



**COUNCIL OF  
THE EUROPEAN UNION**

**Brussels, 19 November 2012**

**16425/12**

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<b>CHIMIE</b>	<b>85</b>
<b>RECH</b>	<b>417</b>
<b>ENER</b>	<b>476</b>
<b>TRANS</b>	<b>403</b>
<b>PROCIV</b>	<b>186</b>
<b>REGIO</b>	<b>132</b>
<b>MARE</b>	<b>11</b>
<b>PECHE</b>	<b>485</b>
<b>IND</b>	<b>195</b>

**COVER NOTE**

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from: Secretary-General of the European Commission,  
signed by Mr Jordi AYET PUIGARNAU, Director

date of receipt: 14 November 2012

to: Mr Uwe CORSEPIUS, Secretary-General of the Council of the European  
Union

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No Cion doc.: COM(2012) 673 final

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Subject: Communication from the Commission to the European Parliament, the  
Council, the European Economic and Social Committee and the Committee of  
the Regions  
A Blueprint to Safeguard Europe's Water Resources

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Delegations will find attached Commission document COM(2012) 673 final.

Encl.: COM(2012) 673 final



Brussels, 14.11.2012  
COM(2012) 673 final

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL  
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**A Blueprint to Safeguard Europe's Water Resources**

{SWD(2012) 381 final}  
{SWD(2012) 382 final}

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL  
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**A Blueprint to Safeguard Europe's Water Resources**

**1. RATIONALE FOR THE BLUEPRINT: THE STATUS OF EU WATERS IS NOT DOING WELL ENOUGH!**

Water is essential for human life, nature and the economy. It is permanently renewed but it is also finite and cannot be made or replaced with other resources. Freshwater constitutes only about 2% of the water on the planet and competing demands may lead to an estimated 40% global water supply shortage by 2030<sup>1</sup>.

The EU's water policy has been successful in helping to protect our water resources. This **Blueprint to Safeguard Europe's Water Resources** aims to tackle the obstacles which hamper action to safeguard Europe's water resources and is based on an extensive evaluation of the existing policy. The Blueprint is based on a wealth of information and analysis including the EEA State of Water report,<sup>2</sup> the Commission assessment of the Member States River Basin Management Plans (RBMPs) and Review of the Policy on Water Scarcity and Droughts,<sup>3</sup> and the Fitness Check of EU Freshwater Policy.<sup>4</sup> Moreover it is accompanied by an Impact Assessment.<sup>5</sup> The Blueprint is based on extensive public consultations both in the framework of its development and under the Fitness Check which has involved the general public, stakeholders, Member States as well as other EU institutions and bodies.<sup>6</sup> The Blueprint recognises that the aquatic environments differ greatly across the EU and therefore does not propose any one size fits all solution, in line with the principle of subsidiarity. It emphasises key themes which include: improving land use, addressing water pollution, increasing water efficiency and resilience, and improving governance by those involved in managing water resources.

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<sup>1</sup> Charting our water future, a report of the 2030 Water Resources Group, [http://www.mckinsey.com/client\\_service/sustainability/latest\\_thinking/charting\\_our\\_water\\_future](http://www.mckinsey.com/client_service/sustainability/latest_thinking/charting_our_water_future)

<sup>2</sup> <http://www.eea.europa.eu/themes/water/publications-2012>.

<sup>3</sup> Commission report on the Implementation of the Water Framework Directive (2000/60/EC) - River Basin Management Plans, and Commission Communication on the Report on the Review of the European Water Scarcity and Droughts Policy, adopted together with this Blueprint.

<sup>4</sup> Commission Staff Working Document on the Fitness Check of EU Freshwater Policy.

<sup>5</sup> Commission Staff Working Document – Impact Assessment, accompanying the Communication 'Blueprint to Safeguard Europe's Water Resources' which includes a full list of the studies that have fed into the Blueprint.

<sup>6</sup> European Parliament resolution of 3 July 2012 on "The implementation of EU water legislation, ahead of a necessary overall approach to European water challenges", <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2012-0273&language=EN&ring=A7-2012-0192>. See also the opinion of the Committee of the Regions (30 June 2011) on "The role of local and regional authorities in sustainable water management"; [http://www.toad.cor.europa.eu/ViewDoc.aspx?doc=cdr%5cenvve-v%5cdossiers%5cenvve-v-008%5cEN%5cCDR5-2011\\_REV2\\_PAC\\_EN.doc&docid=2770279](http://www.toad.cor.europa.eu/ViewDoc.aspx?doc=cdr%5cenvve-v%5cdossiers%5cenvve-v-008%5cEN%5cCDR5-2011_REV2_PAC_EN.doc&docid=2770279); and the opinion of the European Economic and Social Committee (15 June 2011) on the "Integration of water policy into other EU policies" <http://www.eesc.europa.eu/?i=portal.en.nat-opinions.18788>

## 1.1. Policy context

EU water policy has successfully contributed to water protection over the past three decades. Europeans can safely drink tap water and swim in thousands of coastal areas, rivers and lakes across the EU. Pollution from urban, industrial and agricultural sources is regulated and this has brought about significant improvements in the quality of European waters, particularly by reducing an excess of nutrients. As a result, iconic fish species such as salmon and sturgeon have, in some places, returned to European rivers.

In 2000, the EU Water Framework Directive (WFD)<sup>7</sup> addressed for the first time in a comprehensive manner all the challenges faced by EU waters, making it clear that water management is much more than just water distribution and treatment. It involves land-use and management that affect both water quality and quantity; it requires coordination with spatial planning by the Member States and integration into funding priorities. The WFD established the objective to achieve good status by 2015. This deadline is approaching. The EEA State of Water report and the Commission assessment of the Member States' RBMPs developed under the WFD concur that this objective is likely to be achieved in slightly over half (53%) of EU waters. Major additional action is therefore needed to preserve and improve EU waters.

The main causes of negative impacts on water status are interlinked. These include climate change; land use; economic activities such as energy production, industry, agriculture and tourism; urban development and demographic change. Pressure from these causes takes the form of pollutant emissions, water over-use (water stress), physical changes to water bodies and extreme events such as floods and drought, which are set to increase unless action is taken. As a result, the ecological and chemical status of EU waters is threatened, more parts of the EU are at risk of water scarcity, and the water ecosystems — on whose services our societies depend — may become more vulnerable to extreme events such as floods and droughts. It is essential to address these challenges to preserve our resource base for life, nature and the economy and protect human health.

The EU needs to focus on green growth and become more resource efficient (including water) to achieve a sustainable recovery from the current economic and environmental crisis, adapt to climate change and build resilience to disasters. Tackling these challenges holds significant potential to boost the competitiveness and growth of the European water sector, which includes 9000 active SMEs and provides 600 000 direct jobs in water utilities alone. There is also potential for green growth in other water-related sectors (water-using industries, water technology development etc.) where innovation can increase operational efficiency.

Sixty per cent of the EU's territory lies in transboundary river basins. The hydrological cycles are so interconnected that land use in one country can affect precipitation beyond its borders. Moreover, the European market, EU common policies and Member State policies all have significant impacts on water status. Therefore, the Commission proposes this **Blueprint to Safeguard Europe's Water Resources**. Its long-term aim is to ensure the sustainability of all activities that impact on water, thereby securing the availability of good-quality water for sustainable and equitable water use. This goal is already enshrined in the WFD in various ways. The Blueprint will help us achieve the goal by identifying obstacles and ways to overcome them.

