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REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

Third Follow up Report to the Communication on water scarcity and droughts in the European Union COM (2007) 414 final

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1. INTRODUCTION

In 2007, the Commission adopted a Communication on Water Scarcity & Drought (WS&D)[1]. The Communication identified seven policy areas that had to be addressed if Europe was to move towards a water-efficient economy. In October 2007[2] the Council supported the options identified in the Communication and invited the Commission to review the strategy for WS&D by 2012 and in 2008 the European Parliament adopted a resolution underlining that urgent actions and more funds are needed. Action to improve the efficient use of water resources should be seen in the context of the Flagship initiative on resource efficiency[3] as part of the Europe 2020 Strategy.

The first and second reports from 2008[4] and 2009[5] which followed the Communication on water scarcity identified some encouraging policy initiatives at both EU and national levels but concluded that there was still a lot to be done.

In June 2010, the Council recognised that WS&D are already serious problems in many European regions and invited the Member States to promote more efficient and sustainable water use and recalled that trustworthy data would be needed on WS&D events to support further policy development. The Council invited the Commission to consider the right mix of measures and financial instruments needed to tackle WS&D events and to present relevant proposals as appropriate.

This report covers the period May 2009 to May 2010 and is based upon the responses of 21 countries to the Commission's annual questionnaire.[6] The situation concerning water scarcity was as follows:

– Three Member States reported that they faced continuous water scarcity (CZ, CY, MT);

– Five Member States reported that they faced droughts or rainfall levels lower than the long term average (FR, PT, HU, ES, UK); and

– Four Member States experienced local limited water scarcity occurrences (FR, NL, RO and SE).

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1 COM(2007) 414 final 18.7.2007
2 13888/07, 15 October 2007, ENV 515, DEVGEN 182, AGRI 325.
3 COM(2011) 21 of 26 January 2011
4 COM(2008) 875 final, 19.12.2008
5 COM(2010)228 final, 18.5.2010
6 21 countries (AT, BE, BG, CH, CY, CZ, DK, EE, ES, FR, HU, IE, IT, LU, MT, NL, PT, RO, SE, SK and UK) replied to the questionnaire for the annual report (sent to the 27 Member State and Norway and Switzerland)

Consequently, mitigation actions were developed and restrictions were applied in order to restrict water use (FR), irrigation (RO, SE, CY) and shipping (NL) in some of the affected Member States. Six Member States reported that they did not experience drought or water scarcity situations (AT, BE, EE, IE, LU, SK), and the same applied to Switzerland (CH). This information reported by the Member States should be seen in relation to the 2010 State of the Environment report from the European Environment Agency[7] which states, that "*Except in some northern and sparsely-populated countries that possess abundant resources, water scarcity occurs in many areas of Europe, particularly in the south, confronted with a crucial combination of a severe lack of and high demand for water".*

The present report gives further details on the extent of WS&D in the EU and the measures which are being put in place to address both situations. The report also sets out the activities to be implemented by the Commission in preparation for the 2012 review of WS&D policy.

2. TOWARDS A BLUEPRINT FOR SAFEGUARDING EUROPE'S WATERS

The Commission intends to adopt a "Blueprint" to safeguard Europe's waters by the end of 2012 based on assessments of the implementation of the Water Framework Directive (WFD)[8], WS&D policy and the vulnerability of water resources to climate change and other man-made pressures. This evaluation has a twofold purpose:

- It will look back and assess the implementation and achievements of policies and measures in place to ensure the protection and availability of EU water resources, while identifying gaps and shortcomings;

- It will look forward at the evolving vulnerability of the water environment to identify measures and tools that will be needed in several EU policy areas in order to ensure a sustainable use of water in the EU in the long term;

The Blueprint will synthesise policy recommendations and will be accompanied by a number of new initiatives, including of a legislative nature if appropriate. The Blueprint will also examine the needs for additional funding, incentives, measures and the establishment of the necessary support for data collection, scientific and technological development. It will consider the links between the various aspects of water policy, including those relating to quality and availability. The Blueprint will be developed in close consultation with stakeholders.

