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**REPORT FROM THE COMMISSION TO THE COUNCIL  
AND THE EUROPEAN PARLIAMENT**

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

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# **REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT**

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

### **1. INTRODUCTION**

Water is one of our most valuable resources but is also becoming a scarce resource, and every indication is that it will become even more so in the future. Decreasing availability, declining quality, and growing demand for fresh water are creating significant challenges. Climate change is expected to exacerbate the situation. Therefore, water scarcity issues need to be regarded in this broader context.

In 2007 the Commission adopted a Communication on water scarcity and droughts<sup>1</sup>. The Communication identified seven policy initiatives that had to be addressed if Europe was to move towards a water-efficient and water-saving economy. In October 2007<sup>2</sup> the Council supported the options identified in the Communication and invited the Commission to review and further develop the evolving strategy for water scarcity and droughts by 2012.

In October 2008 the European Parliament adopted a report on the Communication and supported the proposed first set of policy options for action. Parliament's Resolution underlines that urgent action is needed - particularly to promote water savings, exchanges of good practice, awareness raising campaigns, putting the right price tag on water - and more funds are needed to support these actions.

The first follow-up report to the Communication<sup>3</sup> was adopted in December 2008 and detailed the progress made in implementing the Communication's proposals. It identified some encouraging policy initiatives at both EU and national levels that had contributed to the results but concluded that there was still a great deal to be done. The report was accompanied by a work programme that was also to be monitored regularly. As announced in the report, the Commission will assess on an annual basis progress towards implementation of the set orientations with a view to the 2012 policy review, in line with the Council Conclusions of 30 October 2007. This is the second report assessing progress made in implementing the options of the Communication and the work programme for the medium and long term. The aim of the report is to present the progress that has been achieved across Europe over the last year. The report<sup>4</sup> incorporates the information received from Member States in response to a questionnaire on implementation of the policy options.

### **2. ASSESSMENT OF PROGRESS MADE IN IMPLEMENTING THE POLICY OPTIONS**

#### **Setting the scene**

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<sup>1</sup> COM(2007) 414 final 18.7.2007

<sup>2</sup> 13888/07, 15 October 2007, ENV 515, DEVGEN 182, AGRI 325.

<sup>3</sup> COM(2008) 875 final, 19.12.2008

<sup>4</sup> In spring 2009 a questionnaire was sent to the 27 Member State Water Directors. Replies were received from CZ, IT, FIN, AT, DE, PT, UK, BE, PL, FR, MT, CY, ES and LT. The references to specific Member States throughout the text serve as examples.

In April 2009 the European Commission presented a policy paper (White Paper<sup>5</sup>) which sets out a framework for climate adaptation measures and policies to reduce the EU's vulnerability to the impacts of climate change. The White Paper stresses the need for further measures to enhance water efficiency and to increase resilience to climate change.

22 December 2009 was a milestone in European water policy. This is the date by which the implementation of the Water Framework Directive<sup>6</sup> (WFD) required River Basin Management Plans (RBMPs) to be adopted for all river basins across the EU. This will give a clearer overview of what Member States are planning in the respective river basins for tackling water scarcity and drought problems.

However, by December 2009, several of the Member States where water scarcity and drought is expected to be most severe had not adopted their plans.

### **2.1. Putting the right price tag on water**

The Water Framework Directive (Article 9)<sup>7</sup> requires Member States to ensure by 2010 that water pricing policies provide adequate incentives for users to use water resources efficiently and that the different water uses make an adequate contribution to the recovery of costs of water services. The programmes of measures in the RBMPs will make it possible to check whether this has been fully implemented across Europe.

The current information received from Member States shows that adaptation of tariff systems to take account of the principle of cost recovery may result in increased water bills for citizens. Consequently, this is happening gradually. Experience shows that the price increase may not necessarily lead to a decrease in consumption. Pricing is only one possible tool to be considered; additional measures are needed to encourage efficient use of water. Examples of the most widespread measures used in the Member States are the application of block tariffs, penalties for excessive consumption and discounts for water savings.

Concerning the efforts to spread metering programmes in all water-using sectors - including compulsory controls on abstractions (Article 11(3) WFD) several Member States reported that the use of meters for domestic drinking water supply is reaching a high level of implementation. The metering of non-domestic water uses is also improving, especially if users are connected to the public supply. The metering and control of direct abstractions is usually associated with the authorisation process itself. In some southern European river basins legal measures have been adopted to also control existing groundwater extractions.

