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

**The Water Framework Directive and the Floods Directive: Actions towards the 'good
status' of EU water and to reduce flood risks**

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1. INTRODUCTION

The implementation of the 2000 Water Framework Directive (WFD)¹ relies on Member States taking a range of cost-effective measures in a transparent and participatory way. Member States must summarise these measures (included in their 'programmes of measures' or PoMs) in their river basin management plans (RBMPs), which are updated every six years. In 2012, the Commission published its assessment of the RBMPs available at that time.²

Effective water management, as required by the WFD, helps Member States prepare for extreme weather events which, due to climate change, are becoming more frequent and cause tremendous damages.³ To complement the WFD, the Floods Directive (FD) was adopted in 2007 and requires Member States to assess and map flood risks and hazards and to manage them by putting in place flood risk management plans (FRMPs).⁴

Both directives have reached a crucial point in their implementation. This Communication presents an evaluation of progress made so far, keeping in mind that the two directives are linked and that their implementation should be coordinated. The evaluation is based on the first reports on specific actions taken by Member States to implement the measures summarised in their RBMPs. It builds on the Commission's assessment of the RBMPs⁵ available in 2012 and meets the requirements under Article 18.4 of the WFD, which requires the Commission to publish in 2015 an interim report on the Member States' implementation of their PoMs.

The Commission's assessment of Member States' PoMs and its evaluation of their preliminary flood risk assessments is the basis for the recommendations laid out at the end of this document. They are presented here in view of the second RBMPs and first FRMPs to be adopted by Member States by the end of 2015 and currently subject to public consultations.

Seven Commission Staff Working Documents accompany this Communication. Two include a more detailed assessment of progress made in implementing the WFD and the FD to date⁶. The other five include assessments of the RBMPs of Belgium, Greece, Spain, Portugal and Croatia⁷, which had not been adopted yet in 2012.

¹ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, OJ L 327, 22.12.2000.

² See <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52012DC0670>.

³ Under the no-adaptation scenario (i.e. assuming continuation of the current protection against river floods up to a current 100-year event), EU damages from the combined effect of climate and socio-economic changes are projected to rise from EUR 6.9 billion/year to EUR 20.4 billion/year by the 2020s, EUR 45.9 billion/year by the 2050s, and EUR 97.9 billion/year by the 2080s. See Rojas et al. (2013) Climate change and river floods in the European Union: Socio-economic consequences and the costs and benefits of adaptation, *Global Environmental Change* 23, 1737–1751 available at <http://www.sciencedirect.com/science/article/pii/S0959378013001416#>.

⁴ Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks, OJ L 288, 6/11/2007.

⁵ See http://ec.europa.eu/environment/water/water-framework/impl_reports.htm#third.

⁶ Report on the progress in implementation of the Water Framework Directive Programmes of Measures; Report on the progress in implementation of the Floods Directive.

⁷ Reports on the implementation of the Water Framework Directive River Basin Management Plans.

2. SEIZING THE OPPORTUNITIES OF EU WATER POLICY

The WFD and other water-related directives,⁸ have contributed to improving water protection in the EU. In general, 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 subject to regulation.

The 2012 ‘fitness check’ of EU freshwater policy⁹ has confirmed that the current water policy framework addresses the challenges faced by European freshwaters. However, we still have a long way to go before the quality of all EU waters is good enough, due to decades of previous degradation and persisting ineffective management: the 2012 Commission ‘Blueprint to safeguard Europe’s Water Resources’¹⁰ found that about half of EU surface waters are unlikely to reach a good ecological status in 2015. Moreover, gaps in monitoring the chemical status of surface waters were so significant that in 2012 the status of over 40 % of water bodies was unknown and it was impossible to establish a baseline. The picture seems to be more positive for groundwater, but problems in some basins are still severe.¹¹

As stated in its response to the first European Citizens’ Initiative on the human right to water,¹² the Commission will reinforce implementation of its water legislation, building on the commitments presented in the 7th Environment Action Programme and the Water Blueprint. The Blueprint proposed a wide range of implementation tools which have been taken up in the 2013-15 work programme for the WFD’s common implementation strategy.¹³ In addition, since 2012 the Commission has strengthened its dialogue with Member States and has held extensive bilateral meetings with them to discuss its assessment of their RBMPs and to agree on specific actions to improve implementation.