The work of the Commission will be supported by the core integrated analysis being developed by the European Environmental Agency which links resource efficiency, accounting, environmental externalities and policy instruments in the area of water.

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7 http://www.eea.europa.eu/soer/europe/water-resources-quantity-and-flows

8 Directive 2000/60/EC, OJ L 327, 22.12.2000, p.1.

3. REVIEW OF POLICY ON WATER SCARCITY AND DROUGHTS

The first consultation of stakeholders on the WS&D policy review took place in April 2010 when the Commission presented the main building blocks of the policy review and the process and timing for preparing it.

The main building blocks of the WS&D policy review are:

- Water efficiency (in agriculture and the urban environment),
- Better planning (demand management, land use planning, drought observatory and indicator development, enhancing integration of WS&D in the River Basin Management Plans (RBMPs) and in sectoral policies) and
- Adequate implementation instruments (such as financing water efficiency, water pricing, water allocation).

The policy review will also address the external dimension of the WS&D problem. In many parts of the world, water resources are becoming more and more vulnerable and an important part of EU's water footprint (indicator for direct and indirect water use) is embedded in imported water-expensive goods (such as agriculture, food and textile products). The water foot printing and of life-cycle analysis approaches are increasingly used to raise awareness of water consumption related to products or production processes, and the policy review will assess to which extent these tools can be useful for policy purposes.

4. IMPROVING WATER EFFICIENCY

In accordance with the water hierarchy described in the 2007 Communication, improved water efficiency will be an important part of the policy review on WS&D including the following specific topics.

Water efficiency of buildings

Most Member States have so far not implemented national legislation in terms of water efficiency standards in buildings or water using devices, though some aspects are included in RBMPs (BG, CY, IE, SK). The UK has defined new water efficiency targets for water companies.

At the end of 2010, the Commission launched a study to analyse further the possibilities for improving the water performance of buildings across Europe. The Commission will look at three aspects of improvement to the water performance of buildings, namely water saving devices; water-efficient construction, design and renovations; and measuring building's performance.

The study will determine which regulatory or non-regulatory measures will be the most appropriate to improve water efficiency in buildings, ranging from a directive (similar to the

directive on energy performance of buildings[9]), to integration of water efficiency into existing regulatory measures and a mixture of other measures and standards. The environmental, economic and social impacts of the proposed measures will be evaluated.

Reduction of leakages in distribution systems

One of the means of increasing water efficiency is to reduce leakages from water distribution networks. Studies have so far indicated that as much as 50% of water abstracted is lost in distribution in certain areas of Europe. However, there are significant differences between the leakage levels in different Member States.

The Member States also report that they consider leakage reduction a relevant issue and thirteen of them (AT, BE, BG, CY, ES, FR, IE, IT, MT, PT, RO, SE, SK, UK) report that significant activities in this respect have taken place in the reporting period. Measures which have been implemented include periodical maintenance works, updated guidelines, detection, leakage quantification and reduction measures, new legislation binding local authorities to promote action plans and multi-annual work programmes, integration of measures to restore water networks in RBMPs and National Programmes. In some Member States, network renewal is not planned (CZ, EE, HU, LU) whilst the Netherlands has stated that leakage in its supply network for drinking water is low (<5%) and thus no measures to reduce leakages are considered necessary.

In 2010, following a request of the European Parliament, the European Commission launched a pilot project to investigate the resource and economic efficiency of water distribution networks. The project will comprise 5-8 pilot studies to analyse and quantify factors of relevance for leakages in distribution networks at a river basin level. It will also identify cost-effective solutions for reducing water losses and present recommendations on policy options for improving water efficiency in distribution systems.

Water efficiency in agriculture

A Commission Communication on the Common Agricultural Policy (CAP) towards 2020 was adopted in November 2010[10]. Besides the contribution of agriculture to a greater resilience to flooding and drought, it also recognised that many farming practices have the potential to put pressure on the environment, leading to soil depletion, water shortages, pollution, and loss of biodiversity. The inclusion of the Water Framework Directive within the scope of cross compliance will be considered, once the Directive has been implemented and the operational obligations for farmers have been identified.