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<sup>7</sup> Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy. OJ L327, 22.12.2000.

## 2. 'GOOD WATER STATUS' AND HOW TO ACHIEVE IT: SOMETHING BETTER, SOMETHING MORE AND SOMETHING NEW

Although the Blueprint objective is not new, it is the first time that so much information has become available on water status throughout the continent, particularly thanks to the development of RBMPs under the WFD and the above-mentioned assessments. These and the views expressed by stakeholders converge in showing that the current EU legal framework on water is extensive, flexible and essentially fit to address the challenges faced by the aquatic environment. However, there is a need for **better implementation** and **increased integration** of water policy objectives into other policy areas, such as the Common Agriculture Policy (CAP), the Cohesion and Structural Funds and the policies on renewable energy, transport and integrated disaster management. The reasons for the currently insufficient levels of implementation and integration are complex and have been analysed in the accompanying impact assessment. They consist of a series of water management problems related to the insufficient use of economic instruments, lack of support for specific measures, poor governance and knowledge gaps. Only in a minority of cases have gaps been identified that would require the **completion** of the current framework by new action of a legislative/legal nature.

Clearly, the success of the approach proposed by the Blueprint will depend on Member States' willingness and action to involve stakeholders and follow up to the Commission's proposals to improve implementation of existing legislation. In this respect, the WFD Common Implementation Strategy (CIS), involving all Member States and relevant stakeholders, should continue to play a positive role in WFD implementation. The Blueprint tries to build on the CIS, where possible, to create ownership and facilitate implementation of the Commission's proposals. However, relying on the CIS does not imply that the Commission will give up its enforcement role with respect to water legislation. Depending on the progress made by the Member States to address their implementation shortcomings, infringement cases may become necessary. Legislative initiatives may need to be considered.

The following sections address the problem areas and suggest ways forward in relation to land use/ecological status, chemical status and water pollution, water efficiency, vulnerability and cross-cutting issues. But it should be kept in mind that these are all inter-connected aspects of water management and the proposed measures will contribute to multiple goals. For instance, water efficiency and vulnerability measures are expected to have positive impacts on ecological and chemical status and vice versa.

### 2.1. Land use and the ecological status of EU waters: problems and solutions

The EEA State of Water report and the Commission's assessment of the RBMPs show that good ecological status is currently achieved in 43% of the reported freshwater bodies and that the additional measures included in the plans are expected to increase this to 53% by 2015.

While ecological status assessments still need improvement, it appears that the most widespread pressure on ecological status in the EU (19 Member States) originate from changes to water bodies<sup>8</sup> due, for example, to dams for hydropower and navigation or draining land for agriculture; embankments for flood protection.

There are known ways to address these pressures and they should be applied. Where existing structures built for hydropower, navigation or other purposes break river continuity and, often,

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<sup>8</sup> So-called hydromorphological pressures which affect about 40% of the water bodies.

fish migration, mitigation measures such as **fish passes and fish lifts** should be standard practice. This is now happening, mostly for new developments, as a consequence of WFD requirements (Article 4.7), but it is important to progressively retrofit existing structures in order to improve water status. When there are plans to make significant new changes to water bodies, **Strategic Environmental Assessments (SEA)**<sup>9</sup> should be made in addition to **Environmental Impact Assessments (EIA)**<sup>10</sup> for specific projects. For instance, national and regional plans to develop hydropower should be subject to a SEA to identify where the dams could be located to minimise negative environmental effects and vulnerability to disaster risks, or to compare the plans with alternative renewable energy sources development<sup>11</sup>. Similarly, SEAs of plans to develop inland navigation should look into which waterways could support most traffic at the lowest environmental cost and in the most sustainable combination with other transport modes.<sup>12</sup> The Commission will be particularly vigilant on the enforcement of Article 4.7. Transboundary issues also should be addressed in the EU's relations with third countries, including in the framework of the European neighbourhood and enlargement policies.

Pressure from agriculture and flood protection can be mitigated or prevented. Methods include developing **buffer strips**, which provide biological continuity between rivers and their banks and using, whenever possible, **green infrastructure** such as the restoration of riparian areas, wetlands and floodplains to retain water, support biodiversity and soil fertility, and prevent floods and droughts. This is a valuable alternative to classical grey infrastructure (e.g. embankments, dykes and dams). Particular attention should be paid to preventing the degradation of headwaters. These are small water bodies (nurseries to many fish species) which are frequently threatened, according to the EEA, by agricultural works (drainage, filling) and by dry-out. Fish ponds also play an important role in the retention and storage of water in the landscape, prevention of flooding and erosion.

To address this, powerful policy integration tools are enshrined in the Commission proposals for the 2014-2020 Multiannual Financial Framework (MFF)<sup>13</sup> that could greatly enhance the take-up of green infrastructure. The proposed commitment of 20% of the EU budget for climate mainstreaming in the MFF should increase support for all water measures related to climate adaptation. Elements of ecological focus areas envisaged by the Commission proposal on the greening of **CAP pillar I**, such as buffer strips, could serve as Natural Water Retention Measures (NWRM), a type of Green Infrastructure. NWRMs could also be financially supported by the **Cohesion and Structural Funds** as an alternative to grey infrastructure. The proposal for the new **European Maritime and Fisheries Fund (EMFF)** includes measures to foster the development of sustainable aquaculture providing support for the

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<sup>9</sup> Directive 2001/42/EC of the European Parliament and of the Council on the assessment of the effects of certain plans and programmes on the environment. OJ L 197, 21.7.2001.

<sup>10</sup> Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment. OJ L 175, 5.7.1985 as later amended. The Commission expects that the upcoming revision of the EIA Directive will also contribute to water objectives by helping identifying water impacts in a more comprehensive way.

<sup>11</sup> See WFD and Hydro-morphological pressures Policy Paper, Focus on hydropower, navigation and flood defence activities - Recommendations for better policy integration. [http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework\\_directive/thematic\\_documents/hydromorphology/hydromorphology/\\_EN\\_1.0\\_&a=d](http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/thematic_documents/hydromorphology/hydromorphology/_EN_1.0_&a=d)

<sup>12</sup> See, e.g., International Convention for the Protection of the Danube River, Joint Statement on Navigation, [http://www.icpdr.org/main/sites/default/files/Joint\\_Statement\\_FINAL.pdf](http://www.icpdr.org/main/sites/default/files/Joint_Statement_FINAL.pdf).

<sup>13</sup> [http://ec.europa.eu/budget/reform/commission-proposals-for-the-multiannual-financial-framework-2014-2020/index\\_en.htm](http://ec.europa.eu/budget/reform/commission-proposals-for-the-multiannual-financial-framework-2014-2020/index_en.htm)

conservation and improvement of the environment, biodiversity, management of the landscape and traditional features of aquaculture zones.

The Commission's proposals on the MFF need to be supported and fleshed out further in implementing rules. The Member States need to give sufficient priority to water policy objectives when they negotiate Partnership Agreements with the Commission for programming of EU Funds expenditure.

