indicators will be presented for endorsement.

MEDSTAT:
In the Medstat-work so far, the interlinkages mainly took place as cross-checking of data with the “United Nations Statistical Department” (UNSD) as well as with ESCWA (United Nations regional economic and social development commission in Western Asia). This has been valuable to improve the quality of the collected data.
Currently, the Medstat II-project on the environment and its work program is being revised since it is entering a new phase; this work has not been completed yet (the 3. phase has started on 01/06 for the other 8 sectors, while for the environment it started 07/06). This next phase will follow a different philosophy: up to now, long and “heavy” questionnaires where used. Now the information collection will more strongly be based on the needs of the countries, while the “environmental accounts”-approach will be used as frame/basis. A focus will be on data about the resource itself and the different uses. In addition, economics aspects of environmental data will be added, too.
For the next phase of Medstat, two kinds of synergies will be developed:
* With other statistical sectors who can have links with environment such as tourism, transport, energy in order to develop common understanding and to avoid duplication.
* With other programmes, such as “Horizon 2020” Initiative (former SMAP), the METAP (Mediterranean Environmental Technical Assistance Program of the World Bank), the Mediterranean Action Plan (MAP), etc.

INFORAC:
So far, many of the partnerships in the Med region have been too informal. Therefore, InfoMAP is developing formal working partnerships in the region and has promoted and is getting involved in a number of alliances including with the:
* Med-Countries: as “owners” as well as “users” of InfoMAP;
* MAP Coordination/MEDU – multi-agency partnership management & Oversight;
* MAP RACs: first signatories of the InfoMAP partnership agreement; leadership from INFO/RAC;
* DG Env: joint work programme with MAP;
* EEA: joint work programme for 2006-2008 between UNEP-MAP and the EEA (under finalisation);
* Eurostat – National & Regional Infrastructure for Regular Statistical Data through MEDSTAT I & II;
* Global Environment Facility (GEF);
* International Telecommunications Union (ITU);
* United Nations System Staff College (UN).
The development of InfoMAP (prototype available end-06 / in 07), an advanced portal which will serve as shared Information Infrastructure for the Mediterranean, will be one of the main activities that InfoRAC will carry out while developing the IC strategy of the MSSD in the field of information (including water-related information).
The definition and scope of InfoMAP has been progressively refined and expanded 1) to meet the specific information requirements of Countries as well of the MSSD, as well as 2) to guarantee interoperability with the EC existing mechanisms, which demand effective monitoring, assessment, reporting etc. 3) and complement initiatives run under Horizon 2020.
The InfoMAP will be a portal and will ensure:
* Interoperability with National (Environmental) Information Systems & Nodes e.g. Egypt, Libya (Emerging NSDI) etc.;
* IC Capacity of MAP Components;
* Harmonization with EEA’s Reportnet & SEIS Approach;
* Integration of Clearinghouse activities, e.g. SMAP-RMSU;
* use of the outputs of the MEDSTAT Programme;
* inclusion of the MedPol System.
At the first stages of this process leading up to InfoMAP, defining exactly what is meant by a ‘common information infrastructure’ has been a key challenge and starting-point. From the outset, collaboration has been vital—with valuable inputs from early collaborators; but also stressing the requirement for a wider constituency of partners–international, public, private, civil society, NGOs etc. as initiative progresses since all have a stake in the results so far.
In its first six months of activity (from Nov 05), INFO/RAC has focused on InfoMAP as one of the key element of the IC Strategy for the MSSD. The main objectives of the vision are to:
* Enhance and improve dialogue and cooperation among MCSD Actors;
* Provide user-friendly access to selected documentation, data and media outputs;
* Implement successful media/public information campaigns in target segments;
* Transparently measure and replicate what works across the region.

Blue Plan / MSSD:
Stronger links to the following institutions/processes for better information quality/homogeneity regarding the MSSD aims will be valuable in the future:
* EEA / WISE system: of limited use for the non-EU-Countries, since too detailed/focused on WFD implementation, but of use for the Med EU-countries;
* FAO: Waterbase;
* Eurostat – Medstat;

* WHO-JMP: here, a stronger co-operation will enable a better consistency of data provided from the different national focal points (which is right generally speaking, for all the institutions/processes).
Based on the experiences collected by the first progress report and the national studies, the list of MSSD indicators and their definitions will be re-assessed (changed / adapted) by 2009-2010; based on this revised list, harmonization of the data provided will be sought for the future.
Besides the information collection on the MSSD water indicators, the second field of activities in the context of the MSSD by BP is related to the exchange of experiences within the Med region regarding water demand management / IWRM. In this context, national and regional reports will be prepared in order to reinforce exchanges. A workshop will also take place in 2007 for which a call for papers has been published.