The Farm Advisory Services (FAS) were set up in Member States to assist farmers in complying with the cross compliance standards. Water is not always addressed to the same extent in the FAS of the different MS; additional guidance was needed, and the Commission and stakeholders therefore developed a handbook for administrations about integrating water issues in the FAS[11].

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9 Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings

10 COM(2010) 672 final, 18.11.2010

11 http://ec.europa.eu/environment/water/quantity/good_practices.htm#handbook

At the end of 2010 the Commission launched a study aimed at having an overview of the current situation of agricultural water use in Europe. The study will compile information on possibilities for water saving in agriculture.

Non-authorized water abstraction was addressed at a conference hosted by the Belgian Presidency in 2010. Many Member States face non-authorised water abstractions which affect water availability. Better control is required to identify and penalise this misuse, and the Commission intends to continue to put focus on this issue in preparation for the policy review.

Halting desertification

In 2010, the Commission launched pilot projects on halting desertification upon a request by the European Parliament with the aim of disseminating best practices across Europe. The projects will also provide examples of water efficiency measures and will contribute with examples and best practices to the WS&D policy review.

5. BETTER PLANNING

In parallel to looking at ways to improve water efficiency, the WS&D policy review will also look at possibilities for better planning and preparedness to deal with droughts and improved water demand management.

Activities to integrate water scarcity and droughts into sectoral policies have been undertaken by several Member States, in particular efforts to reduce water consumption (AT, BG, BE, CY, FR, HU, IT, MT, RO, SK, NL, LU, RO), and adaptation to climate change (AT, ES, PT and CH). The integration of WS&D actions into RBMPs (BE, CY, HU, IT, MT, RO, SK, NL) and specific national programmes (BG, LU, UK) concerning industry, agriculture (LU, RO) and households was also reported.

Implementation of the River Basin Management Plans

Adoption of river basin management plans for each river basin district under the WFD had to be completed by December 2009 whilst the relevant information had to be reported to the Commission by 22 March 2010. As of December 2010, several of the Member States where water scarcity and/or drought is expected to be most severe (CY, EL, ES, PT, RO) had still not published their RBMPs.

In 2010, the implementation of the RBMPs started in the Member Sates. At the same time the Commission launched the assessment of the submitted plans which will also address WS&D. The report on how Member States have tackled their RBMPs will be published in 2012 as part of the Blueprint.

Further developing the observatory and an early warning system on droughts

The prototype of the European Drought Observatory (EDO) has been further developed providing for the continuous monitoring of drought indicators across Europe and displaying these on a map server. All indicators cover the entire European continent and are presented as actual data and as deviation from the expected long-term average. In the long run, GMES services might be useful to support the operational monitoring activities.

In 2010, the first tests for meteorological drought forecasting were performed and the first interoperability arrangements set up with regional, national and local services including the Drought Management Centre for South East Europe, the Spanish Observatory for Sustainability and the Ebro River Basin Authority.

Data collection and setting up of a comprehensive indicator framework

Important knowledge gaps still exist as regards WS&D in the EU and trustworthy and comparable **data** are needed about the temporal and spatial distribution of water scarcity and droughts events, the expected impacts of climate change on water resources and the vulnerability of ecosystems, as well as the associated socio-economic aspects.

As a part of the Common Implementation Strategy for the WFD period 2010-2012, an Expert Group is working on defining water scarcity and drought **indicators**. Different indicators are needed for the evaluation of water scarcity and for droughts respectively. Indicators on water scarcity often follow a pressure-state-response approach and compare water abstraction/water use with long term availability. Common drought indicators are based on meteorological and hydrological variables such as rainfall, stream flow, soil moisture, reservoir storage, and ground water levels.