⁸ Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration, OJ L 372, 27/12/2006; Directive 2008/105/EC of the European Parliament and of the Council on environmental quality standards in the field of water policy, OJ L 348, 24/12/2008; Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources, OJ L 375, 31/12/1991; Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment, OJ L 135, 30/05/1991; Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control), OJ L 334, 17/12/2010; Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption, OJ L 330, 5/12/1998; Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality, OJ L 64, 4/3/2006; Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), OJ L 164, 25/6/2008; Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides, OJ L 309, 24/11/2009.

⁹ SWD(2012) 393 final.

¹⁰ COM(2012) 673 final.

¹¹ Given the different situations across European river basins, the EU average (about 90 % of water bodies are expected to reach good groundwater quantitative status and 77 % good groundwater chemical status in 2015) hides significant regional problems. Moreover, the figures should be interpreted cautiously due to the major gaps and weaknesses in the groundwater status assessment methods used by some Member States.

¹² COM(2014) 177 final.

¹³ The common implementation strategy (CIS) is a cooperative and open process involving the Commission, Member States and stakeholders. It started in 2001 and aims to facilitate WFD implementation.

The common implementation strategy and bilateral processes have helped Member States by clarifying the WFD's requirements, creating new implementation tools, and proposing solutions based on previous experience. If Member States successfully integrate and implement these in the 2015 RBMP update, further enforcement action should not be required.¹⁴ The Commission will, however, continue to pursue infringement cases in priority areas,¹⁵ where the above means prove ineffective in improving implementation.

EU water policy has also made it possible for the EU to develop a dynamic, world-leading water sector that includes 9000 active SMEs¹⁶ and provides almost 500 000 full-time equivalent jobs.¹⁷ It is therefore much more than a response to an environmental imperative: it is a building block for the EU to spark green and blue growth and become more resource efficient. For instance, water management technologies are at the heart of eco-innovation and the Commission has launched the European innovation partnership (EIP) on water in 2012¹⁸ to facilitate the development of innovative solutions, which have the potential to contribute to sustainable economic recovery while adapting to climate change.

3. THE COMMISSION'S ASSESSMENT OF THE WFD 'PROGRAMMES OF MEASURES' (POMs)

The PoMs consist of compulsory basic measures, including some taken under a number of directives that pre-date the WFD and other WFD specific, such as controls on water abstraction, discharges, diffuse pollution or the physical alteration of water bodies. In addition, Member States are required to take supplementary measures if needed to achieve the environmental objectives.

¹⁴ The annex to the Report on the progress in implementation of the Water Framework Directive Programmes of Measures includes specific recommendations for actions to be carried out by Member States. These reflect the Commission's assessment and the results of the bilateral process.

¹⁵ These include the enforcement of deadlines for adopting the RBMPs, monitoring and assessment, diffuse pollution from agriculture, infrastructure that is not WFD-compliant, etc. coordinated with the enforcement of the Nitrates and Urban Waste Water Treatment Directives.

¹⁶ COM(2012) 216 final.

¹⁷ 'Potential for stimulating sustainable growth in the water industry sector in the EU and the marine sector — input to the European Semester', Water Industry Final REPORT, Acteon — to be published.

¹⁸ http://ec.europa.eu/environment/water/innovationpartnership/about_en.htm.