To expand green infrastructures, Member States should increase their policy integration efforts at national level. They should make full use of RBMPs that require an integrated approach to managing water resources across policy areas such as agriculture, aquaculture, energy, transport and integrated disaster management. The Commission proposes to develop **CIS guidance on natural water retention measures** to facilitate this integrated approach and will also consider developing guidance in order to ensure an appropriate level of protection of shellfish waters.

The second most common pressure on EU ecological status (in 16 Member States) stems from **over-abstraction of water**. Over-allocating water to users in a river basin due to an overestimation of the available amounts, or to economic or political pressure, should be distinguished from water abstraction, which is illegal because it is conducted without a permit or in breach of a given permit.

To address the issue of **over-allocation**, there is a need in many EU river basins to put quantitative water management on a much more solid foundation: namely the identification of the **ecological flow**, i.e. the amount of water required for the aquatic ecosystem to continue to thrive and provide the services we rely upon. Fundamental to this is the recognition that water quality and quantity are intimately related within the concept of 'good status'. However, there is no EU definition of ecological flow, nor a common understanding of how it should be calculated, even though these are preconditions for its consistent application. To address this gap, the Commission proposes developing a **guidance document** in the framework of the WFD CIS, using its open and participatory process. Once a common definition and a methodology for the calculation are agreed, they should be implemented in the next cycle of RBMPs due for adoption by the end of 2015.

On the issue of **illegal abstraction**<sup>14</sup>, while it is for the Member States to use all means to enforce EU and national law, reliance on satellite imagery and derived information, such as provided by the Global Monitoring for Environment and Security (GMES) programme, could considerably help them identify areas that are irrigated well beyond what is allowed by national permits or even without permits. Therefore, the Commission proposes to work together with the Member States that face the problem of illegal abstraction with a view to proposing **GMES services** that make full use of the information held at Member State level to detect illegal abstraction.

*Table 1*

<b>Blueprint's proposed action</b>	<b>Who will take it?</b>	<b>By when?</b>
Develop CIS Guidance on Natural Water	Commission,	2014

<sup>14</sup> It is difficult to obtain a reliable figure on illegal abstraction but, according to the Spanish Ministry for the Environment in 2006, there were 510,000 illegal wells in Spain (WWF, Illegal water use in Spain. Causes, effects and solutions, May 2006).

Retention Measures (Green Infrastructure).	Member States & stakeholders	
Green CAP pillar I to support Natural Water Retention Measures (through ecological focus areas).	Commission and Member States	As of 2014
Use Structural & Cohesion Funds & EIB loans to support Natural Water Retention Measures.	Commission, EIB and Member States	2014-2021
Develop CIS Guidance on ecological flow (and water accounts).	Commission, Member States & stakeholders	2014
Apply GMES services to detect illegal abstraction.	Commission and Member States	As of 2013

## 2.2. Chemical status and pollution of EU waters: problems and solutions

The information provided in the RBMPs on chemical status is not sufficiently clear to set a baseline for 2009, the year of adoption of the plans. While there have been improvements in the chemical quality of water bodies over the last 30 years, the situation as regards the priority substances — which are the basis for assessing chemical status as introduced by the WFD — is below expectations.

The assessment of **chemical status** indicates that a large proportion (about 40%) of water bodies has an **unknown** status. Monitoring is clearly insufficient and inadequate in many Member States, in particular where not all the priority substances are monitored, where the number of water bodies monitored is very limited, and/or where the selection of the compartment of the aquatic environment in which the substances are monitored is not suitable.

Fulfilment of the **monitoring obligations** under the WFD is fundamental to support robust decision making, especially since the cost of monitoring is orders of magnitude lower than the cost of taking inappropriate decisions.

Before the WFD, the EU addressed significant point-source and diffuse chemical and other pollution in the aquatic environment by passing several pieces of legislation, including the **Urban Waste Water Treatment (UWWTD)**,<sup>15</sup> **Nitrates (ND)**,<sup>16</sup> **Plant Protection Products (PPP)**<sup>17</sup> and **Industrial Emissions Directives (IPPC-IED)**.<sup>18</sup> These Directives protect

<sup>15</sup> Council Directive 91/271/EEC concerning urban waste-water treatment. OJ L135, 30.5.91.

<sup>16</sup> Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources. OJ L375, 31.12.91.

<sup>17</sup> Council Directive 91/414/EEC concerning the placing of plant protection products on the market, OJ L 230, 19.8.1991, repealed by Regulation (EC) No 1107/2009 of the European Parliament and of the Council, OJ L309, 24.11.2009.

<sup>18</sup> Directive 2008/1/EC of the European Parliament and of the Council concerning integrated pollution prevention and control. OJ L28, 29.1.2008 to be replaced by Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions, OJ L 334, 17.12.2010.



water resources from pollution from nutrients and/or other chemicals from agriculture, households and industry.

Although implementation of these Directives has progressed significantly, full compliance has not been reached, and this prevents achievement of their environmental objectives. Diffuse and point-source pollution are still significant pressures on the water environment in, respectively, about 38% and 22% of EU water bodies. Eutrophication due to excessive nutrient load remains a major threat to the good status of waters as nutrient enrichment is found in about 30% of water bodies in 17 Member States. To counter these threats, there is a need to extend nitrate vulnerable zones and step up action programmes. It is also important to improve compliance rates on waste water treatment through long-term investment planning and implementation plans (including EU funds and EIB loans). National authorities should ensure that the industrial emissions permits they issue provide for Emission Limit Values (ELVs) that are in line with Best Available Techniques (BAT) and take into account relevant water objectives.

EU **legislation on chemicals (REACH)**<sup>19</sup> and on **plant protection products and biocides**<sup>20</sup> has recognised the need to assess their risks to the aquatic environment and, where necessary, to impose restrictions on how they may be used or to deny authorisation to use them at all. Either way, upstream measures should be seen as preferable to downstream (cleaning up) solutions.

The **Directive on the Sustainable Use of Pesticides**<sup>21</sup> was identified in the Commission's proposals for CAP reform for possible inclusion in the cross-compliance mechanism. Effective enforcement of this Directive could complement the measures taken under the legislation on plant protection products and help to further reduce water pollution from plant protection product use. To contribute to this, it is important that the Commission's proposal to include this Directive in cross compliance is supported.

With regard to the legislation on **pharmaceuticals**, there is a difference between the environmental protection afforded under the legislation on human<sup>22</sup> and that on veterinary<sup>23</sup> medicinal products. Both require assessing environmental risk, and case-by-case consideration of the need for protective measures<sup>24</sup>, but only for veterinary medicines can an authorisation take account of environmental concerns. Environmental pollution with

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<sup>19</sup> Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, OJ L 396/1, 30.12.2006.

<sup>20</sup> Directive 98/8/EC of the European Parliament and of the Council concerning the placing of biocidal products on the market, OJ L123, 24.04.1998, to be replaced by Regulation (EU) No 528/2012 of the European Parliament and of the Council concerning the making available on the market and use of biocidal products, OJ L 167, 27.06.2012.

<sup>21</sup> Directive 2009/128/EC of the European Parliament and of the Council establishing a framework for Community action to achieve the sustainable use of pesticides, OJ L309, 24.11.2009.

