

MEDITERRANEAN EUWI/WFD JOINT PROCESS

MED-EUWI GROUNDWATER WORKING GROUP (MED-EUWI GW WG)

TERMS OF REFERENCE

(v. 13/7/05)

A. Objectives

The objective of the MED-EUWI Groundwater WG is to exchange experiences, share common challenges and develop synergies between EU and non EU countries of the Mediterranean region, aiming at the adoption of a common vision on groundwater resources management, based on the Water Framework Directive (WFD) approach and objectives and the regional conditions.

In particular, the development of partnership on groundwater issues between the EU and non EU countries, basin authorities and stakeholders of the Mediterranean region, in the framework of the MED-EUWI Groundwater WG, aims to:

1. **identify the most significant problems**, pressing needs and challenges for the Mediterranean region relating to groundwater resources management,
2. **list on-going regional and national processes**, initiatives and projects developed to respond to groundwater issues in the region, and then create the basis for the **development of additional joint initiatives** and projects relevant to groundwater issues,
3. **develop common approach methodologies and management strategies** on groundwater resources based on the concept of integrated management of all available resources and **develop adequate recommendations and technical specifications** on priority issues,
4. **transfer, exchange and demonstration of know-how on strategies, criteria, methodologies and tools** used in the Mediterranean region on various groundwater management issues, such as inter-State cooperation regarding shared aquifers, remedial actions practised to recover salinized resources, management of data on shared aquifers, etc., and by then improve the **awareness raising** on issues relating to the groundwater protection and sustainable management.

B. Final output

The final output of the first phase of the MED-EUWI Groundwater WG will be a report (**Mediterranean document on Groundwater**) which will include technical specifications and specific recommendations on issues relating to groundwater resources management in the Mediterranean region, based on the WFD approach and the regional conditions.

The MED-EUWI Groundwater WG will also provide **Mediterranean recommendations, examples and experiences** on key issues that have been already selected by the Working Group C (WG on Groundwater under the WFD Common Implementation Strategy – WFD CIS) and more specifically **on monitoring** (chemical and quantitative), **protected areas** and **direct/indirect discharges** to groundwater, to be included in the general guidance (core text) which will be developed by that Group (WG C).

C. Organisation of the work

I. Detailed content of each chapter of the final report and distribution of responsibilities

MEDITERRANEAN DOCUMENT ON GROUNDWATER

CONTENT		COORDINATOR	CO-DRAFTERS	EXAMPLE PROVIDERS
1. Introduction		Mohammed BLINDA, Jean MARGAT (Plan Bleu)		
Groundwater in the Mediterranean context	General description of the Mediterranean region – Groundwater resources in the region: their role and importance. <i>(the general description should include the description of the GW resources at the country level, and not only those directly connected to the Mediterranean)</i>			
	GW resources management in the Mediterranean within the concept of integrated water resources management			
	The need for common approaches on GW resources management in the Mediterranean.			
Groundwater in the European Water Framework Directive: general description of the approaches and criteria included in the Directive. Links with GW Daughter Directive			Spyros TASOGLOU (Greece)	
Objectives and contents of the document <i>(General description of the priority/pressing issues to be addressed by the document)</i>			Sylvie DETOC (EC)	

CONTENT		COORDINATOR	CO-DRAFTERS	EXAMPLE PROVIDERS
2. Chapter I: Over-exploitation of GW resources (links with Water Scarcity WG: use elements from the Water scarcity document)		Teodoro ESTRELA, (MENBO)		Spyros TASOGLOU (Greece incl. IGME), Idriss HASSANI (Algeria), Med. Islands (Cyprus, Malta) <u>Cases of non-renewable GW resources:</u> Khaled ABUZEID (CEDARE), Idriss HASSANI (Algeria)
State of play: Detailed description of the GW quantitative status in the Mediterranean (key role of GW resources during draught periods).			Idriss HASSANI (Algeria), Plan Bleu	
Challenges	A. Irrigation in Mediterranean and GW quantitative status - links with Rural Development and Agriculture Med WG.		Spyros TASOGLOU (Greece incl. IGME)	
	B. Other GW uses (drinking water, tourism, industry) and their impact on the quantitative status		IGME	
	C. Specific case of non-renewable groundwater resources		Khaled ABUZEID (CEDARE), GW-Mate briefing notes	
Recommendations: Description of recommended approaches and methodologies (aquifers recharge, etc.)			Idriss HASSANI (Algeria)	
Illustration of case studies				