### **2.2. Allocating water and water-related funding more efficiently**

#### **Improving land-use planning**

Economic activities should adapt to the sustainable availability of resources at river basin level, without exacerbating already existing pressures on some river basins. Large-scale

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<sup>5</sup> COM(2009) 147 final, 1.4.2009, 'Adapting to climate change: Towards a European framework for action'

<sup>6</sup> Directive 2000/60/EC of the European Parliament and the Council establishing a framework for Community action on water policy, OJ L 327, 22.12.2000, p.1.

<sup>7</sup> Pursuant to Annex VII, point A.7.2, RBMPs must include 'a report on the practical steps and measures taken to apply the principle of recovery of the costs of water use in accordance with Article 9'.

development of economic activities such as tourism or farming could lead to over-abstraction of waters which can cause significant problems, particularly in water-scarce areas.

Several activities linked to land-use planning are ongoing across the EU both at European and at national level:

Regarding **agriculture**, to respond to new challenges, the Common Agricultural Policy (CAP) Health Check agreed in 2008 resulted in the inclusion of better water management objectives relating to cross-compliance. From 2010 Member States will have to define standards applying at farm level for compliance with existing national authorisation procedures when using water for irrigation. Obligations related to cross compliance should help raise farmers' awareness of the authorisation procedures, particularly through the provision of better information to farmers and the perspective to reduce CAP payments in case of infringement. The Commission will carefully monitor the application of the cross-compliance rules resulting from the Health Check during the implementation phase.

The directive on promotion of the use of energy from renewable sources (Renewables Directive<sup>8</sup>) sets mandatory national targets for the share of renewable energy in final consumption and a target of 10% renewable energy in transport by 2020. This might lead to an increase of **biomass** production in the EU. A study carried out for the Commission<sup>9</sup> on the impact of bioenergy development on water availability shows that a significant increase in biomass production in the EU will not require an increase in total irrigation water consumption in most areas. However, the study concluded that in order to avoid increased pressure on European water resources, European feedstock for bioenergy should be more concentrated in northern and central parts of Europe than in the south (and particularly in water scarce regions).

Regarding **water efficiency measures in urban areas** some initiatives are being taken at local level to promote the incorporation of a new culture of water management in the municipalities' development plans, but the activities reported provide evidence that much more emphasis should be put on this at national level.

Most Member States reported that they fully implement the Environmental Impact Assessment<sup>10</sup> (EIA) and Strategic Environmental Assessment<sup>11</sup> (SEA) Directives. In the case of projects significantly affecting the aquatic environment it is recommended that the assessment of water-related impacts required by Article 4 (7) WFD are incorporated in the SEA and EIA<sup>12</sup>.

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<sup>8</sup> Directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources, OJ L 140, 5.6.2009.p.16.

<sup>9</sup> T. Dworak et al. (2009), Assessment of inter-linkages between bioenergy development and water availability.

<sup>10</sup> Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, OJ L, 175, 5.7.1985, p.40.

<sup>11</sup> Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment, OJ L 197, 21.7.2001, p.30.

<sup>12</sup> CIS Guidance Document No. 20 on Exemptions, [http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework\\_directive/guidance\\_documents/documntn20\\_mars09pdf/\\_EN\\_1.0\\_&a=d](http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/documntn20_mars09pdf/_EN_1.0_&a=d).

The **tourism sector** needs attention. Most tourists go to the areas where water scarcity and droughts are already problematic and use on average over four times<sup>13</sup> as much water per day as a local resident. Peak season demands can therefore put severe constraints on local supply. A key challenge identified is to reduce water demand in the peak season and minimise resource use to reduce the ecological footprint and stress on water.

### **Financing water efficiency**

Rural Development Programmes are an important tool that can have a significant impact on achieving the WFD objectives. Water concerns are being integrated into the rural development policy, but particular attention is needed in order to tackle concerns regarding possible negative impacts on water management due to new farm investments, in particular those aiming at increasing irrigated areas and new large-scale water storage. Control systems should be developed that help growing agriculture holdings use water resources in a sustainable way<sup>14</sup>. Consequently, increased coordination is needed between water and agricultural policies.

The agreement reached in the framework of the **CAP Health Check** has resulted in increasing financial transfer from the first pillar to rural development policy. Additional financial resources of €3.3 billion will allow Member States to reinforce their efforts under their rural development programmes to meet the new challenges faced by European agriculture including the need for better water management. In addition, the European Economic Recovery Package makes available €1.020 billion earmarked for the improvement of broad band infrastructure in rural areas and for addressing the new challenges as identified in the Health Check. Based on the information communicated to the Commission by Member States in 2009, they allocated 26.9% of these additional resources for water management in their existing Rural Development Programmes.<sup>15</sup>

In the 2007-2013 programming of the **Cohesion Policy** more than 6% of the total allocations are used for investments in infrastructure related to water management. In addition a large share of the €5.8 billion for "risk prevention" will support projects on "water", including water scarcity.