<sup>22</sup> Directive 2001/83/EC of the European Parliament and of the Council on the Community code relating to medicinal products for human use, OJ L311, 28.11.2001.

<sup>23</sup> Directive 2001/82/EC of the European Parliament and of the Council on the Community code relating to veterinary medicinal products, OJ L311, 28.11.2001.

<sup>24</sup> Directive 2004/27/EC of the European Parliament and of the Council of 31 March 2004 amending Directive 2001/83/EC on the Community code relating to medicinal products for human use, OJ L136, 30.4.2004.

pharmaceutical residues is an emerging problem. The Commission is due to present a report on the scale of this problem, along with an assessment of whether amendments to EU legislation on medicinal products or other EU legislation are required<sup>25</sup>. On the basis of available information, on 31 January 2012, the Commission proposed an amendment to the Environmental Quality Standards Directive and Water Framework Directive<sup>26</sup> to, *inter alia*, add 15 substances to the priority substances list under that legislation, including three pharmaceuticals. When adopted, this amendment will strengthen the role of the Water Framework Directive in identifying risks to or via the aquatic environment. It will also provide monitoring data, which will be useful when developing further measures.

Table 2

Blueprint's proposed action	Who will take it?	By when?
Water Framework Directive: Enforce reporting requirements.	Commission	Ongoing
Nitrates Directive: Extend nitrate vulnerable zones and reinforcing action programmes.	Member States	Ongoing
Urban Waste Water Treatment Directive: Improve compliance rates on waste water treatment through long-term investment planning (including EU funds and EIB loans).	Member States (also Commission for EU funds, EIB for loans)	2018
Prepare implementation plans	Member States, Commission	2014
Industrial Emissions Directive: Ensure that industrial emissions permits provide for Emission Limit Values (ELVs) that are in line with Best Available Techniques (BAT) and take into account relevant water objectives.	Member States	As of 2016
Directive on the Sustainable Use of Pesticides: add to cross-compliance under CAP.	Council, EP, Commission	As soon as the conditions in the Commission proposal are fulfilled (i.e. at the earliest in 2014)

<sup>25</sup> See Recital 6 of Directive 2010/84/EU of the European Parliament and of the Council amending, as regards pharmacovigilance, Directive 2001/83/EC on the Community code relating to medicinal products for human use, OJ L348, 31.12.2010; and Recital 3 of Regulation (EU) No 1235/2010 of the European Parliament and of the Council amending, as regards pharmacovigilance of medicinal products for human use, Regulation (EC) No 726/2004 laying down Community procedures for the authorisation and supervision of medicinal products for human and veterinary use and establishing a European Medicines Agency, and Regulation (EC) No 1394/2007 on advanced therapy medicinal products, OJ L348, 31/12/2010.

<sup>26</sup> Proposal for a Directive of the European Parliament and of the Council amending Directives 2000/60/EC and 2008/105/EC as regards priority substances in the field of water policy. COM(2011) 876, 31.1.2012.

Pharmaceuticals: Present a report on pharmaceuticals and the environment.	Commission	2013
Environmental Quality Standards Directive: Adopt the Commission's proposal for amendments.	Council, EP	2012-2013

### 2.3. EU water efficiency: problems and solutions

The sustainable use of Europe's waters, especially its quantitative aspects, is a real challenge for water managers, given global phenomena such as climate change and demographic developments. The EEA State of Water report highlights worrying trends showing the increase and wider spread of **water scarcity and stress**, which is expected to affect in 2030 about half of EU river basins. To respond to this, in addition to improving water allocation based on ecological flow, **water efficiency measures** should be taken to save water and, in many cases, to save energy too.

Article 9 of the WFD requires implementation of **pricing policies** that provide an incentive to use water efficiently. Pricing is a powerful awareness-raising tool for consumers and combines environmental with economic benefits, while stimulating innovation. **Metering** is a pre-condition for any incentive pricing policy. Article 9 also requires **cost-recovery** (including environmental and resource costs) for water services, taking into account the polluter pays principle. The 2007 Commission Communication on Water Scarcity and Droughts<sup>27</sup> included options related to 'putting the right price tag on water', 'allocating water more efficiently' and 'fostering water efficient technologies and practices'. These water efficiency measures fit into the overall resource-efficiency objective of Europe 2020<sup>28</sup>.

As evidenced by the Commission's Review of the Policy on Water Scarcity and Droughts, limited progress has been achieved in implementing the policy instruments identified in the 2007 Communication. The Review highlights the high untapped potential for water efficiency measures in all the main water-using sectors (agriculture, industry, distribution networks, buildings and energy production). It states that bringing in water accounting and water efficiency targets at sectoral level would provide a stronger basis for effective and targeted water protection measures. An assessment of the WFD RBMPs reveals that the situation is not much better in relation to Article 9: incentive and transparent water pricing is not applied across all Member States and water-using sectors, also due to the lack of metering. Only 49% of RBMPs plan to change the water pricing system to foster a more efficient use of water and only 40% include measures to improve water metering. Not putting a price on a scarce resource like water can be regarded as an environmentally-harmful subsidy. Moreover, the narrow interpretation of the concept of water services by some Member States is hindering progress in implementing cost recovery policies beyond drinking water and sanitation<sup>29</sup>. This limits considerably the potential impact of these WFD provisions.

<sup>27</sup> Communication from the Commission to the Council and the European Parliament, Addressing the challenge of water scarcity and droughts in the European Union. COM(2007)414, 18.07.07.

<sup>28</sup> Roadmap to a Resource Efficient Europe, COM(2011) 571, 20.9.2011.

<sup>29</sup> Following a complaint, the Commission started infringement procedures against nine Member States for their narrow interpretation of the concept of water services.

While continuing **enforcement action** to ensure compliance with Article 9, the Commission will try to facilitate implementation by developing a **guidance document**, in the framework of the **CIS**. The guidance document will focus on the methodology to **assess the costs and benefits** of water measures supporting cost-effectiveness and further implementation of the concept of payment for ecosystem services. This will help identify water efficiency measures and also implement the polluter pays principle. Furthermore, the presence of a water pricing policy is envisaged as an ex ante condition to obtain financing for certain projects under the Commission's proposals for Rural Development and Cohesion funds. If these proposals are supported, they would be a further incentive for efficient water pricing.

The Commission has identified a number of additional actions that could greatly improve quantitative water management and water efficiency in Europe, thereby also contributing to water quality objectives.

First, together with the EEA, the Commission has developed **water accounts** at river basin and sub-catchment level. These accounts will need to be further refined with Member States and stakeholders in the context of the WFD CIS, but they provide the 'missing link' in many river basins for water management. They tell water managers how much water flows in and out of a river basin and how much water can realistically be expected to be available before allocation takes place. Water accounts fill a gap by bringing together knowledge that so far was only available in a scattered and piecemeal manner. If widely implemented, they could go a long way towards helping to solve water scarcity problems, e.g. by better analysing structural and episodic categories of water stress and providing better insights for water resource indicators. Water accounts are closely linked to the identification of ecological flow as they should ensure that the needs of nature are respected and that water balances within a river basin stay within sustainable limits. But water accounts alone are not enough as the information they provide is only the basis for action.