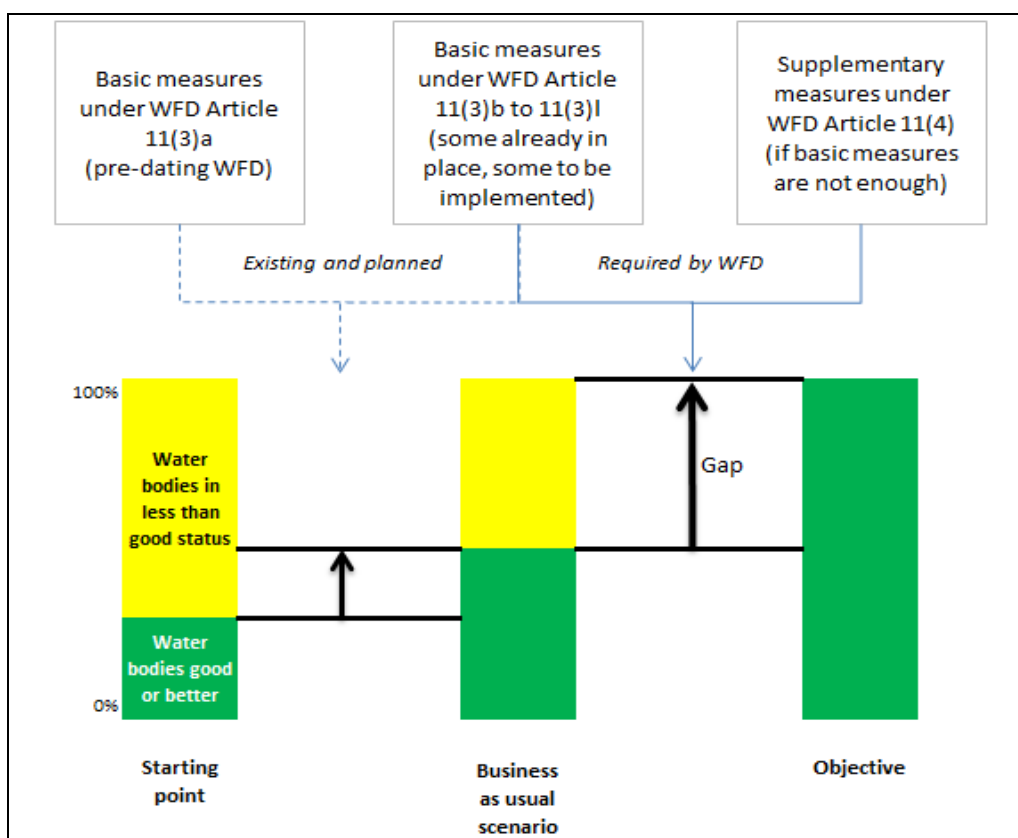


Figure 1. Simplified illustration of a process to identify and fill in the gap between business as usual and the 2015 objective of good water status.

The Commission's assessment shows that many Member States have planned their measures based on 'what is in place and/or in the pipeline already' and 'what is feasible', without considering the current status of water bodies and the pressures identified in the RBMPs as preventing the achievement of 'good status'. Instead of designing the most appropriate and cost-effective measures to ensure that their water achieves 'good status', thus tackling the persisting performance gap, many Member States have often only estimated how far existing measures will contribute to the achievement of the WFD's environmental objectives. This causes exemptions to be applied too widely and without appropriate justification. In most cases, when exemptions are applied and the achievement of 'good status' is postponed, it is not clear whether measures are taken to progress towards the objective, as required by the directive.

The WFD's environmental objectives are quantified and linked to a clear timetable. The approach taken by many Member States – of 'moving in the right direction' based (largely) on business-as-usual scenarios – is clearly not sufficient to achieve the environmental objectives for most water bodies.

3.1. Water pollution caused by agriculture, industry and households

Reducing pollution to meet the objectives of the WFD requires that several other directives and regulations are correctly implemented first. This includes the Urban Waste Water Treatment Directive, the Nitrates Directive, the Directive on Sustainable

Use of Pesticides, and the Industrial Emissions Directive, which play a key role in tackling point source and diffuse pollution and should therefore be taken into account in RBMPs and PoMs.

In the **agricultural sector**, the last report on the Nitrates Directive¹⁹ points to a slight improvement in groundwater nitrate pollution while stressing the need for further action to reduce and prevent pollution. This is confirmed by the analysis of PoMs reported by the Member States. Despite the fact that 63 % of river basin districts reported that implementation of the Nitrates Directive is not enough to tackle diffuse pollution to the level needed to secure WFD objectives, necessary measures have not been added to address the remaining shortcomings. Diffuse pollution significantly affects²⁰ 90 % of river basin districts, 50 % of surface water bodies and 33 % of groundwater bodies across the EU. The agricultural sector is the primary source of diffuse pollution. In spite of some progress in relation to declining mineral fertilisers' consumption²¹, there are still many gaps in the basic measures put in place by Member States to address agricultural pressures, including a lack of measures to control phosphate and nitrates emissions outside nitrate vulnerable zones established under the Nitrates Directive. Supplementary measures reported in agriculture are largely voluntary, including advice schemes and agri-environment measures of the Common Agriculture Policy (CAP) such as farm extensification and organic agriculture.

