

Mandate for the Water Scarcity and Drought Expert Group

I. Introduction

Water Scarcity and Droughts (WS&D) was first addressed by the Water Directors in a meeting in 2003. In June 2006 a technical document and a policy summary on Water Scarcity & Droughts produced by a drafting group under the Common Implementation Strategy (CIS) was presented. In parallel, a Mediterranean Working Group, set up in the framework of the MED-EU Water Initiative / Water framework Directive, produced a report on Mediterranean specificities and examples in the region.

During the Environment Council of March 2006, a number of Member States requested to initiate a European Action on Water Scarcity & Droughts, which later translated into a **Communication** from the Commission to the European Parliament and the Council: Addressing the challenge of water scarcity and droughts in the European Union (COM (2007)414 final, 18 July 2007).

An in-depth assessment, based on complementary data provided by MS and stakeholders, was presented to the Water Directors in June 2007. In parallel, an **Expert Network on Water Scarcity & Drought** was set up within the CIS Structure on December 2006. The Network developed the technical document "Drought Management Report, including Agricultural, Drought Indicators and Climate Change Aspects" (DMP report) which was endorsed by Water Directors in November 2007. This report set the basis for developing, when appropriate, drought management plans complementary to the River Basin management plans, aiming at minimizing the socio-economic and environmental WS&D impacts. The DMP report recommends strategic, operative and administrative measures to be applied progressively, according to the drought status, which is previously identified through indicator systems.

The technical work undertaken up to date identified a list of pending issues dealing with WFD implementation process, to be further analysed: **common EU indicators for both water scarcity and droughts, risk maps and early warning systems.**

The aim of the follow-up process of the Expert Group is to provide pragmatic and simple indicators for both water scarcity and drought in order to provide a clear picture throughout the EU.

The objective is to come up with a limited number of indicators for water uses, water availability etc. capturing both the natural phenomena and the socio-economic aspects. The indicators will be mainly built on the basis of case studies proposed by voluntary countries (ES, IT, Fr, etc.) which reflect different climatic, socio-economic hydrologic conditions, and confronted and complemented by the existing indicators in other EU countries.

The indicators should help in the implementation of the WFD at river basin level (by preparation of drought management plans, early warning systems, etc.), should identify the extent and magnitude of the socio-economic and environmental problems caused by WS&D: zones concerned by using an indicator based approach and developing risk maps where possible, causes of these phenomena and valuation of their impacts;

The working group may address potential gaps in the EU legislation referring to WS&D (prevention and mitigation measures) and propose recommendations and technical/financial tools.

II. Objectives

The main objectives of the WS&D Expert Group are:

- To further analyse and address the list of pending issues (**indicators, risk maps, drought management plans**) under the WFD implementation process. Indicators and maps will allow Member States to establish drought phases and structural water scarcity, applied recommended measures included in the DMP report, and minimize WS&D socio-economic and environmental effects and impacts. In addition, works will assist clarifying the feasibility of the use of European indicator frameworks for regional and local assessments.
- To function as forum for WS&D issues and, where appropriate, to provide advice on WS&D issues to Water Directors via the Strategic Coordination Group.

The Expert Group will, where appropriate, provide advice on WS&D issues to WD's, and disseminate the EU experience to international fora. An active involvement is expected for the International Conference "*Droughts and water scarcity: the path to climate change adaptation*", Madrid, Spain, 18-19 February 2010.

In addition, the Expert Group will be informed of the activities set up through the Mediterranean EUWI/WFD Joint Process, and future projects of the Strategy for Water in the Mediterranean (Union for the Mediterranean) related to WS&D. It will exchange experiences such as, *inter alia*, effects of climate change in areas affected by water scarcity and droughts, or applying mitigation and preventing measures. The Expert Group should also ensure science and policy interlinkages by acting as a communication channel for results coming from EU WS&D research activities, and promote the use of advance technological tools in the field (e.g. remote sensing techniques).

III. Tasks

The main tasks identified to be further developed by the Expert Group are as follows:

1. Support the definition of commonly accepted **indicators for water scarcity and for droughts**) in Europe including the demonstration of the added value of these indicators.
2. Exchange information on WS&D in the **first river basin management plans**.
3. **Transfer and exchange experience** and expertise with international fora/other regions.
4. Contribute to the development of the **European Drought Observatory (EDO)** under development at JRC.
5. Support the creation of **Drought Risk Maps**, through commonly agreed methodology and scales.
6. Support the development of a progressive integration of WS&D aspects under **WISE, on voluntary basis**.
7. Link WS&D policies and strategies with **research initiatives**, especially within the FP7 framework (e.g. XEROCHORE project) and promote the use of appropriate

technological tools. This can be done in close collaboration with the future SPI ad hoc activity.

Roles and responsibilities: The development of common indicators is the responsibility of the leaders of the expert network (IT, ES, FR) and close collaboration with the COM. The leaders will be supported by **EEA** in the frame of the general work on water quantity assessments.