Joint process / WG Groundwater:
The next, second phase of the Joint Process currently under preparation should be linked to the ENP-process and esp. the "ENP-action plans". The JP will support the regional programming of the ENPI (European Neighbourhood and Partnership Instrument), providing a mechanism for facilitating convergence of legislations through exchanges between EU and non-EU experts at regional level.
In addition, it is under consideration to set up a network of Mediterranean Pilot River Basins within the Joint Process.
Based on the results and recommendations of the WG groundwater, it is planned to set-up a program on groundwater monitoring, utilizing existing data but also potentially collecting new information.
A statement on the main implementation points of the next phase of the Med-EUWI will be presented at the Euro-Med water directors meeting in November 06 in Athens.
Institutions that could/should play a role in the activities of the next phase of the Joint Process include (on groundwater but also beyond):
* Sahara and Sahel Observatory
* CEDARE (e.g. on the Nubian Aquifer)
* GEF-Med program phase II (working on pilot cases, capacity building and (together with GWP-Med) on IWRM)
* EEA
* Eurostat/Medstat
* UNESCO-WWAP
* OECD (working on financial information of water-related projects as well as data collection for the environmental reports)
* National statistical offices (esp. on additional information about socio-economic data/information, pricing, different sectors related to water use etc. beyond the information to be found in the environmental/water institutions)

EUWI-MED:
The EUWI-MED works together with a number of other organizations/processes. Strong working links have been established with the European Commission (DD Environment, DG AidCo), OECD (on ODA information), the World Bank, UNEP-/MAP, UNEP/GPA, UNEP-UCC, the GEF S.P. Programme, the African Development Bank, EMWIS, GWP-Med as well as other Regional networks and Agencies.

EUWI – WG Monitoring:
Representatives of donors, recipients and international organizations leading M&R systems actively took part in the M&R WG. Among them were Denmark, Greece, Japan, Spain, United Kingdom, UNDESA, WHO, UNICEF, WWC, WWF, IRC, EU Water Facility etc.

Especially within UNWater, UNDESA is developing a similar M&R information system / large database for all agencies; at the same time, all competencies are left within the agencies themselves.
It would be advisable to closely link the further development of the EUWI-M&R methodology to this UNWater approach.
Other institutions with which a close cooperation is taking place are:
* FAO / Aquastat;
* OECD /EU-Commission (on water financing data);
* Statistical department of the UN etc.
The current work phase of the WG has ended; the next step should be the application of the methodology by the different components of the EUWI in order to test and develop it further. For each specific component, the methodology and indicators would have to be adjusted to the specific circumstances.
This would e.g. lead to an assessment of the different initiatives of a component (e.g. IWRM support, transboundary water management support projects, country dialogues etc.) are consistent with the aims of the EUWI. In a second step, the effects of the initiatives/projects selected would be checked as well as their consistency with the overall EUWI objectives. The regional components of the EUWI need to put a focus on this and provide the necessary resources; the timeframe would be approx. 1-2 years.
The WG M&R can offer some methodological support if needed and has proposed a training process on the application of the methodology to take place, but it´s future financing and continuation of work is unclear at this point.

ENP – Horizon 2020 Initiative:
Up to now, there are no specific processes defined in the ENP action plans for measuring the progress regarding environmental/water related aims. Also for the progress reports, it is currently not planned to develop and use specific numerical indicators. At the same time efforts are underway in the EU to streamline the reporting requirements for the EEA and the Barcelona convention and its protocols.
On the Horizon 2020 initiative, based on the EU-Communication, the European Environment Agency in cooperation with the statistical office of the European Commission (EUROSTAT), the Mediterranean Marine Pollution and Research Programme (MEDPOL) under the Barcelona Convention, the Euro-Mediterranean Water Information System (EMWIS), the European Commission and other relevant bodies is currently developing a “scorecard” to measure progress with Mediterranean pollution levels taking advantage of ongoing work at the European level.
This work is ongoing, a first “options paper” is currently under preparation. It is planned to present some main elements at the Cairo Euromed Environmental Ministers meeting in November 06.

WISE, Reportnet-water / Eionet-water data flow (EEA):
The current work of the EEA on water going beyond the EU-25 includes inclusion of information collected in a number of international and European processes (WWC, FAO, UnWater, OECD etc.). More specifically, there is a joint questionnaire of the EEA and Eurostat / Medstat on water uses and wastewater loads.
This cooperation will be strengthened in the WISE-context in order to increase the comparability of the information collected and to strengthen the links to the European reporting requirements including those for WFD-implementation and to better include the work done in the context of the EUWI.
Within the Horizon 2020 initiative, the EEA has been asked to play a role in cooperation with Eurostat/Medstat, MED POL, EMWIS, the European Commission and other relevant bodies to develop a “scorecard” to measure progress with Mediterranean pollution levels. For further information on cooperation with UNEP-MAP components, please consult the draft joint EEA-UNEP-MAP work plan.

On the issues where limited information is available so far (water quantity / scarcity / droughts, specific water uses and their efficiency, linkage between climate change and water) the EEA is planning to increase its activities, which will be found in the "EEA annual work programme" for 2007. This additional work will also lead to more / better information to be used in the "State of environment" and Outlook reports as well as future thematic reports on water issues.
In the context of WISE being the "single entry point" for water information, it is under discussion to include additional information on water quantity issues as well as water information of neighbouring counties / international river basins / regional processes-conventions.
These expansions e.g. for neighbouring regions like the Med will be demand / user need – oriented, supporting the coverage of information needs e.g. also for Southern Med-countries.
Finally, it is planned to develop a "platform for sharing information" within the WISE information system in order to collect and share experiences including a database of WFD implementation projects as well as water-related research projects.