As concerns **households**, implementation of the Urban Waste Water Treatment Directive has been challenging, mainly because of the financial and planning aspects related to major infrastructure investment in sewerage systems and treatment facilities. Implementation is advanced in the EU-15²², with several Member States close to full compliance. For most of the EU-13, however, the transitional periods negotiated in the accession treaties are coming to an end and most countries are still far away from full compliance, in spite of significant work carried out in the past decade. The main challenges for the EU-15 relate to maintaining and renewing sewerage collection and treatment systems, while the newer Member States need to continue their work on setting up the minimum required infrastructure. Furthermore, sewer overflows²³ remain one of the main pollution sources in urban areas, requiring significant investment in the coming years across the EU. In order to increase compliance rates, Member States were asked to submit detailed implementation programmes in 2014, including investment planning for infrastructure. The Commission is currently analysing these.

Pollution caused by industrial activities can be particularly significant for certain pollutants and water bodies. The Industrial Emissions Directive provides for the main ways of tackling this, notably through the requirement for operators of industrial installations to apply the 'best available techniques' to ensure a high level of protection of the environment as a whole (i.e. water, air and land quality). The national authorities responsible ensure that emission limit values in industrial emissions permits are in line with 'best available techniques' and take into account relevant water objectives.

¹⁹ COM/2013/0683final.

²⁰ A water body affected by a significant pressure is at risk of not achieving 'good status' with current measures.

²¹ http://ec.europa.eu/eurostat/statistics-explained/index.php/Agri-environmental_indicator_-_mineral_fertiliser_consumption.

²² Member States who joined the EU before 1 May 2004. The EU-13 joined after that date.

²³ Both stormwater and combined (sewage + stormwater) sewer overflows.

Although this does happen to some extent, the PoMs show that it is not done systematically or if it is done, it is not reported.²⁴

Most Member States have begun work on their inventories of emissions of **priority substances**, as required by the Environmental Quality Standards (EQS) Directive. They are using this work and their analyses of pressures and impacts to identify sources of pollution. The proportion of water bodies identified as being affected by point or diffuse sources varies significantly between Member States. For the inventory, most Member States are not yet quantifying diffuse emissions originating from a variety of sources. The number of pollutants identified by Member States as being of national concern²⁵ also varies significantly. Consequently, most of the measures identified by Member States in relation to chemical pollution are too general, with unquantified outcomes, rather than substance- or source-specific.

3.2. Using too much water: over-abstraction

The abstraction of water beyond the renewing capacity of nature puts major pressure on EU surface and groundwater, especially due to irrigation in Mediterranean and Black Sea countries, but also because of urbanisation and other economic activities in different parts of the EU. Excessive abstraction significantly affects 10 % of surface water bodies and 20 % of groundwater bodies. Where there is already over-abstraction in river basins subject to intense water use, the WFD requires Member States to put in place measures that restore the long-term sustainability of abstraction such as revision of permits or better enforcement. However, the first PoMs showed that this problem is inadequately addressed, as exemptions have been used extensively in the affected water bodies, often without proper justification.

The first RBMPs also showed that most Member States have not addressed the water needs of nature, which they are required to do if the WFD environmental objectives are to be achieved. They often considered only the minimum flows to be maintained in summer periods, without taking into account the different factors²⁶ that are critical for ecosystems to thrive and to deliver their full benefits. This means that the measures implemented do not guarantee the achievement of 'good status' in many water bodies affected by significant abstractions or flow regulation (e.g. for irrigation, hydropower, drinking water supply, navigation). At the same time, however, Member States have actively supported the development of a common understanding of ecological flows and how to better consider them when implementing the WFD. This has resulted in a guidance document that Member States should start implementing in 2015.²⁷ The WFD's common implementation strategy has also made it possible to share good practices in using water balances that include environmental needs to ensure that

²⁴ Measures to upgrade or improve industrial wastewater treatment plants are reported as key types of measures in only 29 river basin districts in eight Member States.