CONTENT		COORDINATOR	CO-DRAFTERS	EXAMPLE PROVIDERS
3. Chapter II: Deterioration in GW quality		Sevket COKGOR (Turkey), SPAIN		
State of Play: Detailed description of the GW qualitative status in the Mediterranean.			Plan Bleu	
Challenges	A. Saline water intrusion in the coastal aquifers:		Idriss HASSANI (Algeria)	Stephanos PAPATRYFONOS (Cyprus), Manual SAPIANO (Malta), Idriss HASSANI (Algeria)
	<ul style="list-style-type: none">Description of current situation		Idriss HASSANI (Algeria)	
	<ul style="list-style-type: none">GW uses which affect this problem			
	<ul style="list-style-type: none">Recommended methodologies to face the problem (<i>remedial actions to recover salinized resources, etc.</i>)		Manual SAPIANO (Malta)	
	<ul style="list-style-type: none">Illustration of case studies			
	B. Chemical GW pollution in the Mediterranean – direct/indirect discharges to GW		Stephanos PAPATRYFONOS (Cyprus)	Spyros TASOGLOU (Greece), Spain, N. Africa
	<ul style="list-style-type: none">Description of current situation		Idriss HASSANI (Algeria)	
	<ul style="list-style-type: none">GW uses which affect the problem - links with Rural Development and Agriculture Med WG		Spyros TASOGLOU (Greece): <i>for agric.</i> , Stephanos PAPATRYFONOS (Cyprus): <i>for tourism</i> , Bulgaria	
<ul style="list-style-type: none">Recommended methodologies (<i>risk assessment methods, etc.</i>)				
<ul style="list-style-type: none">Illustration of case studies				
Links between groundwater and protected areas (<i>drinking water supply, etc.</i>)			Alfredo DIDOMENICANTONIO (Italy)	Idriss HASSANI (Algeria)
Recommendations (<i>synthesis</i>)			+ GW-Mate brief. notes	

CONTENT		COORDINATOR	CO-DRAFTERS	EXAMPLE PROVIDERS
4. Chapter III: Monitoring and data management		Spyros TASOGLOU (Greece)	Ariane BLUM (BRGM)	Panagiotis SAMBATAKAKIS (IGME), V́ctor ARQUED (Spain)?, Egypt
The role and importance of GW monitoring and data management for GW resources management and IWRM				
State of Play: Current situation on the availability and reliability of information on GW resources: gaps and needs				
Challenges	Development of GW monitoring networks in Mediterranean region			
	Data availability and management on GW resources			
	Monitoring and data management in the shared aquifers of the Mediterranean region		Khaled ABUZEID (CEDARE), Jacques GANOULIS (INWEB)	<u>Shared aquifers:</u> Khaled ABUZEID (CEDARE), Jacques GANOULIS (INWEB)
Recommendations: Description of methodologies - Provisions of WFD regarding the development of GW monitoring networks				
Best Practices (including shared aquifers)				

CONTENT		COORDINATOR	CO-DRAFTERS	EXAMPLE PROVIDERS
5. Chapter IV: International cooperation		Khaled ABUZEID (CEDARE)		Jacques GANOULIS (INWEB), Idriss HASSANI (Algeria), Eastern Med. countries
State of Play	Description of the most significant shared aquifers (North Africa, Balkans, Eastern Med countries)		Jacques GANOULIS (INWEB),	
	Current situation regarding management of shared aquifers (agreements, problems, gaps, etc.)		Jacques GANOULIS (INWEB), Idriss HASSANI (Algeria)	
	General description of initiatives, projects, etc. in the region on issues relating to GW resources management		Jacques GANOULIS (INWEB)/ Elisa VARGAS (MENBO),	
Challenges: The role and importance of the shared aquifers.				
Recommendations: Ways to strengthen the inter-State cooperation – Best practices – WFD approach.			Idriss HASSANI (Algeria) <u>WFD approach:</u> Spyros TASOGLOU (Greece)	