AQUASTAT:
Possible synergies concerning Aquastat-work is stronger cooperation with other UN agencies in UN-Water in order to reach agreement on "who does what" on water monitoring with the UN-system and on harmonization of definitions and data;
Currently, the Working Group on Water Statistics (including several UN Agencies, Eurostat, etc.), which is a sub-group of the Inter-secretariat Working Group on Environmental Statistics is trying to divide the tasks on water monitoring between the different institutions in order to avoid double-working and increase specialization / efficiency; working on harmonization of definitions;
Within this work, there are links established with regional institutions (ESCWA etc.), at the same time, the focus is on the global level.
On new initiatives; Aquastat is currently doing more work on irrigation investment costs (database to go online end of 2006/beginning of 2007).

JMP (WHO):
Current plans focus on:
* Building national monitoring capacities
* Rapid assessment of drinking water quality
Potential synergies could be developed at two levels:
1. Building national monitoring capacities: use of common definitions, harmonized survey instrument, Rapid Assessment of Drinking Water Quality, improving the ownership of JMP concepts by country decision makers; mapping the households' surveys (conducted by Health Ministry) and work done by Water Ministries in order to consolidate the results, preparing national "maps" of actors, role and responsibilities in monitoring;
2. Working through regional monitoring mechanisms in order to improve the data collection.

A multiplicity of monitoring mechanisms brings about a huge risk of conflicting statistics and confusing messages being issued by different organizations. A major achievement of the JMP was precisely to ensure that all international organizations adopt the national coverage statistics calculated and disseminated by the JMP, which are normally based on solid evidence and are calculated through a clear and transparent methodology.

WWAP (UNESCO):
The WWAP cooperates closely with 24 UN-agencies of UNWater and other institutions of relevance for the water issue.
Therefore, it is closely linked with the data and information systems of the UN agencies, for example GRID, GEMS-Water, the Global International Waters Assessment (GIWA) of UNEP, the Global Runoff Data Centre (GRDC) of WMO, AQUASTAT of FAO, the Interna-

tional Groundwater Resources Assessment Centre (IGRAC) being established by WMO and UNESCO, the water supply and sanitation databases of WHO and UNICEF and the databases of the World Bank system.
Additionally, the WWAP is affiliated to following groups and organizations:
* European Union Water Initiative (EUWI)
* Global Water Partnership (GWP)
* International Association of Hydrogeologists (IAH)
* International Association of Hydrological Sciences (IAHS)
* International Programme for Technology and Research in Irrigation and Drainage (IPTRID)
* International Union for Conservation of Nature and Natural Resources (IUCN)

The work programme in view of the 2009-WWDR includes as main points:
* Increasing use of remote sensing information / satellite supported information systems (complemented by field studies); information will be complied within the UNWater process under the lead of UNESCO;
* Development of new capacities in developing countries: supporting the emergence of a "new water culture" that sees the collection of data as a main cornerstone of water management;
* Reducing the set of indicators used for the WWDR, development of social/environmental indexes.

OSS :
Synergies could be developed for a joint approach to set-up a regional water information system. The SASS experience could also be of benefit for other transboundary aquifers (under development between Mali, Niger and Nigeria).

IME:
IME is setting up the MedWat service mechanism which is a dialogue unit to promote exchange and cooperation of experiences and knowledge between the Mediterranean water authorities.
In addition, due to difficulties to obtain relevant information and the importance of the irrigation sector in the water-scarce Med countries, the IME has performed an "pre-feasibility study" (in 2003-2004) on the initiation of an observatory on irrigation water in the Med region (1. phase) with a focus on the southern Med countries.
This comprised assessments at the national level in 11 countries (the core group). These assessments identified the persons within national authorities dealing with irrigation information and collected any existing information regarding irrigation in these countries in order to assess the main gaps/needs. These first results where presented and discussed at a workshop in May 2004, which concluded that the main information missing regarding the irrigation sector in the Med is water quality on irrigation, professional training on irrigation, national policy on irrigation training etc.
These indicators are based on the stakeholder needs for improving irrigation in the Med, thus leading to water savings.
The phase 2 regarding the initiation and setting up of an irrigation observatory (the feasibility study) has not been conducted due to lack of funding. There is a continued strong interest by the South Med countries, both from stakeholders in general and more specifically within the relevant national authorities already involved in the phase 1.
The overall aim of the irrigation observatory would be to provide a platform of exchange (South-South, North-South) leading to better water management. The target group would mainly comprise decision makers and stakeholders. It would be crucial to initiate a continuous information collection process.
The irrigation water observatory could be linked to already existing information collection institutions (e.g. the WHO, FAO).
In addition, links to the "joint process" and esp. the WG on water scarcity could be valuable.

Links should be sought for with the potential overall water observatory.
Connection should be made the Meda Water Programme and its projects focused on local management of water in MEDA Countries.

WWC-WMA:
Currently, country profiles bringing together water information from a variety of sources (e.g. OECD, WHO, JMP etc.) are being developed thus - inter alia - confronting water-related needs and current water-related financing. This will lead to a combination of information that usually is not "seen together" at the country level.
In addition, the WMA aims at increasing the relations between monitoring programs, from - the current communication phase (database) strengthening the exchange of information to
- interlinking different monitoring programs (like e.g. the potential linkage of the OECD data on Official Development Aid (ODA) to the data of the Joint Monitoring Program of WHO-UNICEF) enabling mutual access to data and information and exchange of data.
Later phases of the WMA could lead to:
- the coordination of monitoring programs (joint programming etc.) and
- cooperation on definition and/or use of common methods and data, common methods to enhance exchangeability allowing benchmarking and the selection of common indicators.
Setting up regional "branches" of the WMA focusing on specific regions (e.g. the Mediterranean) is imaginable.
Due to the problems created by most of the existing monitoring programs having a "birds-eye view" on monitoring information, the WMA wants to strengthen a structured "bottom-up"-approach to monitoring, thus triggering progress at a practical level through better information. So the focus is on better local information, showing the potential advantages of better monitoring information and supporting a better understanding on what type of tools and capacities are needed for improving monitoring information.