The Commission is also developing[12] a set of **vulnerability indicators** for water related impacts under a set of climate change and socio-economic scenarios, and performing an inventory of potential adaptation measures and assessment of their impact, which gives a strong emphasis to WS&D issues.

The Commission has started an assessment of natural water retention measures and their potential impact i.e. on WS&D prevention. An upcoming Commission Communication will address the multiple benefits of **green infrastructure** including its role in water retention and mitigating the effects of extreme events. Green infrastructure assists the keeping of water in river basins for a longer timescale, enabling soil, forest, grassland and wetland ecosystems to deliver their water retention and disposal services.

Furthermore, the EEA is progressively implementing **water accounts** across Europe in cooperation with Eurostat and the Joint Research Centre in order to support the adoption of a more sustainable approach to water resource management. The accounts quantify water availability and use by all sectors, at a river basin scale and on a monthly basis. The approach enables 'hotspots' of water stress to be identified and over-exploitation to be quantified. In this way measures to address unsustainable water use can be targeted in an optimal manner. The first results are expected to be available in 2011.

6. INSTRUMENTS

Financing

European funds and state aids offer more and more opportunities to meet the challenge of water scarcity and droughts. At European level the allocation of funding should be consistent with the Europe 2020 targets including environmental concerns and resource efficiency.

[12] www.climwatadapt.eu

The Commission adopted a Communication on the post-2013 review of the EU's budget in October 2010[13]. In the field of **Cohesion Policy**, the Commission has suggested a new planning and management cycle to ensure that future EU funding is firmly linked to the Europe 2020 targets.

In Commission Communication on 'Regional Policy contributing to Sustainable Growth in Europe 2020'[14], managing authorities are encouraged to use Regional Policy funding for natural risk prevention projects that can preserve ecosystem services such as water quality and quantity, and prioritize "green infrastructures" such as flood plains restoration, which allow for preserving clean water availability. In addition they are asked to fully consider the water hierarchy and give priority to projects on water savings and water efficiency.

The recent Communication on the orientation of reform to the **Common Agricultural Policy** (CAP) mentions that future direct payments should include a mandatory greening component. by supporting environmental measures applicable across the whole EU territory. These should take the form of simple, generalized, non contractual and annual actions and are linked to agriculture (e.g. permanent pasture, green cover, crop rotation and ecological set-aside). They could contribute to the improvement of water resources, as farmers will have to engage actively in farming practices that bring benefits also for water quality and improve water management.

Member States plan to spend 26,9% of CAP Health-Check and European Economic Recovery Plan (EERP) funds on water management. Of these funds, for the remainder of the current period, the various rural development programmes set out planned spending of 184 million Euros for water storage, 568 million Euros on water savings technologies and 119 million Euros for wetland restoration[15]. In the coming years rural development policy will remain an indispensable tool for improving care for the EU's precious water resources.

The EU Solidarity Fund still applies a delay of 10 weeks following the onset of damage caused by a disaster. For slowly unfolding disasters this provision implies an objective difficulty to present applications to the Commission within the application period. A Communication on the future of the EU Solidarity Fund will be published in the first half of 2011, addressing also the issue of slowly unfolding disasters such as droughts.

The **European Investment Bank** (EIB) emphasizes resource efficiency and optimizing solutions in their Water Sector Lending Policy. The current water efficiency concept includes efficiency by the consumer, in allocation across different users, of service providers as well as efficiency of the physical systems. In 2009/10, the lending in the EU water sector was 4,3/5,4 billion EUR with total project cost of 14/13 billion EUR, half of which was for water supply. A 100 million EUR loan was approved to for a water distribution project in Madrid that will include investments in treatment and distribution of recycled water.

Water pricing and funding at national level

[13] COM(2010)700final, 19.10.2010

[14] COM(2011) 17 final of 26 January 2011

[15] Commission fact sheet :Overview of the CAP Health Check and the European Economic Recovery Plan

At national level the use of national budgets (BG, FR, EE, ES, LU, MT, PT, SK), EU funds (CY, CZ, HU, MT, SK) and private funds (IT, PT) were reported to be used to finance better water management and to improve water efficiency.