The Commission is already undertaking activities in preparation for the post-2013 period of the cohesion policy. In March 2009 the Commission published the working document 'Regions 2020 – Climate change challenges for European Regions'<sup>16</sup> which also addresses the aggravation of water scarcity and droughts with climate change. The European Territorial Cooperation programmes (previously 'Interreg') give major support to cross-border and transnational projects on water scarcity.

The funding of measures fostering better water management, such as the improvement of existing supply systems, leakage reduction, reuse of waste-water, soil protection,

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<sup>13</sup> EEA Europe's Environment, The Third Assessment (2000).

<sup>14</sup> T. Dworak et al (2009) In-depth assessment of RD-programmes 2007-2013 as regards water management

<sup>15</sup> In addition, since the publication of implementing rules for article 38 of the rural development regulation (Commission Regulation (EU) No 108/2010) Member States may grant support for mainstreaming the implementation of the Water Framework Directive. This measure can be used once the river basin management plans are operational.

<sup>16</sup> [http://ec.europa.eu/regional\\_policy/sources/docoffic/working/regions2020/index\\_en.htm](http://ec.europa.eu/regional_policy/sources/docoffic/working/regions2020/index_en.htm)

environmental and water resources protection and monitoring and research to improve knowledge, are increasingly taken into account in EU and national budgets. More information is expected on improved **use of the EU and national funds** in the River Basin Management Plans.

Only a few Member States reported the implementation of **taxation policies** that take into account water scarcity and drought issues.

### **2.3. Improving drought risk management**

#### **Developing drought risk management plans**

Moving from 'crisis response' to 'risk management' in the context of water management is the way to improve society's resilience to water scarcity and droughts. Member States across the EU consider and tackle these issues depending on their recent history and suffering with regard to water stress. Several Member States have begun identifying the areas or entire basins affected by drought, suffering permanent or semi-permanent water scarcity, soil degradation and desertification processes. Specific Drought Management Plans could be developed as supplements to the River Basin Management Plans. However, the delay in implementing the WFD can hamper the affected Member States in tackling water scarcity and drought problems.

A guidance document on incorporating climate change in the second and third river basin management cycles was adopted by the Water Directors in December 2009<sup>17</sup>. It includes a specific chapter on adaptation measures related to water scarcity and drought problems.

Some Member States already reported that no basins with permanent scarcity are identified (DE, AT, FI, LT, BE) but occasional, or even frequent, water stresses during summer can be expected (DE, AT, FI, LT). However, others suffer permanent scarcity across the whole country (MT, CY) or whole river basins (ES, IT). Not only Mediterranean countries, but also others from central Europe reported areas with frequent water scarcity (CZ) or over-exploited aquifers (FR, BE).

#### **Developing an observatory and an early warning system on droughts**

The prototype of the European Drought Observatory (EDO) for drought forecasting, detection and monitoring in Europe is currently engaged in pre-operational production of drought indices using meteorological information.

Several activities are currently ongoing in Europe to monitor and manage drought, water scarcity and desertification risks, at both national and European level. Several Member States are already monitoring droughts (e.g. ES, PT, UK, IT, PL, AT).

#### **Further optimising the use of the EU Solidarity Fund and the European Mechanism for Civil Protection**

In 2009 a contribution of €7.6 million in aid from the EU Solidarity Fund (EUSF) was granted to Cyprus to help reimburse the costs of emergency measures needed due to the

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[http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework\\_directive/guidance\\_documents/management\\_climatepdf/\\_EN\\_1.0\\_&a=d](http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/management_climatepdf/_EN_1.0_&a=d)

severe droughts in 2008. This is the first time the Solidarity Fund was used to provide financial aid for emergency measures in response to an exceptional drought.

Mobilising the EUSF for drought is difficult due to the ten week time-limit for presenting applications to the Commission following the emergence of the first damage. The application mechanisms (deadline) should be reconsidered in the future in order to allow the EUSF to better respond to slowly unfolding disasters, such as droughts. The implementation of drought plans and indicators, as well as an effective Early Warning System on droughts may mitigate this difficulty for applicants.

The European Parliament supported the Commission in its appeal to the European Council to reconsider its negative stance on the proposed amendment to the EUSF Regulation put forward by the Commission already in 2005, covering also a new definition of the criteria and broader scope of the eligible events.