Member States will voluntarily provide data to the Expert Group. Member States, in close collaboration with **EEA** and **JRC**, will evaluate the use of the developed European tools for the regional assessments regarding indicators for water scarcity (anthropogenic pressures) and for droughts (natural events). Member States will evaluate the initial results in pilot river basins, and check their effectiveness, reflecting the diversity of climate and hydrology within Europe, and specifying their needs for early warning systems.

The current version of the map server of the European Drought Observatory at **JRC** could serve as a test bed for the implementation, inter-comparison, and analysis of different drought indices and indicators throughout Europe. The integration within the EDO map server will allow for an evaluation of the chosen indices at different spatial scales.

Member States, under the supervision of the leaders of the Expert Group, will assess the process, provide expertise, and apply results in pilot river basins for the future use of possible common indicators in the implementation of the WFD (prepare drought management plans, elaborate early warning systems,...).

Water Directors will be invited to endorse a main list of common agreed indicators to be used for assessment purposes and risk map elaboration.

IV. Deliverables

The main deliverable of the Expert Group will be a set of indicators, previously assessed by Member States and endorsed by Water Directors.

Furthermore the possibility to integrate on a voluntary basis some WS&D data and information under WISE will be considered and potential contributions to the European Drought Observatory (EDO) at JRC will be explored.

Finally, the possible support to the development of drought risk maps in Member States will be supported. These maps will be obtained through common agreed indicators and methodologies that will allow implementing the DMP recommended measures.

Throughout the whole process, RBMPs aspects related to WS&D, research activities and their results, as well as useful technological tools, will be taken into account:

The indicative timetable for the Expert Group will be:

- **Year 2010:** first set of indicators to be tested in the pilot member states (Already identified Spain, Italy, France, UK –tbc-, Finland –tbc-...); contributions to EDO. Presentation of initial results in the International Conference “Droughts and water scarcity: the way towards adaptation to climate change”, Madrid, Spain, 18-19 February 2010.

- **Year 2011:** Practical application of indicators for additional member states voluntarily; contributions to EDO, and potential contribution to the development of an integration of WS&D aspects under **WISE on a voluntary basis**.
- **Year 2012:** Support the creation of Drought Risk Maps and assessment, contributions to EDO.

V. Link to other CIS groups and regional initiatives

The WS&D Expert Group will give technical inputs to the existing WGs in order to ensure that specific aspects of WS&D are taken into consideration in the CIS WGs, in particular:

- Support to the **Working Group Reporting and WISE**: provide specific data for the WS&D
- Support to the **Temporary Expert Group “Agriculture and Water”** (basis already available on the DMP report): analysis of measures that could be used to address WS&D.
- Support to the **Temporary Expert Group “Climate change and water”**: contributions to links between climate change effects and water scarcity and droughts issues (analysis of the PoM, White Paper follow-up etc.).
- Support to **Working Group C Groundwater**: expertise when addressing specific measures to prevent and mitigate WS&D impacts in aquifers (e.g. specific control networks to avoid over-exploitation).
- Support to the **workshop on Environmental Objective and Exemptions**: contributions to the common understanding of *prolonged droughts* and its application (basis already available on Annex III of the Exemptions guidance); Measures to apply under exceptional circumstances.
- Support to the SPI ad hoc activity: identification of and support to research needs on WS&D issues.
- Exchange of expertise with the **Strategy for Water in the Mediterranean** related activities.

VI. Timetable

Time Tasks	2010				2011				2012			
	1	2	3	4	1	2	3	4	1	2	3	4
Exchange of first results on indicators International Drought Conference Madrid*	X											
1. Development and testing of indicators	X	X	X	X	X	X	X	X				
2. Development of the indicators based on case studies	X	X	X	X								
3. Contributions to EDO	X	X			X	X	X	X	X	X	X	X
4. Potential support to integration of WS&D aspects under WISE on a voluntary basis					X	X	X	X	X	X	X	X
5. Exchange of information on RBMP		X	X	X								
5. Approval of list of indicators by Water Directors						X						
Deliverables												
Common agreed indicators			X	X	X	X	X	X				
Application of indicators					X	X	X	X				
Support to the development of Risk maps									X	X	X	X

* *Droughts and water scarcity: the path to climate change adaptation*, Madrid, 18-19 February 2010

VII. Lead countries/organisations

The following people will be the contact persons of the WS&D Expert Group.

Name	Organisation	E-mail
Leading countries		
Cristina Danés	Spain, Ministry of Environment and Rural and Marine Affairs	Buzon-interu@mma.es Buzon-interua@mma.es
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Commission		
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The Water Scarcity and Droughts Expert Group should be reinforced, based on the existing WS&D Expert Network established by WD in 2006, supplemented with additional MS and stakeholders who might be interested in the upcoming tasks. Experts dealing with the development of indicators are especially welcome.

Although most of the drafting, discussion on documents and data reporting will be done through e-mails, the WG will meet on regular basis in order to exchange views on the ongoing work. Spain, Italy and France will lead the overall activity in close collaboration with the Commission.