CONTENT	COORDINATOR	CO-DRAFTERS	EXAMPLE PROVIDERS
6. Chapter V: Institutional aspects	Sylvie DETOC (EC)		Specific examples from EU and non-EU States (Spain/Greece, Malta/Cyprus/Slovenia, N. Africa)
Existing legal frameworks regarding groundwater resources management in the Mediterranean region – WFD approach		Idriss HASSANI (Algeria)	
Public Participation and groundwater resources management: state of play, gaps, WFD aspects		Spain, Spyros TASOGLOU (Greece)	
Recommendations			
7. Conclusions – Lessons to learn = Recommendations?	Spyros TASOGLOU (Greece)	Sylvie DETOC (EC), Khaled ABUZEID (CEDARE)	
8. Appendix I: list of on-going regional and national processes, initiatives and projects developed to respond to groundwater issues in the region.	INWEB, EMWIS, GWP, etc.		

Review of the document:

- Stephen FOSTER (IAH),
- Sylvie DETOC (EC),
- Spyros TASOGLOU (Greece),
- Khaled ABUZEID (CEDARE)
- Teodoro ESTRELA, Elisa VARGAS (MENBO)

II. Development of linkages with other related WGs

WORKING GROUP	REPRESENTATIVE OF THE MED-EUWI GROUNDWATER WG
WFD COMMON IMPLEMENTATION STRATEGY	
WG C (Groundwater)	Sylvie DETOC (EC), Jacques GANOULIS (INWEB)
Pilot River Basins Testing WG	Spyros TASOGLOU (Greece)
EU Water Directors	Sylvie DETOC (EC)
MEDITERRANEAN EUWI/WFD JOINT PROCESS	
Med EUWI & Med EUWI/WFD Joint Process general WG	Sylvie DETOC (EC), Spyros TASOGLOU (Greece)
Water Scarcity WG	Sylvie DETOC (EC)
Linking Rural Development to Water Management WG	Spyros TASOGLOU (Greece)

III. Description of the work - Responsibilities

1. Description of the tasks for the drafting of the Mediterranean document on Groundwater (final report):
 - **Coordinator of each chapter:** Coordinates the drafting of each chapter. More specifically, the coordinator communicates and collaborates with all the “contributors” (co-drafters and example providers) of the corresponding chapter, collects their contributions and produces, by including his inputs where necessary, the corresponding chapter. The coordinator delivers the corresponding chapter to the WG leaders, according to the defined timeframes.
 - **Co-drafters:** Collaborate with the coordinator of the corresponding chapter and with the other co-drafters (if necessary) for the drafting of the corresponding part of the document. The co-drafters provide the coordinator of the corresponding chapter with their contributions.
 - **Example providers:** Provide the coordinator of the corresponding chapter with specific case studies, practices, etc., including a description, to be included (after the evaluation of the coordinator) in the proper part of the document.
2. The work plan of the MED-EUWI GW WG is strongly affected by the timeframe of the WG C and the need for Mediterranean contributions to the general guidance (core text) to be developed by that WG. Therefore, the key issues:
 - **monitoring** (chapter III of the Med. document),
 - **protected areas** (included in the chapter II of the Med. document) and
 - **direct/indirect discharges to groundwater** (included in the chapter II of the Med. document)will be addressed according to the WG C timetable and requirements. The first contributions for these key issues must be submitted to the WG C leaders according to the defined timeframes.

3. The representatives of the MED-EUWI Groundwater WG to other related WGs of the WFD CIS and the Med EUWI/WFD Joint Process are responsible for:
- presenting the progress and results of the MED-EUWI Groundwater WG to the corresponding WG leaders and members,
 - providing information, when necessary, to the MED-EUWI Groundwater WG on the progress and results (documents, conclusions of meetings, etc.) of the corresponding WG and
 - providing inputs (if possible) to specific parts of the Mediterranean document on Groundwater. These inputs will be derived from available documents and conclusions of the corresponding WGs.