²⁵ These are either river basin specific pollutants of surface waters or groundwater pollutants for which Member States establish threshold values.

²⁶ E.g. flow magnitude, frequency, duration, timing and the rate of change of flood events.

²⁷ See CIS guidance document on ecological flows (eflows) in the implementation of the WFD, available at <https://circabc.europa.eu/w/browse/a3c92123-1013-47ff-b832-16e1caaafc9a>.

allocation of water is sustainable,²⁸ and in using remote sensing technology to support inspections and follow up illegal abstractions.²⁹

3.3. Changing the flow and physical shape of water bodies

Changes to the flow and physical shape (the ‘hydromorphology’) of water bodies are among the main factors preventing the achievement of good water status but, in general, the first PoMs propose insufficient actions to counter this. The changes are most often due to the development of grey infrastructure, such as land drainage channels, dams for irrigation or hydropower, impoundments to facilitate navigation, embankments or dykes for flood protection, etc. Some measures to redress this have been defined in almost all RBMPs, but they are often very general, there is no prioritisation and measures bear no clear link with the existing pressures or expected effects. Moreover, some Member States have not developed water status assessment methods that are sensitive to hydromorphological changes, and this limits their ability to tackle the issue effectively.

4. THE LINK WITH THE FLOODS DIRECTIVE (FD)

It is widely recognised that large parts of Europe will be confronted with an increase in the occurrence and frequency of flood events due to climate change. In 2007, the FD created a pan-European framework that can support Member States in identifying, evaluating and addressing flood risk.

As is generally the case in risk management, the FD is implemented in iterative cycles. At the end of each six-year cycle, flood risk management plans (FRMPs) are prepared. The first set of plans is due by the end of 2015 and should be coordinated with the RBMPs³⁰ under the WFD in order to exploit synergies between the instruments. Natural water retention measures³¹ are an example of measures that can contribute simultaneously to the achievement of objectives under the WFD and the FD by strengthening and preserving the natural retention and storage capacity of aquifers, soils and ecosystems. Measures such as the reconnection of the floodplain to the river, re-meandering, and the restoration of wetlands can reduce or delay the arrival of flood peaks downstream while improving water quality and availability, preserving habitats and increasing resilience to climate change.

The first steps in the risk management process established by the FD was the preparation of preliminary flood risk assessments by the end of 2011 and the identification of areas of potential significant flood risks, which enabled Member States to focus implementation on areas where this risk is significant. Preliminary assessments were largely based on available information about past significant floods and on forecasts of potential significant future floods.

Most Member States have developed new preliminary flood risk assessments while others have relied on existing assessments or on a mix of new and existing ones. Fluvial

²⁸ A CIS guidance document on water balances is expected in spring 2015.

²⁹ See study on Applying Earth observation to support the detection of non-authorised water abstractions, available at <https://circabc.europa.eu/w/browse/fe1bf504-5dc4-4e12-a466-37c3a8c3eab4>.

³⁰ See CIS resource document on ‘Links between the Floods Directive (FD 2007/60/EC) and Water Framework Directive (WFD 2000/60/EC)’ available at <https://circabc.europa.eu/w/browse/b91b99c7-835f-48fe-b0f5-57740b973d4c>.

³¹ See CIS policy document on NWRMs at <https://circabc.europa.eu/w/browse/2457165b-3f12-4935-819a-c40324d22ad3>.

is by far the most common reported source of flooding in the EU, followed by pluvial and sea water. The most commonly reported consequences are economic, followed by those for human health.³² Criteria for defining significant floods and methods for quantifying impacts are diverse; and in some cases not thoroughly detailed.

Only one third of Member States explicitly considered long-term developments (climate and socio-economic changes) in their assessment of flood risk. This is surprising as flood losses in Europe have increased substantially in recent decades, primarily due to socio-economic factors such as increasing wealth located in flood-prone areas, and due to a changing climate.