Second, in order to improve the efficiency of water use, **water efficiency targets** should be developed by the river basin authorities for the river basins which are — or are projected to be — water stressed, on the basis of **water stress indicators** developed in the CIS process and applied at river basin level. Such targets should address all the main water using sectors (industry, energy production, agriculture, households, etc.) and should be closely linked to the objective of good status. They should be relied upon together with the above mentioned incentive water pricing, in order to avoid the possible **rebound effect** (improvements in water efficiency increase rather than decrease water use and consumption). They could become part of the water allocation process and objective setting in the RBMPs. This could yield water and energy savings, benefiting the water ecosystems, limiting costs and reducing greenhouse gas emissions. To ensure consistency and comparability, the Commission proposes to develop a **common EU methodology** for setting water efficiency targets, to be agreed under the CIS process.

Third, in order to foster water efficiency in the building sector, the Commission has analysed the available options and has decided to develop voluntary EU Ecolabel and Green Public Procurement criteria<sup>30</sup> for key water related products and to include **water-related** products in the **Eco-design** Working Plan in the scope specified in this Plan<sup>31</sup>. This option offers several

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<sup>30</sup> EU Ecolabel, <http://ec.europa.eu/environment/ecolabel/>; EU Green Public Procurement, [http://ec.europa.eu/environment/gpp/index\\_en.htm](http://ec.europa.eu/environment/gpp/index_en.htm)

<sup>31</sup> Directive 2009/125/EC of the European Parliament and of the Council establishing a framework for the setting of eco-design requirements for energy-related products, OJ L 285, 31.10.2009; Directive 2010/30/EU of the European Parliament and of the Council on the indication by labelling and standard

advantages: it is straight-forward for consumers who will in the future only find on the market more efficient water devices and products clearly labelled on the basis of their efficiency; it is based on a progressive approach as it does not require retrofitting existing buildings but gradual replacement on the market of old products with more efficient ones; it will yield considerable energy savings as a large part of the water consumed by households is heated. Energy savings estimated for taps and showers are equivalent to 10.75 Mtoe in 2020 and around twice that in 2030. These savings are equivalent to around 3.5% of total residential energy use in EU 27 or around 1% of total energy use in EU 27.

Fourth, in the field of agriculture, the Commission’s proposals for **reforming the CAP**, which are currently under discussion, provide (under pillar II on Rural Development) scope for funding to improve **irrigation efficiency** in ways that are consistent with the WFD objectives and prevent the rebound effect. This includes minimum water use reductions. It is hoped that these measures will be supported in the finally agreed CAP texts. This is important as agriculture accounts for 24% of water abstraction in Europe and, although that might not sound like much compared to the 44% abstracted for cooling water in energy production, its impact on reserves is much greater. In energy production, almost all cooling water is returned to a water body, but for agriculture the figure is often just a third<sup>32</sup>.

Fifth, regarding the problem of **leakage from water distribution networks**, the Commission believes that this can only be tackled on a case-by-case basis to assess the environmental and economic benefits of reducing the leakage levels. The situation is very different between and within Member States as leakage rates vary from 7% to 50% or more. The Commission will work with the EU water industry to accelerate the development and spread of **best practices** on Sustainable Economic Leakage Levels (SELL) and, more broadly, of a strategic vision for the future of water infrastructure to help it adapt to climate change in a world of evermore scarce resources.

Lastly, **water trading** is another instrument, used mostly outside the EU, which could help to improve water efficiency and overcome water stress, if a sustainable overall cap for water use is implemented. Water trading entails relatively significant administrative costs and, in principle, only makes sense among water users in a defined river basin. Although it would not be helpful to set up such a system at EU level, the Commission proposes developing **CIS guidance** to help the development of water trading in the Member States that choose to employ it.

Table 3

Blueprint's proposed action	Who will take it?	By when?
Enforce water pricing/cost-recovery obligations under the Water Framework Directive, including metering when relevant	Commission	Ongoing
Make water pricing/cost recovery an ex ante condition under the Rural Development and Cohesion policy funds.	Council, EP and Commission	As of 2014

<sup>32</sup> product information of the consumption of energy and other resources by energy-related products, OJ L 153, 18.6.2010.  
<http://www.eea.europa.eu/articles/the-water-we-eat>.

Develop CIS Guidance on trading schemes and on a cost/benefit assessment.	Commission, Member States & stakeholders	2014
Make water use reduction a pre-condition for some irrigation projects under Rural Development.	Council, EP and Commission	As of 2014
Develop CIS Guidance on water accounts (and ecological flow).	Commission, Member States & stakeholders	2014
Develop CIS Guidance on target-setting.	Commission, Member States & stakeholders	2014
Include water-related products in the Eco-design Working Plan.	Commission	2012
Develop voluntary EU Ecolabel and Green Public Procurement criteria.		2013
Spread best practices/tools to achieve a sustainable economic leakage level.	Commission, Member States & water industry	2013

#### 2.4. The vulnerability of EU waters: problems and solutions

Data from the Blueprint impact assessment show increasing trends in river flow droughts and flood-related losses in Europe over the last decades. This underlines the need to improve the resilience of the aquatic ecosystem to adapt to a changing climate, which is also likely to bring additional pressure such as higher water temperature and invasive alien species. At the same time, it is necessary to look into measures based on an integrated disaster management approach and specifically aimed at countering the effects of extreme events such as droughts and floods whose frequency, intensity and environmental and economic damage appear to have increased over the past thirty years.

The EU Floods Directive requires the development of Flood Risk Management Plans (FRMPs) by 2015, to be fully coordinated with the second cycle of RBMPs also due in 2015. The FRMP should also be taken into account when developing cross sectoral and multi hazard risk management plans. This should hopefully bring about improved land use and spatial planning, which takes duly into account climate change, disaster resilience and adaptation needs.<sup>33</sup>

Among the measures that can greatly contribute to limiting the negative effects of floods and droughts is **green infrastructure**, particularly **natural water retention measures**. These

<sup>33</sup> The Commission has developed the European Flood Awareness System as an effective tool to increase preparedness for trans-national floods in Europe and which has been adopted as part of the GMES emergency management service (GIO EMS).

include restoring floodplains and wetlands, which can hold water in periods of abundant — or excessive — precipitation for use in periods of scarcity. Green infrastructure can help ensure the provision of ecosystem services in line with the EU Biodiversity Strategy.<sup>34</sup> Reducing soil sealing is another measure that can diminish flood risks<sup>35</sup>. These measures should be included in both RBMPs and FRMPs and, as mentioned, should become a priority for financing under the **CAP, Cohesion and Structural Funds**.

The 2007 Commission Communication on Water Scarcity and Droughts included, in addition to the above-mentioned water efficiency options, a suggestion to ‘consider additional water supply infrastructure’. The Communication also proposed a water hierarchy whereby additional water supply options (e.g. desalination) are only considered after all other improvements in efficiency on the demand side are exhausted. This should be based on a cost-benefit analysis.