IV. Timetable

ACTIVITIES		2005								2006					
		..	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Drafting of the final report	Introduction														
	Chapter I: Quantitative status														
	Chapter II: Qualitative status														
	Chapter III: International cooperation														
	Chapter IV: Monitoring & data management														
	Chapter V: Institutional aspects														
	Conclusions - Recommendations														
	Appendix I														
Operation of a groundwater web page & electronic forum															
WG C meetings			X				X			X					X
MED-EUWI GW WG specific meetings / Workshops		X						X						X?	
DELIVERABLES		..	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
D1						X									
D2							X								
D3												X			
D4													X		
D5														X	

Description

Deliverables:

D1: first draft report for each chapter (*apart from the chapter on Conclusions*) of the Mediterranean document to be submitted by the coordinators of the corresponding chapter to the WG leaders by **26/09/05**. The Mediterranean contributions to the key issues identified by the WG C to be submitted by the coordinators of the corresponding chapters until **16/09/05**.

D2: first draft synthesis report to be disseminated to all the WG members for comments **from 17/10/05 until 31/10/05**, in order an updated version to be presented in the EU Water Directors meeting (*London, 28-29/11/05*)

D3: March 2006: final draft version of each chapter of the document to be submitted to the WG leaders

D4: April 2006: final draft synthesis report to be disseminated to all the WG members for comments

D5: May 2006: final version of the Mediterranean document to be presented for further discussion on the conclusions and recommendations

Confirmed meetings:

12 October 05: Plenary WG C Meeting, Brussels

30 November – 02 December 05: Workshop on "Rural development as integrator of multifaced problems in river basins" and the Mediterranean dimension of the Pilot River Basins, Portugal (exact place to be confirmed)

June 2006: Groundwater Conference, Vienna

Other meetings of the MED-EUWI Groundwater WG or specific sessions during general workshops will also be organised during September 05 – June 06 in different places of the Mediterranean region and Europe.

Web page and electronic forum:

An electronic platform of the MED-EUWI Groundwater WG is hosted by the EMWIS web site and it is available in the following URL address:

<http://www.emwis.org/GroundWaterHome.htm>

Any documents related to groundwater resources management in the Mediterranean region can be uploaded in this web page, after requesting to Mr. Spyros Tasoglou (e-mail: tasoglou@dpers.minenv.gr).

An electronic forum for the MED-EUWI Groundwater WG is available in the following address:

http://www.emwis.org/forum/forum.asp?FORUM_ID=37

A direct link to the e-forum is also available from the web page of the MED-EUWI Groundwater WG.

In this electronic forum any comments, opinions, suggestions, etc. can be submitted (after subscription) on the activities and work of the MED-EUWI Groundwater WG as well as on issues related to groundwater resources management in the Mediterranean region.

D. WG MEMBERS

NAME	ORGANISATION/COUNTRY	ADDRESS	TEL.	FAX	E-MAIL ADDRESS
Khaled ABUZEID	Centre for Environment & Development for the Arab Region & Europe (CEDARE)	2 ElHegaz Street, Heliopolis, Cairo, Egypt P.O.Box 1057 Heliopolis Bahary	+202 4513921-4 ext. 665	+202 4513918	kabuzeid@cedare.org
Nizar AL-HASALAH	Environment Monitoring & Research Central Unit (EMARCU) Royal Scientific Society	P.O. Box 1438 Al-Jubaiha 11941 Hashemite Kingdom of Jordan	+962 6 5344701	+962 6 5340520	halasah@emarcu.gov.jo
Víctor ARQUED	Ebro River Basin Authority Planning Department	Paseo de Sagasta, 24-26 E-50.012 ZARAGOZA, Spain	+ 34 97 6711053		varqued@chebro.es
Fatma ATTIA	Egypt				f-attia@link.net
Ahmed BELKHEIRI	AB du Sebou Directeur Général, Morocco				abdsebou@iam.net.ma
Mohammed BLINDA	Plan Bleu	15 rue Beethoven Sophia Antipolis F-05560 Valbonne, France	+33 4 92 387130	+3304 92 387131	mblinda@planbleu.org
Ariane BLUM	France - BRGM	3 avenue Claude Guillemin, BP 6009 45060 Orléans Cedex 2 France	33 (0)2 38643829	33 (0)2 38643446	a.blum@brgm.fr
Serge BROUYERE	Université de Liège Hydrogéologie et Géologie de l'Environnement, Département GEOMAC Unité d'Intégration de l'Aquapole-ULg	Batiment B52/3, Bureau - 1/519, Parking 52, 4000 Sart Tilman Belgique	+32 43662377	+32 43669520	serge.brouyere@ulg.ac.be
Sevket COKGOR	Istanbul Technical University, College of Civil Engineering, Departments of Hydraulics	34469, Maslak, Istanbul, Turkey	+90 212 2853735	+90 212 2853710	cokgor@itu.edu.tr