The second step in the FD's risk management process was the production of flood hazard maps and flood risk maps for the areas identified as areas of potential significant flood risks by the end of 2013. The Commission is currently assessing the information reported by Member States.³³

In spite of the above-mentioned gaps, for the first time all Member States are concurrently taking action, under the same framework, to prevent or reduce social, economic and environmental damage from flood risk. In addition, the FD has served as a strong incentive for them to focus on prevention and awareness, in addition to protection.³⁴ The flood hazard maps and flood risk maps should now direct decision makers and authorities towards measures aimed at reducing flood risks in an effective and sustainable way for water and society.

5. HOW TO DO IT: INVESTMENT OPPORTUNITIES AND PRICING WATER TO REDUCE INEFFICIENCY

The need for better implementation and increased integration of water policy objectives into other policy areas, including funding policies such as the CAP and the European structural and investment funds, is acknowledged. The results of the 2007-13 financing period show that Member States' have not exploited to the full extent EU funding possibilities to support objectives under the WFD³⁵ notwithstanding some good examples³⁶. For instance, Article 38 of the former Rural Development Regulation³⁷, which could be relied upon to finance measures resulting from the WFD, has hardly been used.³⁸ Funds available to construct urban wastewater treatment plants have in some cases not been absorbed or their allocation delayed, partly due to lack of

³² Roughly 9 out of 10 of the more than 8.000 areas of potential significant flood risks reported by Member States are associated with fluvial flooding and most report primarily potential negative economic consequences.

³³ As of February 2015, 3 Member States have not reported flood hazard and risk maps.

³⁴ The area of risk management is a new eligible area within the 2014-20 cohesion policy, so projects dealing with preventing and managing weather-related risks and natural disasters can be co-financed.

³⁵ See the Court of Auditors' Special Report 04/2014, "Integration of EU water policy objectives with the CAP: partial success", http://www.eca.europa.eu/Lists/ECADocuments/SR14_04/SR14_04_EN.pdf.

³⁶ For instance non-productive investments *ex* Article 41 of the Rural Development Regulation (1698/2005) used to improve the condition of water courses' banks (e.g. Flanders) and to restore wetlands (e.g. Denmark).

³⁷ Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD), OJ L 277, 21.10.2005.

³⁸ For the programming period 2007-2013, water related measures under Article 38 of the Rural Development Regulation 1698/2005, were activated in 2010, when the PoMs under the WFD became available. As regards measures under Article 30 of the Rural Development Regulation 1305/2013, the Rural Development Programmes for the period 2014-2020 are for the large majority not yet approved and it remains to be seen whether water measures will be included.

appropriate planning. The Commission required Member States in 2014 to submit implementation programmes, including detailed investment planning, under art 17 of the Urban Waste Water Treatment Directive and will closely monitor their implementation. More generally, the PoMs do not always seize EU funding opportunities to contribute to the objectives of the RBMPs.

The PoMs also confirm that incentives to use water efficiently and transparent water pricing are not applied across all Member States and all water-using sectors, partly due to the lack of metering. In order to implement incentive pricing, consumptive uses should by default be subject to volumetric charges based on real use. This requires widespread metering, in particular for agriculture in basins where irrigation is the main water user. Despite some Member States' significant progress in adapting water pricing policies to WFD requirements, measures to ensure the recovery of environmental and resource costs are limited. The lack of cost recovery, including for environmental, resource and infrastructure costs, only adds to the bill to be paid by the next generations in those areas which will face dramatic water scarcity and failing water infrastructure.

To foster the correct implementation of water pricing, the Common Provisions Regulation³⁹ established ex-ante conditionalities for accessing Rural Development and Cohesion policy funds. In this context, the Commission is carrying out an assessment of Member States' water pricing and cost recovery policies and requires action plans where deficiencies are detected. As recognised in a recent ruling by the EU Court of Justice,⁴⁰ cost recovery — by pricing or other means — potentially applies to a wide range of water services which have an impact on water. When a Member State chooses not to apply cost recovery to a specific water use activity, it needs to clearly explain what other measures are in place to ensure that WFD objectives are achieved.

6. CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations set the scene for how PoMs can:

- reconcile environmental and economic objectives by relying on measures that offer clean water in sufficient quantities for nature, people, and industry;
- ensure the long term sustainability and economic viability of EU agriculture and aquaculture;
- support energy production, sustainable transport and tourism development, thereby contributing to a genuinely green growth of the EU economy.

The need for a solid basis for PoMs

Member States need to step up their efforts to base their PoMs on a sound assessment of pressures and impacts on the aquatic ecosystem and on a reliable assessment of water status. Otherwise, if the basis assessment of pressures is flawed, the entire RBMPs will

³⁹ Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006.

⁴⁰ Ruling of 11 September 2014, case C-525/12 Commission v. Germany.

be ill-founded and there is a risk that Member States will not carry out their work where it is most needed and in a cost-effective way.

Monitoring should be maintained and/or improved. In particular, the monitoring of water status should be improved for surface water, especially as concerns priority substances. The remaining shortcomings in the methods to assess the ecological status of water should be urgently addressed in several Member States. The development of methods sensitive to hydrological and physical alterations of water bodies is particularly important, and some Member States have done this already. The resulting increased knowledge base should ensure that measures are better targeted to achieve WFD objectives.

Gap analysis: what needs to be done to achieve the objectives?

In order to correctly design PoMs, Member States need to identify the most cost-effective combination of measures that are needed to fill in the gap between water's current status and 'good status'. This gap analysis is necessary to understand what needs to be done to achieve the objectives, how much time it will take and how much it will cost to whom. In addition, properly justifying exemptions due to technical unfeasibility or disproportionate costs is possible only based on this analysis. Moreover, even if exemptions are justified, Member States need to ensure that measures progress as far as possible towards the objectives.

Adapting water use to the WFD environmental objectives and enforcing the changes

Existing permits, e.g. for water abstraction (including water rights), discharge, hydropower, etc., should be reviewed and, if necessary, updated with a view to ensure their compatibility with WFD objectives. Some Member States are already doing this, and the others should follow.

After permits are reviewed, Member States must ensure that they are respected. This may include inspections based on a non-compliance risk approach and ensuring adequate enforcement capacity.

Tackling pollution

Member States need to strengthen their basic measures to tackle diffuse pollution caused by agriculture. Despite the fact that there is still a long way to go to achieving 'good status' and that the pre-WFD measures are not sufficient in many river basin districts, many Member States rely only on voluntary measures. While these can effectively close a fraction of the remaining gap, significant improvement can only be achieved through the compulsory basic measures.

Member States should tackle the sources of pollution by fully implementing WFD measures and water-related legislation, especially the Nitrates Directive, Industrial Emissions Directive and Urban Waste Water Treatment Directive. This is much preferable to using end-of-pipe treatment, for instance to ensure the high quality of drinking water while avoiding high treatment costs and protecting the environment. Member States are encouraged to continue extending the establishment of safeguard zones to protect areas used for the abstraction of drinking water, in particular as regards

surface waters. Moreover, they need to ensure that their measures target the sources and chemicals that cause water bodies to fail to achieve ‘good status’.

Tackling quantitative aspects, including the link to quality

The Commission’s assessment of the PoMs shows the need to better address the link between quality and quantity in assessing pressures on the aquatic ecosystems and to put in place measures that target abstractions and flow regulations.

Water scarcity and droughts are an increasing problem in many areas of Europe, at least seasonally, due to climate change. Quantitative problems are progressively affecting more river basin districts across the EU and Member States need to take preventive measures to avoid moving into unsustainable levels of abstraction. Where abstraction levels are already excessive, Member States should take appropriate measures to restore water use to sustainable levels. This is particularly important for groundwater, especially in cases where it is connected to important water-dependent ecosystems, often protected areas, such as wetlands. Any exemptions must be properly justified in the RBMPs, based on the conditions set out in the WFD.

Tackling flow and physical changes to water bodies

Despite the fact that one third of the EU’s water bodies are significantly affected by flow (hydrological) regulations and physical (morphological) alterations, many Member States’ PoMs do not set out clear sets of measures that would address this situation.