In the stakeholder consultations leading to the Blueprint, one alternative supply option — **water re-use for irrigation or industrial purposes** — has emerged as an issue requiring EU attention. Re-use of water (e.g. from waste water treatment or industrial installations) is considered to have a lower environmental impact than other alternative water supplies (e.g. water transfers or desalination), but it is only used to a limited extent in the EU. This appears to be due to the lack of common EU environmental/health standards for re-used water and the potential obstacles to the free movement of agricultural products irrigated with re-used water. The Commission will look into the **most suitable EU-level instrument** to encourage water re-use, including a regulation establishing common standards. In 2015, it will make a proposal, subject to an appropriate impact assessment, to ensure the maintenance of a high level of public health and environmental protection in the EU.

Regarding droughts, the Commission will continue to develop the **European Drought Observatory** to act as an early-warning system to increase Member States’ and stakeholders’ preparedness. It will also enforce relevant requirements under the WFD and – through its feedback on the first cycle of RBMPs — encourage Member States to better integrate drought risk management and climate change aspects in their future RBMPs and when developing cross sectoral and multi hazard risk management plans.

Table 4

<b>Blueprint's proposed action</b>	<b>Who will take it?</b>	<b>By when?</b>
Develop CIS Guidance on Natural Water Retention Measures (Green Infrastructure).	Commission, Member States & stakeholders	2014
Green CAP pillar I to support Natural Water Retention Measures (through ecological focus areas).	Commission and Member States	As of 2014
Use Structural & Cohesion Funds & EIB	Commission, EIB	2014-2021

<sup>34</sup> Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions. Our life insurance, our natural capital: an EU biodiversity strategy to 2020. COM(2011) 244, 3.5.2011.

<sup>35</sup> Commission Staff Working Documents 'Guidelines on best practice to limit, mitigate or compensate soil sealing' SWD(2012) 101 final/2, 15.05.2012.

loans to support Natural Water Retention Measures.	and Member States	
Enforce WFD requirements relevant to drought risk management.	Commission	Ongoing
Develop Flood Risk Management Plans	Member States	2015
Propose (regulatory) instrument on standards for water re-use.	Commission	2015
Further develop the European Drought Observatory.	Commission	2013-2014

## 2.5. Crosscutting solutions

The Commission has identified a number of cross-cutting options to further the objectives of EU water policy.

The **Innovation Partnerships** on Water and on Agricultural Productivity and Sustainability launched earlier this year<sup>36</sup> will help find solutions to water challenges in the urban, industrial and agriculture contexts. This will result in both environmental objectives and market opportunities. There is a rapidly growing world water market, which is estimated to be as large as 1 trillion Euros by 2020. A 1% increase of the rate of growth of the water industry in Europe could create between 10,000 and 20,000 new jobs. By seizing new and significant market opportunities, Europe can increasingly become a global market leader in water-related innovation and technology. The Innovation Partnerships will try to facilitate links between the supply and demand of innovative solutions and disseminate tested solutions, e.g. through the creation of an electronic ‘market-place’ and the setting-up of specific networks.

The other cross-cutting options can be broadly summarised into two areas: improving the **knowledge base and improving governance**.

Regarding the knowledge base, the **Water Information System for Europe (WISE)** already gathers an impressive amount of EU-wide information on water status and policy. However, there are still gaps. Often the information is scattered and not readily available at the various decision-making levels. The Commission proposes developing this tool to ensure, through its successive implementation plans, its **full interoperability** with the information systems used at Member State and European level with a view to improving our understanding of the aquatic ecosystems. In particular, the knowledge base will benefit from the development and implementation of INSPIRE,<sup>37</sup> SEIS<sup>38</sup> and GMES and from current water research works under the 7<sup>th</sup> Research Framework Programme and those to be conducted under Horizon 2020<sup>39</sup>. Regarding water statistics, the Commission will propose that the **regulations on**

<sup>36</sup> Commission Communication on the European Innovation Partnership on Water, COM(2012) 216 final, 10.05.2012. Commission Communication on the European Innovation Partnership 'Agricultural Productivity and Sustainability' COM(2012) 79 final, 29.02.2012.

<sup>37</sup> See <http://inspire.jrc.ec.europa.eu/>

<sup>38</sup> See <http://ec.europa.eu/environment/seis/>

<sup>39</sup> See [http://ec.europa.eu/research/horizon2020/index\\_en.cfm](http://ec.europa.eu/research/horizon2020/index_en.cfm)



**Environmental Accounts and Statistics**<sup>40</sup> include the information requirements that are most useful for water policy needs. In close cooperation with the Member States, the Commission will also seek to **further harmonise reporting cycles** under water legislation in order to reduce the administrative burden by proposing further integration and, where necessary, targeted amendments of the relevant legislation (WFD, ND, UWWD).

The Commission will continue to support work to improve the **science- policy interface** and further develop the prototype of the **hydro-economic model** built by the Joint Research Centre to underpin the Impact Assessment of the Blueprint. This will also help in the assessment of the costs and benefits of the reference scenarios and Member States' programmes of measures, in co-ordination with other tools at national and/or river basin level.

Concerning governance, the Commission proposes, in the framework of the CIS, to set up a simple and voluntary **peer- review system** through which river basin district authorities could submit their draft RBMPs to the review by other district authorities, within the same or in other Member States. This is expected, to favour mutual learning and improve the quality of the plans and their compliance with WFD requirements. The Commission could help identify, on the basis of its assessment of the first cycle RBMPs, the river basin district authorities that could benefit most from such an exchange.

As part of the CAP reform, the Commission has proposed to introduce **specific requirements from the WFD in the CAP cross-compliance** mechanism. The details of this proposal need to be defined in delegated acts, but it could, if retained, give a strong incentive to fulfil the WFD requirements at farm level, such as abstraction and impoundments permits, thereby tackling significant agriculture pressures on the water environment.

As part of the follow up to the recent Commission Communication on Implementation of EU environment measures,<sup>41</sup> the Commission is currently working on **strengthening inspections and surveillance requirements applicable to the full body of EU environment law**. The water sector is one of the key areas to be addressed. The Commission will also explore how working more closely with Member States through partnership implementation agreements could improve future compliance on issues such as over-allocation or illegal abstraction of water.

As highlighted in the Commission's Roadmap to a resource- efficient Europe, water is a scarce resource whose efficient use will bring significant economic benefits for a number of economic sectors. Therefore, the Commission will look into water-related aspects in the **Annual Growth Survey** and into **country- specific recommendations** where appropriate for individual Member States in the framework of the **European Semester** process. For third countries, it will work in the context of the accession process and the structured dialogues held with EU neighbours.

Lastly, the Commission supports the use of **awareness-raising tools** such as communication campaigns,<sup>42</sup> certifications schemes<sup>43</sup> and foot-printing<sup>44</sup> to give water users incentives to make sustainable choices.

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<sup>40</sup> Regulation (EU) No 691/2011 of the European Parliament and of the Council on European environmental economic accounts, OJ L 192, 22.07.2011.

<sup>41</sup> Commission [Communication on Improving the delivery of benefits from EU environment measures: building confidence through better knowledge and responsiveness](#) COM(2012)95 final, 07.03.2012.