UNEP-MAP:
A big success of UNEP-MAP is that it as kept the Med-process going even in difficult political situations over the last years, building up more and more trust; at the same time, there is a need for UNEP-MAP to move more towards enforcement and liability. It is vital to safeguard the whole process by not losing support in the countries of the region.
In this context, Initiatives/bilateral activities of the European Union (e.g. Horizon 2020 Initiative) should be structured / implemented in a way that utilizes the experiences and trust of the UNEP-MAP in the region. This also holds for the Med component of the European Water Initiative that up to now remains somewhat fragmented.

III Synthesis of opinions regarding the potential role of the water observatory mechanism

The second main task of this study and the related interviews was to investigate the opinions of the experts regarding the potential role of the observatory.

Before going into detail to the answers given in the following sub-chapters below, in general, the large majority of experts were **in favour of a "Mediterranean water observation mechanism"** while highlighting the necessity to avoid implementing a new system or setting up a new institution but to enhance the existing initiatives, taking into account their competences in order to avoid duplication of work. It needs to be noted that also currently planned and upcoming activities of other institutions and processes in the Mediterranean region need to be considered in the set-up of the observatory. So, the observatory mechanism should not replace the information collection processes in place and planned, but it should reinforce their synergies.

Regarding the **possible assignment and functionalities of the observatory**, the large majority of options presented in the frame of this study were considered to be important. The priority assignments and objectives for the observatory according the experts´ opinions are mainly focussed on relay / interface functions and can be summarized as follows:

* To consolidate the capacities of the Mediterranean countries in order to better meet the needs of the regional level, based on the autonomy of each country for the organization of its national water information system (NWIS);
* To develop a framework for dialogue between the different international / regional information collection and exchange processes and the corresponding national organizations/focal points in order to improve the coordination and exchange of data collection and analysis processes in the Med and thus to better meet the needs for reliable, comparable and quality information;
* To support the strengthening of international cooperation and exchange of experiences between Mediterranean countries by offering a variety of different opportunities;
* As far as feasible, aim at a certain harmonization of definitions, indicators etc. on water information in the Mediterranean at the regional level, thus supporting the development of a "common language" and to promote common procedures of information collection;
* To support the identification, access to and dissemination of water-relevant information at the regional level provided by national and regional institutions.

Finally, the financial sustainability of for the observatory mechanism as well as the commitment of involved institutions and countries needs to be considered and specified before making detailed technical proposals, since the observatory should not be project-based, but have a continuing financial base in order the reach sustainable results.

Regarding the **main topics** where additional work is required and that the mechanism should focus on, a large number of topics were considered to be important. Some highlighted topics where additional work and information is mostly needed are:

* Drinking water supply and sanitation services (esp. linked to the MDGs);
* Socioeconomic aspects and information (esp. linked to (agricultural) water uses, investment needs and programmes for reaching the MDGs);
* Inventory and characterization of water resources (esp. groundwater);

* Links of water to other policies (health, land use planning) and to sustainable development in general;
* Follow-up of IWRM implementation;
* Water quantity and scarcity as well as its consequences;
* Agricultural water use and esp. irrigation, for which limited information and exchange exists so far.

Concerning the **target audience of the mechanism**, it was stated by the experts that the mechanism should have a wide audience, focussing on international organizations, the stakeholders in water resource management at national and local level as well as the cooperation organizations intervening in water resource management. A slightly lower weight was given to the target groups of the users of water resources, the press and public at large and the civil society.

For the **geographical scope of the observatory regarding the potential participating countries**, most interviewed experts identified the 35 Euromed countries of the Mediterranean basin and any other interested country of the Mediterranean basin as the preferred one, giving the mechanism a (optionally) wide (including non-Euromed countries), but also Med-specific focus (excluding e.g. the non-Mediterranean Eu-countries).
At the same time, some experts preferred a more limited geographical scope for the mechanism, that is only the Euromed countries or the Euromed countries of the Mediterranean basin. In a number of occasions, it was mentioned that the start should be done with the Euromed countries of the Mediterranean basin and to expand the geographical scope from there.

Regarding the **geographical scope within the countries**, the overwhelming majority of experts stated that while it is preferable to have information and data structured according to river basins connected to the Mediterranean Sea (water resource management units), it is advisable to start with the whole countries and at a later stage move the river basin approach. The main reason given is that such a national approach is more realistic and feasible at this stage.

Finally, there was some criticism towards the **proposed name** of a “water observatory mechanism”; esp. the term “observatory” was viewed as too negative and controlling.
Some name proposals were given by the experts, while the overall feeling was that the name should not convey the idea of “bringing all monitoring information together”, but should indicate the objective of facilitating interlinkages and strengthening water monitoring in the Mediterranean region.