In several Member States water-tariffs have been introduced recently (AT, BG, BE, EE, ES, NL, SE, UK) or are under development (CY, CZ, IE, RO, SK) in order to ensure cost recovery for water services. The metering of water consumption was reported being extended in most Member States.

The Commission has also launched an assessment comprising the analysis of case studies on water pricing policies for the agricultural sector in selected river basins. Recommendations on best practices will be drawn this assessment.

Water allocation

Following the CAP Health Check, from 2010 the Member States will have to define standards applying at farm level for compliance with existing national **authorisation** procedures when using water for irrigation. In 2010, all but one Member State notified standards on authorisation for the use of water for irrigation, linking the payments with permitting. The Commission is carefully following the application of the cross-compliance rules and financial corrections might be applied if these are not implemented correctly.

The national reports show that the use of an authorization procedure for water abstraction is widespread in the EU, and some Member States (MT, IE) are improving their current procedures in order to comply with the WFD. In the EU and in Switzerland restrictions in water use are applied in order to preserve aquatic life and ecological status of water bodies (AT, CY, CZ, ES, FR, HU, IT, NL, PT, RO, SK, SE, UK) although these have not yet been fully implemented everywhere (BE, BG, EE, IE, LU, MT).

Most Member States (except UK and ES; and BE that introduced ecocheques) do not envisage setting up **water markets** to address water scarcity.

The water hierarchy approach is taken into consideration in the planning procedures, but the design and construction of **new water supply** networks or reservoirs (BG, CZ, EE, FR, IE, PT, RO, SK, SE), and desalination plants (CY, UK) have been reported as necessary.

Research and technological development opportunities

In the framework of the XEROCHORE research project, guidance documents and recommendations were issued on drought-related knowledge base. An exchange platform on drought issues was set up and is now maintained and developed by the European Drought Centre[16]. .New FP7 research projects have been launched, namely DEWFORA (Improved drought early warning and forecasting to strengthen preparedness and adaptation to droughts in Africa), and SIRRIMED (Sustainable use of irrigation water in the Mediterranean region). Furthermore a call for proposals "Vulnerability and increased drought risks in Europe" was opened in 2011.

[16] http://www.geo.uio.no/edc/

FP6 projects covering WS&D (WATCH[17], CIRCE project[18]) will deliver before the end of 2011.

At national level research linked to adaptation to climate change (BE, AT, CZ, ES, UK) and sustainable water management (BE, BG, CH, CY, ES, HU, LU, MT, RO, NL) were reported.

Education and awareness

Many countries reported the introduction of new educational programmes and awareness-raising campaigns, regardless of whether they were expecting (CH, ES, SE, SK) or not (AT, EE, FR, IE, IT, MT, PT, UK, NL, RO) water scarcity situations in the 2010-2011 period.

As part of the preparations for the WS&D policy review the Commission will look at further possibilities for awareness raising and educational activities.

7. CONCLUSIONS

The efficient use of water and effective management of natural water resources in a world where water resources are under significant pressure is about ensuring that natural water resources are sustained in terms of quality and quantity to meet the needs of humans, nature and the economy through integrated management.

This report is focused on the building blocks of the future WS&D policy - water efficiency, better planning and adequate implementation instruments – which are key elements of the establishment of a water efficient economy that meets the challenge of the EU 2020 strategy.

The next milestone of the WS&D policy is its review which will be published in 2012, in the Year of Water, as part of the Blueprint for Europe's waters.

In the next months, the Commission will focus on filling knowledge and data gaps and conducting an impact assessment for the review. The work will be supported by the outcomes of the assessment of the RBMPs, the modelling of water vulnerability to man-made pressures, the cost-benefit analysis of natural water retention measures, the inputs from EEA, JRC and Eurostat and the forthcoming Communication on a road map towards a resource efficient economy.

[17] www.eu-watch.org/

[18] www.circeproject.eu/