

Climate ≈ water

Bridging the gap between adaptation strategies of climate change impacts and European water policies



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**EU COM(2007) 414 final on
addressing the challenge of water
scarcity and droughts in the
European Union**

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Introduction

- Drought is a recurrent feature of the European climate.
- It occurs not only in low, but also in high, rainfall areas and in any season.
- The **most severe consequences** of drought are however found in arid or semi-arid regions where the availability of water is already low under normal conditions.
- Drought **has recently considerably increased** in number and in intensity in the EU. With this reference it has been reported that the number of areas and people affected by droughts went up by almost 20% between 1976 and 2006.

Introduction

Drought conditions develop slowly, often unnoticed, and can persist over very wide areas with serious economic, social and environmental consequences.

Reduced water availability has a direct negative impact on citizens through impacts on economic sectors such as agriculture, industry, energy and transport and may affect competitiveness and the internal market.

Introduction

- Droughts result from a **combination of meteorological conditions** (low rainfalls and high temperatures), **land surface conditions** (land use, soil moisture) together with **water use practices** and are, for this reason complex phenomena.
- To reduce societal vulnerability to droughts, a **paradigm shift** from crisis (reactive approach) to risk management (proactive approach) is gaining ground. This means that the integration of drought risk in water resource planning has to be promoted, in order to minimize severe water shortage and its impacts.

Introduction

- Because Europe can not endlessly increase water supply, such an approach will require a marked **shift towards demand-side management** which includes, before all, an increased efficiency of water use (agricultural domestic and industrial) with water loss control, water reuse and recycling, water savings campaigns together with public education programmes and the use of economic instruments.
- These demand measures have to be **tuned to the local and national circumstances**.
- Besides, given the huge potential for water saving in the EU, water demand management should come first and **alternative supply options** should only be considered once the potential for water savings and efficiency has been exhausted.

Introduction

Because of the very wide cross sectoral impacts of drought, it has been decided to deal not only with COM(2007) 414 final only, but also with the other European policies addressing water scarcity and drought, analysing their guiding principles and highlighting their main weaknesses and gaps.

A particular emphasis has been given to:

- Water Framework Directive (2000/60/EC),
- COM(2007) 414 final.

Gaps in EU policies related to water management

The EU policy on water management is continuously evolving, particularly in relation to water scarcity and drought, taking into account the above mentioned principles.

- Nevertheless general deficiencies still exist with respect to drought risk management and in several countries drought risk has not been yet integrated in water management and relevant sectoral policies.
- In the year 2000, the Water Framework Directive (2000/60/EC), which establishes the general policy framework for water management across the EU was issued. The Directive builds upon the principles of integrated water resources management and planning to achieve a “good status” of European water bodies by 2015.

Gaps in EU policies related to water management

- Because of the above mentioned very cross sectoral impact of drought, an **explicit European drought policy would be necessary** to reach an harmonized approach on drought risk management at the EU level.
- This policy should be supported by actions to achieve greater coherence between European Policies affected by or contributing to drought.
- While the focus of the WFD is correctly placed on the qualitative dimension of the water bodies, the “control of quantity” is considered an “ancillary element to secure water quality”.
- The assessment of quantitative status is not required for surface water, but for groundwater only.

Gaps in EU policies related to water management (2)

- Water demand management measures are listed between the "supplementary measures" in the River Basin Management Plans that have to be prepared by the Member States.
- The need at, European level to identify areas at risk of water scarcity lacks.
- The organization of initiatives to increase public awareness of drought and water scarcity issues also lacks.

Gaps in EU policies related to water management (3)

- Drought problems are not adequately dealt with in the Common Agricultural Policy (CAP) and in the related fund destination.
- Always considering the CAP, it has been argued that rules concerning agricultural water saving are lacking.
- Standards for marginal waters (e.g. treated wastewater) use are not established in the EU legislation.
- Moreover, the “civil protection funds” of the EU are available for floods, but not for drought events.
- The extreme fragmentation of responsibilities among different authorities and agencies, involved in drought management, and the lack of coordination among them is another weakness in the EU policies.