III.1 Overall objectives and scope of the mechanism

Regarding the objectives and scope of the mechanism, a number of comments were given on the overall positioning of the observatory. Before going into more detail to the answers given to specific questions regarding the mechanism, these general reactions are summarized below:

MEDPOL:
* Duplication of work with other institutions / initiatives has to be avoided; therefore, it is crucial to “position” the observatory rightly within the different approaches and processes in place in the Med region;
* The observatory could trigger the collection of additional information at the country level;
* Additional data on the sources of coastal pollution could be collected, but this requires a lot of effort and resources;

* The observatory should coordinate all organizations / institutions collection water-related data and information.

INFORAC:
* It will be important not to create one more institution in the Med region;
* It is crucial to avoid duplication of work between the water observatory and other institutions in the region (e.g. InfoRAC).

EUWI-MED (DG Env):
* What is needed is support by the potential observatory for the streamlining of information collection processes, preparation of guidelines for information collection etc.;
* The observatory could serve as an interface with the regional/international information systems.

EUWI – WG Monitoring:
* Overall, a water observatory from the Med is needed and can be very helpful for the "Joint Med. EUWI/WFD Process" and especially the Mediterranean Groundwater WG;
* It could be important, thought very difficult, to influence or support the setting-up of national water information systems. One step could be the support of expert's judgment on organizational and technical issues, as regards the setting up of NWIS.

EUWI-MED / Joint Process (MinEnv):
* Initially, the mechanism should support the work of the national authorities in developing integrated nation-wide water information systems; then, move towards a "relay function";
* It could clarify the contact system of international / regional information collection processes within the countries and their administration (unclear so far: where does the information within a country come from?);
* Additionally, it should support the setting up of a mechanism within the countries in order to coordinate their inputs to international/regional collection processes, thus increasing efficiency / compatibility of information provided for different processes;
* This activity would enable verification and cross-checking of information provided as an obligation to the various international information collection processes in order to obtain an overall picture, e.g. on ODA levels available/received/required for the water sector in a country;
* In this context, collection of additional information on water-related financing could (a second stage) be a task of the observatory mechanism.

ENP - Horizon 2020 Initiative:
* The proposed activities for the mechanism could well be carried out by existing institutions;
* The issue of the financial sustainability of for the observatory mechanism as well as the commitment of involved institutions and countries needs to be considered and specified before making detailed technical proposals.
* The observatory should not be project-based, but have a continuing financial base that should go beyond initial bilateral start-up financing. Since there is little likelihood of prolonged EC financing, any decision to proceed should be taken by countries with a clear understanding that they will be providing the bulk of the finance.

Blue Plan:
* A focus should be put on the national level: the observatory mechanism should bring together the different national institutions/focal points of different processes dealing with information collection and exchange in the Med region. This would reinforce the water information systems functioning through improving the co-operation of relevant institutions within the Med countries, also at the international level;

* The observatory mechanism will not replace the information collection processes already in place. It should reinforce synergies, which is important but probably very difficult to carry out ("delicate" mechanism of cooperation).

WWAP (UNESCO):
* A water observatory mechanism can overall be of great use for the Med region:
* It should support and promote the development of good water governance the Med-countries by strengthening the development of reliable information within the national water institutions, which need to have suitable financial resources and appropriate capacities;
* Thus, the observatory mechanism will support the capacities within the countries on the issue of water-related information and –linked to this – the transparent provision of this information based on free flow of information;
* It will be crucial for the observatory to avoid duplication of work / overlap with existing initiatives as well as be inclusive of all processes/institutions of relevance in the Med region;
* The observatory should perform a mapping of what water related information is available in the Mediterranean basin, bringing all available information together;
* It can also contribute by producing new information closing existing gaps; a example here is the missing information on overall water availability in the Med region;
* The information to be collected should be based on the needs of the different "customers", that is water managers, researchers, private persons, NGOs etc.; so, different levels of information/aggregation level need to be pursued;
* The observatory should support the development of common standards, esp. on how to compile information at the basin scale;
* A decision / endorsement at the highest level of water authorities for setting up the observatory mechanism will not be enough, but what is needed is a ministerial declaration of commitment;
*It needs to be a long-term initiative and have a clear vision & long-term goals that all relevant institutions are committed to;
* A "memo of understanding" of the observatory mechanism with the WWAP should be established;
* In case the observatory mechanism is decided, the so created momentum needs to be utilized by inviting all relevant stakeholders to become active members and establishing practical links with them.

IME:
* The main level of focus for the water observatory depends on the specific country. In some cases, information within a country exists, but is not centrally collected, not consistent and not available for the public;
* A potential main focus of the water observatory would be the issue of water irrigation information and exchange.

WWC-WMA:
* The water observatory mechanism/platform should not constitute a new information system, but to focus on the Mediterranean region and support the exchange of water policies experience at different levels. A key level should be the country level;
* A strong partnership with the WMA can be envisaged, sharing the "same spirit", while practical interlinkages though compatible web-based tools for information management should be sought.