Member States should apply ecological flows in accordance with the recently adopted CIS guidance and implement the measures that will protect and/or restore these flows for both existing and new uses. This requires that Member States develop monitoring and assessment methods to identify situations where hydrological alterations are likely to prevent the achievement of good ecological status. However, the most significant changes can already be identified and addressed with available tools and measures, and reducing the impact of abstractions and flow regulations should be prioritised in the next PoMs.

For many water bodies, physical changes are linked to flow alterations, so ecological flows might not be sufficient and may need to be coupled with restoration measures if the WFD objectives are to be achieved.

Using economic instruments and incentives wisely

Member States should adjust inadequate pricing of water resources, especially but not only in the agricultural sector. This is still causing very significant environmental and economic damage, for instance inefficient use of scarce water resources or pollution requiring expensive treatment. This reduces their availability for a range of economic activities thereby eroding the future growth opportunities of several EU regions. Adequate WFD-compliant pricing based on metering and cost recovery would lead to water use efficiency reducing unnecessary consumption, favouring the choice of crops or farming systems that reduce production costs and improve the economic balance of

farms as well as raising funds to ensure long-term sustainability of infrastructure investments and address wastage due to leakage.⁴¹

Coordinating implementation to reap multiple benefits

For PoMs to be successful, cooperation is essential at various levels, and should rely on existing structures that have shown their effectiveness. This applies firstly to river basin districts, where administrative or national boundaries should not be an obstacle to the choice of the most cost-effective measures. It also applies to the implementers of different pieces of environmental legislation as, for instance, the WFD PoMs are essential to delivering on some of the objectives of the FD, the Marine Strategy Framework Directive or the EU Biodiversity Strategy and Habitats Directive.

The harmonised timelines for the management plans to be developed under the WFD and the FD are a great opportunity to use the information available on status and pressures together and to design PoMs that help achieve 'good status' while reducing flood risk. These synergies need to be used to the fullest.

When choosing risk management measures under the FD, Member States should consider the wide range of long-term benefits of natural water retention measures. These should also be considered during the assessment of the better environmental options required under Article 4.7 of the WFD for projects that physically change water bodies.

Implementation of the FD so far shows encouraging signs of progress. Considering the directive's framework approach, its ultimate success will depend on Member States' ambition and sound implementation of their 2015 plans in a measurable way.⁴² The methods used to identify potential significant future floods and the quantification of potential future impacts should be improved. Climate and socio-economic changes (e.g. urban sprawl and soil sealing land use) should be factored more widely as they are important elements of flood risk management.

The second cycle of RBMPs also allows for synergies with the development of the first programme of measures under the Marine Strategy Framework Directive. This directive and the WFD are complementary and should be implemented hand-in-hand.

Seizing investment opportunities

Member States should make use of the many EU possibilities to financially support the implementation of the PoMs. These include payments for the adoption of agricultural practices beneficial for the climate and the environment under the Rural Development Programmes, financing from the Cohesion policy funds under objectives related to water and adaptation to climate change, LIFE integrated projects, Horizon 2020 support to innovation in the water sector as well as the deployment of innovative nature-based solutions to address societal challenges related to water and flood risk management. The Commission has extensively commented on the partnership agreements, Rural Development and Operational Programmes proposed by the Member States to maximise their contribution towards the achievement of WFD objectives, and more

⁴¹ See the Good Practice Document on Leakage at <https://circabc.europa.eu/w/browse/bb786001-ed42-416d-836e-4835481ba508>.

⁴² The development of disaster loss data recording guidelines in EU Member States is important for the measurement of success: <http://drr.jrc.ec.europa.eu/LossDataWorkshopOctober2014>.

generally their environmental benefits, but the actual use of the funds is the responsibility of each Member State and Regions.

Similarly, Member States should use the innovations developed under the European innovation partnerships on water and on agricultural productivity and sustainability, and connect them to the challenges of implementing the WFD.

Finally, Member States could also seize the opportunities offered by the Commission proposed EU Investment Plan⁴³, particularly to support the development of water infrastructure.

⁴³ http://ec.europa.eu/priorities/jobs-growth-investment/plan/index_en.htm.