The 2009 work programme on civil protection covers actions that are eligible for financial assistance under the Civil Protection Financial Instrument in the field of response, preparedness and prevention. It includes prevention cooperation projects, preparedness (training, exercises) and expenditure related to the response to emergencies, including drought.

#### **2.4. Considering additional water supply infrastructures**

In those regions where water demand still exceeds the availability of resources, despite having exhausted all possible options to reduce water demand in line with the water hierarchy, new water supply infrastructures for the mitigation of drought effects could be considered.

A study carried out for the Commission in December 2008 assessing the risks and impacts of four alternative water supply options (desalination, wastewater re-use, ground-water recharge, and rainwater harvesting) revealed that it is not possible to provide an EU-wide set of best available mitigation options. The potential problems and mitigation options differ between locations and technologies – meaning that mitigation measures have to be designed to deal with local conditions. Alternative water supply options may be more expensive than conventional options, but subsidies to compensate for price differences should serve only to help users in the transition towards more sustainable use of water where the price of water reflects its true cost.

The role of alternative water supply options will grow in the future due to climate change and the reduction of water availability, so particular attention should be paid to their implementation and the continuous improvement of knowledge in the field.

#### **2.5. Fostering water-efficient technologies and practices**

In July 2009 an assessment<sup>18</sup> was finalised for the Commission showing that the introduction of mandatory requirements on water using devices under the extended Eco-design Directive could induce significant savings. If all domestic water using products were included, a 19.6% reduction in EU total public supply might be achieved (around 6% if only energy-related

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<sup>18</sup> BioIS&Cranfield university (July 2009) Study on water efficiency standards



products were included without considering dishwashers and washing machines). This would correspond to a 3.2% reduction in the total annual EU abstraction.

Reducing the water consumption of energy-related products such as taps, showers and baths can also result in an indirect reduction of energy consumption: a potential reduction of 20% of the heating needs for these products. With regard to buildings it was concluded that small behavioural changes could provide significant savings. Small changes in showering time, bathing frequency or use of taps can result in savings of 20 to 30%.

The EU Eco-Management and Audit Scheme (EMAS)<sup>19</sup> is a management tool for companies and other organisations to evaluate report and improve their environmental performance. The revised Regulation covers reporting on the basis of core performance indicators, including a performance indicator on the use of water, consisting of the total annual water consumption expressed in m<sup>3</sup>. More specific indicators will be defined in the reference documents that will be developed for all sectors of the economic activity.

Apart from EMAS, which requires a voluntary commitment from the participants to contribute to the efficient use of water resources, other voluntary agreements were also reported with different water-using economic sectors in Member States.

The European Environment Agency reported that manufacturing industry uses about 11% of total freshwater abstracted across Europe, with about half used for cooling and half for processing. Water abstracted for energy production accounts for 44% of total freshwater abstraction but very little of this water is consumed in the process. There is potential for greater use of alternative water sources for energy production (cooling) as these can be less impacted by droughts<sup>20</sup>.

## **2.6. Fostering the emergence of a water-saving culture in Europe**

The development of a water-saving culture in Europe requires the involvement of civil society. By explaining the reasons for actions taken and providing information on what is needed to enhance water saving, Member States can encourage consumers to choose water efficient products and services, which will in turn create a market for such products and services. The greening of public procurement and the provision of information to consumers by using labels will facilitate the emergence of a water-saving culture.

The extended Framework Directive on Ecodesign<sup>21</sup> adopted on 21 October 2009 covers not just energy-using items, but also energy-related products. The new Working Plan of the Ecodesign Directive (2009-2011) includes energy-using water-using devices, such as irrigation equipment, and the Energy Labelling Directive is also under revision with the aim to cover a broader range of products, similar to the Ecodesign Directive.

Following the adoption of the revised EU Ecolabel Regulation in November 2009 it is expected that the Ecolabel will play an increasingly important role in helping consumers buy environmentally friendly products, including those produced with lower water consumption and those that use less water.

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<sup>19</sup> Regulation (EC) No 1221/2009, OJ L 342, 22.12.2009, p. 1.

<sup>20</sup> EEA Report No 2/2009, Water resources across Europe - confronting water scarcity and droughts.

<sup>21</sup> Directive 2009/125/EC, OJ L 285, 31.10.2009, p. 10

The Greening of Public Procurements is a major opportunity to stimulate the market for environmentally friendly products and technologies and to give priority to water-efficient products and technologies. The Commission strongly urges Member States to increase their level of green public procurement.