<sup>42</sup> See Communication Campaign 'Generation Awake' <http://www.generationawake.eu/en>

<sup>43</sup> See European Water Stewardship. <http://www.ewp.eu/activities/water-stewardship/>

The Blueprint strives to achieve widespread improvement in aquatic ecosystems, which will contribute positively to the EU Biodiversity Strategy goal of halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible. It will step up work to increase resilience to disasters<sup>45</sup> and adapt to climate change<sup>46</sup> and will achieve the ‘water milestone’ on the EU Resource Efficiency Roadmap. As land-based pressure also influences to a large extent the status of the marine environment, the Blueprint will contribute to reaching good environmental status under the Marine Strategy Framework Directive,<sup>47</sup> provided that there is adequate coordination with programmes of measures under the Marine Strategies due by 2015.

Concerning transboundary water bodies, the Commission will continue its work to encourage candidate and neighbouring countries to align their legislation to EU environmental acquis and provide countries with technical assistance.

Table 5

<b>Blueprint's proposed action</b>	<b>Who will take it?</b>	<b>By when?</b>
Implement the Innovation Partnerships on Water and on Agricultural Productivity and Sustainability	Commission & stakeholders	As of 2013
Upgrade WISE.	EEA, Commission, Member States & stakeholders	2015
Streamline reporting & statistic requirements.	EEA, Commission, Member States & stakeholders	2014
Complete the hydro-economic model.	EEA, Commission, Member States & stakeholders	2013
Continue CIS work on the science-policy interface.	EEA, Commission, Member States & stakeholders	Ongoing
Set up and use a CIS peer review system for RBMPs.	Commission, Member States & stakeholders	2013-2016
Add Water Framework Directive requirements to cross-compliance under CAP.	Council, EP and Commission	As soon as the conditions in the Commission proposal are fulfilled (i.e. at

<sup>44</sup> See ISO [http://www.iso.org/iso/catalogue\\_detail?csnumber=43263](http://www.iso.org/iso/catalogue_detail?csnumber=43263)

<sup>45</sup> Communication from the Commission on ‘A Community approach on the prevention of natural and man-made disasters’ COM (2009) 82 final.

<sup>46</sup> The Commission is working on the development of an EU integrated adaptation strategy by 2013.

<sup>47</sup> Directive 2008/56/EC establishing a framework for community action in the field of marine environmental policy; OJ L164, 25.606.2008.

		the earliest in 2014)
Strengthening inspections and surveillance requirements.	Commission	2013
Look into country-specific recommendations on water in the European Semester.	Commission, European Council	2013
Support awareness-raising tools on water consumption (e.g. voluntary labelling & certification schemes).	Commission, Member States & stakeholders	Ongoing

## 2.6. Global aspects

The primary focus of the Blueprint is on Europe's waters. Water is a local issue but it is also a global problem interlinked with many issues such as food security, desertification, climate change, impact of natural and man-made disasters etc., which all have significant economic, social and security dimensions. The EU is engaged in many of these areas following on from its commitments under Agenda 21, the three Rio Conventions (on desertification, climate change and biodiversity), the Millennium Development Goals (MDGs) relating to water, the Johannesburg Plan of Implementation and most recently the Rio+20 conference. This engagement will continue to be a high priority for the EU.

The world has met the 2015 MDG target of halving the proportion of people without sustainable access to safe drinking water in 2011, but many African countries remain off track as regards access to water. The world is still far from meeting the MDG target for sanitation access as currently 2.5 billion people lack improved sanitation.

Population growth and the competing needs of water users will result in an increase of global water demand of 35-60% by 2025. This could double by 2050<sup>48</sup>. These trends will be exacerbated by climate change, with serious implications for food security.

Given the new thrust of EU development policy<sup>49</sup> and the priorities and strategies of partner developing countries and regions, the focus of water management in EU development cooperation should be on the following aspects:

- **Access to safe drinking water and basic sanitation services**, which was declared a human right by the United Nations in 2010 and reaffirmed in the Rio + 20 Declaration in 2012.<sup>50</sup>

<sup>48</sup> 2011/2012 European Report on Development [http://ec.europa.eu/europeaid/what/development-policies/research-development/erd-2011-2012\\_en.htm](http://ec.europa.eu/europeaid/what/development-policies/research-development/erd-2011-2012_en.htm)

<sup>49</sup> Agenda for Change — COM (2011) 637 final, adopted on 13 October 2011.

<sup>50</sup> See <http://www.uncsd2012.org/index.html>

- **Water for economic growth and sustainable development.** The EU will pay particular attention to the allocation and use of water in economic sectors, sustainable agriculture and the nexus water-agriculture-energy-environment.
- **Water governance:** An effective institutional setting leading to good water governance at river basin level is key to achieve the Rio +20 Declaration commitment to ‘significantly improve the implementation of Integrated Water Resources Management (IWRM) at all levels as appropriate’. Adequate governance and sustainable water management at regional and transboundary levels also contribute to ensure peace and political stability via the water and security nexus.

There will also be a need for coordination mechanisms between EU partners and partner regions, which could build on the EU Water Initiative (EUWI).

EU support to partner countries and regions should draw on the experience and knowledge gained in EU water management, particularly implementation of the WFD. The EU Innovation Partnership on Water could also provide and disseminate innovative solutions for the water challenges faced by developing countries.

Water embedded in traded agricultural and industrial products from developing countries should be taken into account in water management plans of partner countries, and in EU policies. In this respect, the EU should support the development of sustainable water management in exporting countries, e.g. by increasing water efficiency and improving the choice of crops and other products, under the EU’s development policy.

*Table 6*

<b>Blueprint's proposed action</b>	<b>Who will take it?</b>	<b>By when?</b>
Support access to safe drinking water and basic sanitation services.	Commission, Member States & stakeholders	Ongoing and as of 2014
Support integrated sustainable water resource management.	Commission, Member States & stakeholders	Ongoing and as of 2014

### **3. CONCLUSIONS AND OUTLOOK FOR EU WATER POLICY**

The Blueprint has set out key actions that need to be taken by water managers and policy makers to address the challenges faced by the aquatic environment.

It is possible and necessary for Member States to improve implementation of the WFD and reduce hydromorphological pressure in our river basins by restoring river continuity, for instance by using green infrastructure. This can also reduce the EU’s vulnerability to floods and droughts. Under the CAP, the Cohesion and the Structural Funds, there is scope to fund the take-up of green infrastructure, particularly if the Commission’s current MFF proposals are supported. CIS guidance could also be developed to support this objective.

Over-allocation of water must be corrected and we must respect the needs of nature: the ecological flow. The Commission will work within the CIS process to develop a shared understanding of this concept and ways to calculate it. During work on the Blueprint, the Commission has also developed with the EEA water accounts that will enable water managers to have a more realistic picture of water availability at river basin or sub catchment level. These tools, once refined in the CIS process, will enable much improved water allocation.

Diffuse and point-source pollution still threaten the status of EU waters, despite the progress achieved under legislation on nitrates, waste water treatment, industrial emissions, priority substances and plant protection products. Fuller implementation of this legislation is necessary and the Commission will continue its enforcement action. EU financial support is available but it can only complement, not replace, Member State and private-sector long-term investment plans in these areas.