The Drought Management Plan

- To cope with these problems a network of experts developed the proposals of supplementing the River Basin Management Plans (RBMP) to be issued according to the WFD, with a specific “Drought Management Plan” (DMP) to be considered as an annex to the RBMP.
- Main aim of DMPs is the minimization of the negative impacts of droughts on the economy, social life and environment, together with drought vulnerability reduction.

Gaps concerning COM(2007) 414 final

- To overcome gaps and inadequacies of the WFD, a set of general principles to address and mitigate the challenge posed by water scarcity and drought within the Union, was established with the EC Communication on Water Scarcity and Drought COM(2007) 414 final.
- The Communication sets out some general principles to be followed if Europe is to move towards a water efficient and water saving economy, including full implementation of the WFD and horizontal integration of water issues into all sectoral policies.

Gaps concerning COM(2007) 414 final (2)

To address water scarcity and drought issues, it identifies an initial set of seven main policy options:

- Putting the right price tag on water;
- Allocating more efficiently water and water-related funding;
- Improving drought risk management;
- Considering additional water supply infrastructures;
- Fostering water efficient technologies and practices;
- Development of a water-saving culture in Europe;
- Improving knowledge and data collection.

Gaps concerning COM(2007) 414 final (3)

Main aim of the Communication was to open a wide debate on how Europe could adapt to water scarcity and drought.

COM(2007) 414 final represents an important further step ahead towards the harmonization of different policies aimed at reducing drought risk and vulnerability, but **it still presents some weaknesses** or lack of detail.

Gaps concerning COM(2007) 414 final (4)

Among these:

- The lack of suggestions concerning the need to identify the authorities responsible for coping with drought, the responsibilities belonging to each of them and the need to improve the coordination and sharing the competences among them.
- Criteria to set up drought monitoring networks together with appropriate indicators are missing.
- The lack of specific thresholds values on water resources for triggering droughts and the mitigation measures to be adopted.

Gaps concerning COM(2007) 414 final (5)

- Criteria to be used in the prioritization of different water uses are also missing.
- Definition of scenarios referred to different phases of a drought event (e.g. pre-alert, alert and emergency scenarios), to be declared under consideration of monitoring results.
- Definition of actions and emergency measures to be implemented to face each of these scenarios.
- Lack on the other hand, of recommendations for improving public awareness and participation.

The Drought Management Plan Report

- To overcome the mentioned weaknesses, at the end of 2007 the Drought Management Plan Report was issued. It was prepared by the “Water Scarcity and Drought Expert Network” of the European Commission and provides guidelines to alleviate drought impacts, complying with the WFD objectives.
- The report
 - makes an overview of existing drought indicators,
 - describes the objectives and the contents of DMPs,
 - identifies and structures the programme of mitigation measures to be setup according to the drought status,
 - provides suggestions how to organize drought monitoring campaigns and the public participation process,

The Drought Management Plan Report

It also takes into account that climate change is already occurring and that it considerably increases the vulnerability to drought.

EC, 2008: WS&DEN (Water Scarcity and Droughts Expert Network). *Drought management plan report. Including agricultural, drought indicators and climate change aspects*. Technical Report 023. Luxembourg, November 2007.

Available at:

http://ec.europa.eu/environment/water/quantity/pdf/dmp_report.pdf



Conclusions

It seems that the main lacks in the drought management legislation concern the research in the field of the legislative and institutional tools aimed at making drought management strategies more efficient.

Among these:

- the development of efficient linkages between the scientific and political spheres based on increased coordination, to ensure that scientific results are communicated to the different decision making levels.
- the integration of drought risk in all relevant sectoral and environmental policies affected by or contributing to drought, (water management, land use, energy production, tourism, protection of natural resources).

Conclusions (2)

- Last, but not least, the strategy to face drought should also include an increase in public awareness and participation through, for example, educational public campaigns on drought events, their potential impacts and the planned measures.

The involvement of the general public is very important to guarantee its acceptance and cooperation that are essential to make the planned measures effective.

Thanks for attention!