WISE (DG Env):
* For the future inclusion of Med-related water information into the WISE system, UNEP-MAP/Medpol, EMWIS, but also a potential future water observation mechanism would be some of the main partners;

* On content, the information that potentially could be included in WISE for the Med region could have a focus on the crucial issue of water quantity / scarcity. Here, certain information will be available for the Med-EU-countries in the context of WFD-implementation (e.g."good quantitative status of groundwater") as well as through the existing EEA-information collection processes. In addition, certain additional information on water quantity could be included on a voluntary basis; currently, there is an EU-Commission Communication on water scarcity under development (in close cooperation with the EEA) and expected for Mid-2007.
* Going beyond the Med-EU-Countries and looking at the Med countries as a whole, information sources could be the data potentially collected in the context of the Med-EUWI.
In addition, a Med component of WISE (and other regional components) could be developed as a "lighter" version of the information sets collected from the EU-countries, based on the fact that the needs and possibilities of Med-non-Eu-countries are different. The information sets would have to be adjusted to the needs of the Euromed countries and so be expanded to the issues of relevance for the region that is water quantity information etc.
* At a technical level, it is strongly advisable that any future development in the field of water information collection in the Med region (including the water observation mechanism) is based on the WISE-GIS-guidance (linked to the overall approach of the INSPIRE-system) in order to avoid technical difficulties when potentially including this information into the WISE-system in the future.

UNEP-MAP:
Overall, there is a need for such a water observation mechanism. More specifically:
* Based on the existing need for better coordination of data collection and analysis processes in the Med, the mechanism should aim at eliminating the proliferation of the various information collection processes in the Med as well as of the reporting systems in the context of implementation of legal instruments;
* As far as feasible, a certain harmonization of definitions, indicators etc. should be aimed at, supporting the development of a "common language". In this context, the joint work programme of the UNEP-MAP and the EEA currently under discussion points into the right direction;
* It is crucial to utilize the confidence of the UNEP-MAP within the South Mediterranean countries in order to "keep the Med countries together";
* It is crucial to avoid duplication of work;
* The mechanism should serve as a platform of the different processes related to water information in the Med.

III.2 Possible assignment and functionalities

In the questionnaire, the experts were asked to assess the specific potential assignment and functionalities of the mechanism based on the following 4 main groups of activities:

1. A support to the organization and development of national water information systems in the Euromed interested countries;
2. A tool for strengthening international cooperation between Mediterranean countries, by offering a variety of different opportunities;
3. A relay between the collection processes at international level and the national and local sources in order to facilitate the production and the collection of comparable information at the regional level;
4. A support for the evaluation and promotion of what exists and the production and dissemination of information at the regional level.

These four groups of potential fields of work for the water observation mechanism were to a large extent considered either very important or important, while there were some assessments of specific assignments that are of little significance.

In a limited number of cases, some specific assignments within the 4 main groups were considered not useful / advisable. These were:

Within group 1:

* Assistance with the organization and enhancement of data and information (mentioned once);
* Assistance with the development of tools specific to the countries (management, quality control, support to decision making, etc.) (mentioned once).

In one case, the entire point one (support to the organization and development of national water information systems in the Euromed interested countries) was considered as not useful / advisable. The reason given was that while support is needed at this point, the question is if this support needs to go through/be organized at the regional level, so what role the Med observatory should have in this point. As a final aim, the different elements from the Med countries need to "fit together", but flexibility is needed on which way the countries chose in order to improve their national information systems. It is important to keep the ownership on this issue within the countries themselves. So, a "common language" for information collection is needed, but It needs to come "bottom-up", i.e. build upon the national processes of developing and improving the national water information systems.

Within group 2:

* Developing new information sources according to the needs and targeted on the Mediterranean: not useful/advisable (mentioned once).

Within group 4:

***** Production of additional regional information (mentioned once);
* Analysis of synthesis and complementarity of action plans (mentioned once);
* Production of additional regional information (mentioned two times).

Besides this assessment of potential assignments as given, some experts contributed specific proposals for activities for the mechanism (mainly linked to the work of their own institutions / processes). These are:

MEDSTAT/EUROSTAT:

There is a big need for harmonized basic data and indicators; the observatory could be of help here. Additionally, an important new challenge in the context of the MEDSTAT-project is to better support the statisticians who work as the link between the providers of environmental information and the national accountants.

Therefore, what would be of support in this phase of MEDSTAT is:

* a "cookbook" on methodologies, definitions specifically used by MED countries;
* provision of fast replies to practical questions on issues of environmental accounting;
* experts for support (statisticians; environmental experts interested in statistical production etc.)

In this context, the observatory could have the role of a "helpdesk" linking specific needs with pool of experts in a variety of relevant international institutions (WHO, EEA etc.) The observatory could also play the role of catalyst of the linkage between identified needs and potential funds available for the improvement of the national information.

In addition, the observatory could provide some training on giving basic statistical know-how to the water information providers with the Med countries in order to make them aware of the issues connected to the provision of statistical information.

The observatory would be a good opportunity for the identification and the mobilisation of all national and regional actors involved in information production, as well as for the recognition

of their specific mandates and competences. This should contribute to the optimization of the environmental national information system.

In addition, the observatory could facilitate the identification of potential donors to fund new statistical surveys on water issues. Finally, it would be Important to compile a list of all relevant projects including research etc. (as has been done by SMAP trough the development of a clearing house).