The water footprint is increasingly used to raise consumers' awareness of water consumption. It has the potential for providing information on the volume of freshwater used to produce a product (a commodity, good or service). The Commission will consider whether it has a role to play in the future policy on water scarcity and droughts.

A number of initiatives focusing on water saving are ongoing in Europe. Aquawareness - the European Water Awareness and Water Stewardship Programme launched in June 2008 by the European Water Partnership (EWP), involves stakeholders from various sectors of business and civil society including NGOs, regional and local governments in developing joint solutions for a more sustainable water management.

## **2.7. Improving knowledge and data collection**

### **Water scarcity and drought information system throughout Europe.**

Indicators are being produced under the Common Implementation of the WFD in co-ordination with the European Environmental Agency (EEA) and the Joint Research Centre (JRC). The EEA has made progress in establishing a European Water Scarcity and Drought Information System (WSDIS), and the implementation of the Global Monitoring for Environment and Security (GMES), which can deliver space-based data and land monitoring services in support of water policies, has also progressed<sup>22</sup>

The EEA also produces annual figures, including data on water quantity, in the State of the Environment Report (SOER).

Examples of various new information systems related to droughts forecasting are given in the Annex.

### **Research and technological development opportunities**

Research and development projects at both national and international level are playing a key role in seeking synergies between water scarcity and drought management policies, identifying the main gaps in research and the key steps needed in order to improve the current knowledge<sup>23</sup>. Following the request of the European Parliament the Commission will initiate pilot projects that could contribute to the work on tackling water scarcity and droughts (Activities to halt desertification in Europe, Action on Climate in the Carpathian Region and a Reduction of leakage from water distribution systems). Examples of further activities are listed in the Annex.

## **3. CONCLUSIONS**

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<sup>22</sup> COM(2009) 223 final, proposal for a regulation of the European Parliament and the Council on the European Earth Observation programme (GMES) and its initial operations (2011-2013)

<sup>23</sup> Besides the activities already reported in the first follow-up report such as AQUASTRESS, RECLAIM WATER, GABARDINE, MEDINA, MEDESOL, PLEIADeS or FLOW AID.

The priorities of the 2007 Communication on water scarcity and droughts remain valid. Many measures have been implemented and actions carried out in response to the policy options identified in the Communication of 2007 but much more effort is needed to stop and reverse the process of over-exploitation of Europe's precious but limited water resources.

In 2010 the focus will be on water efficiency and in particular the potential for savings in domestic water use. The Commission will consider the options for EU measures on water savings that could be achieved by buildings (and will present them to stakeholders in 2011) and leakage reduction.

The Commission's policy review on water scarcity and droughts in 2012 will focus on assessing what is being achieved and whether more action is needed in terms of water efficiency, policy integration, water savings and improved water retention through changes in land-use and management, water supply infrastructures, use of unconventional water resources, buildings and products, drought management and measures related to early warning for droughts as well as stakeholder mobilisation.

The Commission is concerned that implementation of the Water Framework Directive in the Member States which are most affected by water scarcity is delayed (consultations on the draft RBMPs had not started by December 2009, *inter alia* in PT, CY, MT, EL and in 22 out of 24 RBD in ES). The fact that the year 2009 brought a certain degree of hydrological relief compared to the harsh situation experienced in the last few years by some of the southern European countries, does not change this conclusion. Water resources are still under increasing pressure from pollution, from over-exploitation and from climate change – and even in the light of significant uncertainties about the future hydrological regime in Europe, cleaning up our waters, strengthening biodiversity, moving towards improved water efficiency and maximising water availability must all be part of the answer to these challenges. The know-how and the technology that implementation of such policies can bring us will provide European industry with a leading edge in this area.

The Water Framework Directive requires the Commission to publish, by 2012, a report on its implementation which will review how Member States have tackled their river basin management planning. The above-mentioned policy review on water scarcity and droughts and the report on the implementation of the WFD are closely related and will contribute, together with a review of the vulnerability of environmental resources, to the Commission Blueprint for safeguarding Europe's water resources planned for 2012. The Blueprint will examine the effectiveness of current policies and the need for further policies or measures necessary to strengthen the resilience of EU water policy to the impacts of climate change. It will foster a move away from a crisis management approach towards prevention and preparedness with a view to ensuring a sustainable balance between water demand and the supply of clean water, taking into account the needs of both human activities and of natural ecosystems. In particular, the Blueprint will look into the need for improved implementation and additional legislation, funding, incentive measures and the establishment of the necessary support for data collection, and scientific and technological development.