Water efficiency can help reduce water scarcity and water stress problems. Water pricing based on volumetric metering is a powerful tool to increase water efficiency but, despite the legal requirements under the WFD, it is not used to its full extent. The Commission will continue to enforce requirements while working in the CIS to improve the methodology for an adequate cost-recovery that includes environmental costs. In addition, the Commission proposes that the CIS develop a common methodology for water efficiency targets, which, where relevant, should be integrated into RBMPs. Water efficiency improvements are particularly urgent in specific sectors. In agriculture, the Commission's proposal on CAP pillar II (rural development) envisages support for improving irrigation efficiency, if a reduction in water use is implemented. For buildings, the Commission proposes to include water-related products in the Eco-design Working Plan, in the scope specified in this Plan, a cost-efficient solution that could have major co-benefits for energy reduction.

The Commission will consider developing a regulatory instrument setting EU-wide standards for water re-use, thereby removing obstacles to the widespread use of this alternative water supply. This would help alleviate water scarcity and reduce vulnerability.

A range of cross-cutting instruments will support the implementation of the measures planned in the Blueprint. The Innovation Partnerships on Water and on Agricultural Productivity and Sustainability will support the testing and dissemination of innovative solutions by helping to match innovation supply with demand. The hydro-economic model developed by the JRC will help water managers assess the cost-effectiveness of the measures included in their RBMPs. Developing WISE and making it more interoperable will make it easier for decision makers to access essential information. A peer-review system will be available to facilitate mutual learning in the development of the RBMPs. If the Commission's current CAP proposal is agreed, the addition of specific requirements under the WFD to the cross-compliance mechanism will provide strong incentives to respect those requirements. Lastly, the Commission could make country-specific recommendations for Member States as part of the European Semester process, to identify economic and water environment win-win actions.

At the end of the current MFF negotiations, the Commission will take stock of their result, and, should it prove necessary to achieve the water policy objectives, will make additional legislative proposals, as appropriate, on, for example, metering, NWRMs and water efficiency targets.

Implementation and monitoring of the Blueprint proposals will rely, where relevant, on the WFD CIS in which the Commission will present them and follow them up. The Commission

will develop and regularly update a scoreboard to check progress on implementation. The WFD must be reviewed and possibly revised by 2019. When preparing this review, the Commission will take stock of the state of implementation of all aspects in the Blueprint and, if necessary, propose amendments of the Directive to facilitate the achievement of its objectives. Such amendments could turn into legally binding requirements of some of the non-binding proposals contained in the Blueprint, should the voluntary approach prove insufficient.

The Blueprint has set out clearly the goal and development path for EU water policy. Getting there is a matter of political will and stakeholder commitment in the years to come.

Table 7 below provides an overview of the Blueprint's proposals for action described in this paper and timelines for their implementation

	<b>How do we achieve them?</b>			
<b>Specific Blueprint objectives</b>	Voluntary	Regulation	Conditionality	Funding priority
Efficiency incentive water pricing	<b>CIS Guidance on trading schemes by 2014</b>	<b>Enforcement of Art.9 WFD (ongoing)</b>	<b>Ex ante conditions under the Rural Development and Cohesion policy funds as of 2014</b>	
Metering take up		<b>Enforcement of Art.9 WFD (ongoing)</b>		
Water use reduction in agriculture			<b>Pre-condition for some irrigation projects under Rural Development as of 2014</b>	
Reduction of illegal abstraction/impoundments	<b>Apply GMES as of 2013</b>	<b>Possible EU initiative on inspections in 2013</b>	<b>Cross-compliance under the CAP as soon as the conditions in the Commission proposal are fulfilled (i.e. at the earliest in 2014)</b>	
Awareness of water consumption (e.g. embedded in globally traded goods)	<b>Support voluntary labelling &amp; certification schemes</b>			
Maximisation of the use of Natural Water Retention Measures (Green Infrastructure)	<b>CIS Guidance by 2014</b>		<b>Greening of CAP pillar I (ecological focus areas) as of 2014</b>	<b>Structural &amp; Cohesion Funds &amp; EIB loans (2014-2021)</b>
Efficient water appliances in buildings	<b>EU Ecolabel and Green Public Procurement criteria 2013</b>	<b>Eco-design Working Plan in 2012</b>		
Reduction of leakages	<b>Best practice/tools on SELL in 2013</b>			<b>Structural &amp; Cohesion Funds &amp; EIB loans (2014-2021)</b>
Maximisation of water reuse		<b>Possible Regulation in 2015</b>		<b>Structural &amp; Cohesion Funds &amp; EIB loans (2014-2021)</b>
Improvement of governance	<b>Peer review of RBMPs (2013-2016)</b>			

	<b>How do we achieve them?</b>			
<b>Specific Blueprint objectives</b>	Voluntary	Regulation	Conditionality	Funding priority
Implementation of water accounts Implementation of ecological flow Application of target setting	<b>CIS guidance Water accounts/Ecological flows by 2014</b>  <b>CIS guidance target setting by 2014</b>			
Reduction of flood risk	<b>Through Green Infrastructures (see above)</b>  <b>European Flood Awareness System</b>	<b>Flood Risk Management Plans by 2015</b>		
Reduction of drought risk	<b>Through Green Infrastructures (see above)</b>  <b>European drought observatory in 2013-2014</b>	<b>Enforcement of WFD requirements (on-going)</b>		
Better calculation of costs and benefits	<b>CIS Guidance by 2014</b>			
Better knowledge base	<b>Upgrading WISE by 2015</b>  <b>JRC hydro-economic model by 2013</b>  <b>CIS activity on Science Policy Interface (on-going)</b>	<b>Reporting/statistic requirements by 2014</b>		
Support to developing countries				<b>Support access to safe drinking water and basic sanitation services</b>  <b>Support for integrated sustainable water resource management</b>  <b>(On-going and as of 2014-2021)</b>



	<b>How do we achieve them?</b>			
<b>Specific Blueprint objectives</b>	Voluntary	Regulation	Conditionality	Funding priority
Tackling pollution	<b>Report on pharmaceuticals and the environment (2013)</b>	<p><b>Targeted enforcement of directives WFD, EQS/PSD, NID, UWWTD, IED focussed on</b></p> <ol style="list-style-type: none"> <li>1. Monitoring requirements under the WFD- EQS/PSD</li> <li>2. Extending nitrate vulnerable zones and reinforcing action programmes (on-going)</li> <li>3. Improving compliance rates on waste water treatment through long-term investment planning (including EU funds and EIB loans) by 2018, implementation plans prepared by 2014.</li> <li>4. Ensuring that the industrial emissions permits provide for Emission Limit Values (ELVs) that are in line with Best Available Techniques (BAT) and take into account relevant water objectives as of 2016.</li> </ol> <p><b>Adoption of the proposed amendments to the EQS/PSD</b></p>	<b>Add the Sustainable Use of Pesticides Directive to cross-compliance under the CAP as soon as the conditions in the Commission proposal are fulfilled (i.e. at the earliest in 2014)</b>	
Cross-cutting	<b>Innovation Partnerships on Water and Agricultural Productivity and Sustainability as of 2013</b>	<b>Overall enforcement of directives: WFD, EQS/PSD, NID, UWWTD, IED,</b>	<b>Possible European Semester Recommendations in 2013</b>	<b>Overall prioritisation of water objectives under CAP, Structural &amp; Cohesion Funds &amp; EIB loans (2014-2021)</b>