EUWI – WG Monitoring:

* The work of the Mediterranean Groundwater WG showed that a lot of information about groundwater in the Med region is not comparable, so developing a "common language" in the region for information collection and processing would be very helpful. Furthermore, a substantial amount of data and information is often scattered over different institutes and organisations, with a little or no coordination in data management. In many cases, the available information is not accessible to the public or any interested party. Therefore, a support to the management and dissemination of information, at regional level, would be very important.
* Another important potential point of work for the observatory is to foster the exchange of experience between the Med countries on the methodologies they use in the context of groundwater monitoring.
* Finally, the observatory could play a role in the development of a groundwater monitoring system (harmonizing national monitoring systems and collecting additional data) in line with the recommendations of the WG groundwater. Such a monitoring system would be based on the WFD-monitoring philosophy, but would have lower specific information collection requirements due the specific needs and situation (financial etc.) in the non-EU-Med-countries.

AQUASTAT:

* A main problem for Aquastat is the information coming from different sources and different literature, which don't use the same definitions; regional institutions could play a significant role here, including the regional observatory for the Med region;
* The observatory could potentially become a partner of UNWater responsible for the Med region, on the condition that it is linked to the global perspective ;
* The FAO focuses on irrigation which is a main issue for the Med region. So, in case the observatory does work on this, collaborations could be established (e.g. agreeing on the overall definitions of variables / indicators etc.);
* Overall, there is a large number of global initiatives focusing on reporting of water-related information; at the same time, much less is happening on the much more costly process of collecting primary data on the field through surveys. Maybe the potential observatory could support the collection of such primary data (but would need sufficient funding to do this);
* Rather than taking IWRM (where water is the centre) as the starting point for working on information/indicators, AQUASTAT takes the Livelihood as a starting point, a more systemic approach. Therefore, AQUASTAT does not want to specifically link the work on common methods for the production of information/indicators to IWRM.

JMP (WHO):

It is fundamental that the coverage statistics generated by the regional mechanism be generated in close collaboration with the JMP executing agencies so that the figures for a given country coincide with those of the JMP. While the coverage figures should be the same, the JMP has no objection to the regional monitoring mechanisms generating additional questions and indicators that would provide a more comprehensive perspective of the sector (financial, technical, managerial indicators).

A good way of avoiding double monitoring/reporting is to foresee that the regional mechanism should accommodate a JMP professional in its structure to facilitate the use of the JMP methodology/statistics and ensure a smooth connection between the two monitoring bodies.

Finally, UN-Water brings together all the UN agencies dealing with water issues in order to coordinate their activities. It would be useful to inform this group about this Mediterranean activity.

IME:
Related to the potential initiation and setting up of an irrigation observatory for the Mediterranean (see detailed IME-questionnaires), links should be sought for with the potential overall water observatory mechanism.

III.3 Topics to be covered

The experts were asked to evaluate the topics that should be covered by the mechanism based on the following list:

* Drinking water supply
* Sanitation
* Follow-up of IWRM implementation and political impacts
* Inventory and characterization of water resources
* Characterization of programs for water resource monitoring
* Synthetic information of the qualitative and quantitative follow-up of the resource
* Characterization of non conventional water resources
* Synthesis information on meteorology, climatology & rainfall
* Characterization of programs for following up demand and uses
* Synthetic information on uses
* Protection and exploitation of sea waters
* Economic data (Cooperation, Development Activities, impact of economic activities on water resources, etc.)
* Data useful for risk prevention (Drought, Floods, Others (Tsunami, etc.))
* Water and tourism
* Water and health
* Water and land use planning
* Water and sustainable development

Most presented topics were considered either important or very important by most experts.

At the same time, some topics were considered as having little significance by some experts. The ones mentioned at least two times as having **little significance** are:
* Inventory and characterization of water resources (mentioned 2 times);
* Synthetic information of the qualitative and quantitative follow-up of the resource (mentioned 2 times);
* Characterization of programs for following up demand and uses (mentioned 2 times);
* Protection and exploitation of sea waters (mentioned 4 times);
* Data useful for risk prevention (mentioned 2 times);
* Water and tourism (mentioned 5 times);

A topic that was quite often considered at **not advisable** for the work of the observatory was the
* Synthesis information on meteorology, climatology & rainfall (mentioned 4 times).
Additionally, the following three topics were mentioned once as being not advisable:
* Characterization of non conventional water resources;
* Characterization of programs for following up demand and uses;
* Synthetic information on uses.

An additional topic (of a higher complexity) that was mentioned was conducting work on more general issues like water and peace or water as a catalyst for transnational cooperation that could also be addressed at later stage.
An other expert mentioned that setting up a link with national socio economic, hydrological, land use and other Databases is necessary to cover the topics outlined in the questionnaire, an issue which needs to be tackled seriously.

Finally, an overall comment made was that the present proposal for the observatory could not cover the scope and topics outlined in the questionnaire. There is a need to define accurately the objectives of the mechanism, the users and the topics to be covered in order to reach a practical, consistent and reliable mechanism and information system.

III.4 Target group(s)

In the questionnaire, the following groups were presented as target users of the mechanism outputs:

* International organizations;
* Stakeholders in water resource management at national level (politicians, technical managers, etc.);
* Stakeholders in water resource management at local level (basin, management unit level, etc.);
* The cooperation organizations intervening in water resource management;
* Organizations of the civil society: local authorities, common-cause associations, professional groups, university academicians, searchers, experts;
* The users of water resources (irrigators, industrialists, municipalities, etc.);
* Press and public at large.