Sylvie DETOC (WG Leader)	European Commission DG Environment, Unit D2 Water & Marine	DG Environment BU 5 1049 Brussels	+32 2 2951176	+32 2 2968825	sylvie.detoc@cec.eu.int
Alfredo DIDOMENICANTONIO	Autorità di Bacino del Fiume Tevere, Italy	Bachelet, 12 I - 00185 Roma	+39 0649249240	+39 0649249300	didom@abtevere.it
Teodoro ESTRELA	Mediterranean Network of Basin Organisations (MENBO) Jucar River Basin Authority Planning Department	Avda. Blasco Ibañez 48, Valencia, 46010 Spain	+34 96 3938926	+34 96 3938801	teodoro.estrela@chj.mma.es
Stephen FOSTER	International Association of Hydrogeologist	PO Box 9 CV 81JG Kenilworth UK	+44 (0)1 865 55 69 41	+44 (0)1 865 55 69 41	IAHFoster@aol.com
Jacques GANOULIS	International Network of Water- Environment Centres for the Balkans (INWEB)	Aristotle University of Thessaloniki 54124 Thessaloniki, Greece	+30 2310 995682	+30 2310 995681	iganouli@civil.auth.gr
Idriss HASSANI	Université d'Oran, Département de Géologie Algeria	BP. 1524 El Mnaouer, Oran	+213 71 441353	+213 41 392149	hassanid@hotmail.com
Jean MARGAT	France - BRGM	3 avenue Claude Guillemin, BP 6009 45060 Orléans Cedex 2 France			
Marta MOREN ???	Water Framework Directive Coordination Water Directorate Ministry of Environment Spain	Agustin de Bethancourt, 25 28071 Madrid, Spain	+34 91 45 35 385		MMoren@mma.es
Stephanos PAPATRYFONOS	Water Development Department Cyprus	1413 Nicosia Cyprus	+357 22 45 14 29	+357 22 30 45 39	spatryfonos@wdd.moa.gov.cy
Enkelejida PATOZI	Albania - Valu Add Management Services				shukalb@afb.net.al
Pierre ROUSSEL	Agence de l'eau Rhône-Med-Corse, France Président Conseil d'Administration		+33472712893	+33472712608	pierre.roussel@agriculture.gouv.fr
Panagiotis SAMBATAKAKIS	Institute of Geology and Mineral Exploration (IGME)	70 Mesogion St., 11527 Athens	+30 210 7798412-5	+30 210 7752211	hydro@igme.gr
Manuel SAPIANO	Malta Resources Authority Water Resources Directorate	Millenia, Aldo Moro Rd. Marsa LQA06, Malta	+356 22955152	+356 22955200	manuel.sapiano@mra.org.mt

Spyros TASOGLOU (WG Leader)	Hellenic Ministry for the Environment, Physical Planning and Public Works, Environmental Planning Division, Water Section	147 Patision St., 11251 Athens, Greece	+30 210 8645762	+30 210 8662968	tasoglou@dpers.minenv.gr
Mario URREA	Segura River Basin Authority	PZA. FONTES, 1- MURCIA, 30071Spain	+34 96 8214605		oficina.planificacion@chs.mma.es
Elisa VARGAS	Mediterranean Network of Basin Organisations (MENBO) Jucar River Basin Authority Planning Department	Avda. Blasco Ibáñez 48 46010 Valencia, Spain	+34 96 3938942	+34 96 1125750	elisa.vargas@chj.mma.es

Other representatives from Mediterranean countries (Spain, Bulgaria, Slovenia) and Institutions are expected to be nominated.