Overall, it was stated that the mechanism should have a wide audience; almost all experts identified all groups as being recipients.
A slightly lower weight was given to the target groups of the users of water resources (4 experts not seeing this group as being a target group), the press and public at large (3 experts) and the civil society (3 experts).

A specific comment regarding the target audience of the mechanism (by DG Env) was that a regional mechanism should target the regional and then the international public, as national systems should target the national and then regional public. In addition, its information could always be useful for local analysis, but it should not be its first objective.
For the Med region, the regional public consists of Med organizations / initiatives /stakeholders working in the water sector (MED-EUWI, MSSD, MAP, Horizon 2020, etc.) and particularly the Med Water Directors.
At the same time, this information should also be available for other decision-makers such as financing experts.

III.5 Geographical scope of the observatory

In the questionnaire, two questions were asked regarding the geographical scope of the mechanism: one on the potential participating countries and one on the geographical scope within the countries.

Regarding the first question, the following potential options were presented:

1. The 35 Euromed countries
2. The 35 Euromed countries and any other interested country of the Mediterranean basin
3. The Euromed countries of the Mediterranean basin
4. The Euromed countries of the Mediterranean basin and any other interested country of the Mediterranean basin

Most experts interviewed identified the option 4 as the preferred one, giving the mechanism a (optionally) wide (including non-Euromed countries), but also Med-specific focus (excluding e.g. the non-Mediterranean Eu-countries).
At the same time, some experts (EUROSTAT; INFORAC; ENP-2020, BP) identified option 3 as the preferred one, while option 1 (WWAP) and option 2 (EEA) were each chosen once.
In a number of occasions, it was mentioned that the start should be done with the Euromed countries of the Mediterranean basin and to expand the geographical scope from there. It also was mentioned (by BP) that the countries to be covered depends strongly on the funding of the mechanism,

Regarding the second question, at the level of each country, it was asked if the mechanism should cover:

1. The whole country
2. Only the main water resource management units in contact with the Mediterranean
3. Only the administrative regions of the country which are in contact with the Mediterranean

The overwhelming majority of experts stated that while it is preferable to have information and data structured according to river basins connected to the Mediterranean Sea (water resource management units, option 2), it is advisable to start with the whole countries (option 1) and at a later stage move the river basin approach. The main reason given is that such a national approach is more realistic and feasible at this stage. First of all, regions are divided in administrative units and not (yet) in river basin units, so decisions are taken at administrative levels. Secondly, since the country is one political entity, it also might be difficult to consider issues at lower administrative levels, without putting it in perspective with the entire country. (e.g. regarding relevant national water policies).
Finally, it was mentioned (by IME) that in general the geographical scope of the mechanism should be the whole country in case the water situation is similar in all regions (e.g. the South Med countries). At the same time, if the water situation (e.g. regarding irrigation) is very different form the South to the North within a country (e.g. France), the relevant main water resource management units in contact with the Mediterranean should be considered.

III.6 Name proposals

Overall, there was some criticism towards the proposed name of a “water observatory mechanism”; esp. the term “observatory” was viewed as too negative and controlling.

A specific comment regarding the name (given by WWC/WMA) was that the name should not convey the idea of “bringing all monitoring information together”, but indicate the objective of facilitating interlinkages and strengthening water monitoring in the Mediterranean region.

At the same time, a number of proposals was given as an alternative, these were:

- Mediterranean water observation platform
- Mediterranean Environment Agency
- Mediterranean Water Observatory (2x)
- Mediterranean Observatory for Water and Sustainable Development
- Expert platform on data collection & exchange
- Mediterranean Information and Observation System on the Hydrological Cycle & for Water Resource Management
- Mediterranean water mapping system

IV Conclusions and outlook

This pre-feasibility study identified and investigated a large number of processes and institutions involved with collecting and monitoring water-related data and information at the regional Mediterranean level. While a lot of work is already been done, the difficulties identified by the experts in their work shows that there still is considerable room for improvement regarding water-related information and data provision.

As a reaction to this situation, a number of bilateral/multilateral partnerships have been created between different institutions and processes exploiting synergies, fostering cooperation and avoiding duplication of work. A significant number of these partnerships have either recently been set up or are currently under preparation.

At the same time and complementing these activities, the large majority of experts welcome the plan to set up a Mediterranean water observation mechanism that could fill a number of relay / interface functions. A number of valuable inputs was provided regarding the possible assignment, functionalities, main topics to be covered by the mechanism, as well as its target audience and geographical scope.

The widespread warning by the experts that the new mechanism should avoid implementing a new system or setting up a new institution but should aim at enhancing the existing and upcoming initiatives, taking into account their competences in order to avoid duplication of work, needs to be taken very seriously. Another important point to consider in the preparatory work for setting up the observatory is to ensure its financial sustainability as well as ensuring the commitment of involved institutions and countries.

Therefore, the next (2nd) phase of the feasibility study needs to analyze in more detail the specific functions of the observatory and content of work, synergies with existing related processes and institutions as well as clarify the financial sustainability of the mechanism in order to be able to support the provision of better water related information based on the needs of the Mediterranean counties.

Finally, the current name proposal faced quite some scepticism; therefore, it seems advisable to search for another name that is more suitable for the mechanism, focussing on the partnership aspect of the mechanism and less on “observation”.