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

**on the implementation of the Water Framework Directive (2000/60/EC) and the Floods  
Directive (2007/60/EC)  
Second River Basin Management Plans  
First Flood Risk Management Plans**

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## 1. INTRODUCTION

Water is indispensable for life and thus for our society and economy. Sustainable water management will play an important role towards allowing mankind to adapt to its altered environment, and help in avoiding that the global temperature increase exceeds 1,5° Celsius<sup>1</sup>. More than ever, the management of this vital resource requires a truly integrated approach, taking account of the environmental, social, economic and health dimensions.

This 5<sup>th</sup> implementation report presents the state of implementation of the Water Framework Directive<sup>2</sup> (WFD) and the Floods Directive<sup>3</sup> (FD) based on the Commission's assessment of the second River Basin Management Plans (RBMPs) and first Flood Risk Management Plans (FRMPs) prepared and reported by Member States for the period 2015-2021. This report is required by Article 18 of the WFD and Article 16 of the FD respectively; it also responds to Article 11 of the Groundwater Directive.

The WFD introduced in 2000 ensures the full integration of the economic and ecological perspectives in water quality and quantity management. Its key objective is to achieve, by 2015, good status for the over 111 000 surface waters (e.g. rivers, lakes, coastal waters) and the over 13 000 groundwaters in EU territory. The WFD however allows for extensions to the 2015 deadline, provided they are limited to at most 2 further cycles (i.e. the present 2015-2021 period, and the next 2021-2027 one), unless natural conditions<sup>4</sup> prevent reaching the WFD objectives within the time limits set. Achieving “good status” means securing good ecological and chemical status for surface waters and good quantitative and chemical status for groundwaters, main sources of abstraction of drinking water.

The FD, introduced seven years later as one of the responses to the large floods along the Danube and Elbe rivers in the summer of 2002, sets a framework for reducing the risks of flood damage within the EU. Today this goal is more relevant than ever, in light of increased flooding across Europe. As climate change advances and urban settlements<sup>5</sup> expand, the uncertainties surrounding flood risk management require continuous monitoring and adjustment of practices to ensure the lowest possible damages. This report focuses on progress so far, based on the first FRMPs.

The present report is accompanied by a series of Commission Staff Working Documents with both EU overviews and individual Member State assessments and summaries of international co-operation.

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<sup>1</sup> See report “Global Warming of 1.5 °C”, adopted at the 48<sup>th</sup> IPCC session (6 October 2018) for the expected effects and impacts of 1.5° C and 2° C scenarios.

<sup>2</sup> 2000/60/EC; supplemented by Groundwater (2006/118/EC) and Environmental Quality Standards (2008/105/EC) Directives.

<sup>3</sup> 2007/60/EC

<sup>4</sup> E.g. slow recovery of ecosystems following the implementation of river restoration measures or low rates of reduction in concentrations of nitrate in groundwater.

<sup>5</sup> E.g. through socio-economic changes such as the encroachment of assets into floodplains.

## **2. STATE OF PLAY OF ADOPTION AND REPORTING**

All Member States have approved their RBMPs and FRMPs, except from the FRMPs of the Canary Islands (Spain)<sup>6</sup>.

Although improved compared to the previous reporting exercise, many Member States adopted their Plans late (after 22 December 2015), or were late in the reporting through the Water Information System for Europe (WISE) database (reporting to be concluded by 22 March 2016)<sup>7</sup>. Some delays were of two years or more. The Commission launched legal proceedings against all Member States in breach of their legal reporting requirements.

## **3. ASSESSMENT OF SECOND RBMPs AND FIRST FRMPs**

Information contained in the RBMPs and FRMPs was uploaded to the common digital repository, WISE, managed by the European Environment Agency (EEA). The Commission used WISE as a basis for its assessment, next to information coming directly from the national and international RBMPs and FRMPs.

Ireland, Greece and the Spanish Canary Islands failed to timely report to WISE both their RBMPs and FRMPs for these to be assessed, whilst Lithuania and the UK for Gibraltar failed to do so for their RBMPs. Therefore, the present report does not cover these countries or regions.

The Commission took into account the results of the Water Conference held on 20-21 September 2018 in Vienna, which allowed a range of stakeholders and Member States to provide input to its report.

The Commission also considered comments made by the European Parliament and the Council of the European Union on previous implementation reports. The Parliament adopted a water-related resolution in 2015 stressing, amongst others, the importance of water quality and quantity management, the need for full implementation of EU water law and for its increased integration into other EU policies. It called on the Member States to complete and implement their RBMPs and make relevant information available online. It highlighted also the synergies between the RBMPs and FRMPs. The Council issued several sets of Conclusions between 2007 and 2016.<sup>8</sup> It highlighted in particular the need to fully implement the EU water acquis to protect waters against deterioration and progressively achieve good status, and called on the Commission and Member States to work together to better integrate these efforts into other relevant policies. On floods in particular, the Council referred to the use of green infrastructure and natural water retention measures as means to reduce flooding risks. The Commission supports all these considerations and has committed to act accordingly.

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<sup>6</sup> Spain notified the Commission that the RBMP for La Gomera was endorsed on 17 September 2018, Tenerife, La Palma on 26 November 2018, Fuerteventura, Lanzarote, El Hierro on 26 December 2018, and Gran Canaria on 21 January 2019.

<sup>7</sup> The format for electronic reporting as well as reporting guidance was jointly elaborated by the Member States, stakeholders and the Commission as part of a collaborative process called the “Common Implementation Strategy” (CIS).

<sup>8</sup> On Water scarcity and droughts of 30 October 2007; on Water scarcity, drought and adaptation to climate change of 11 June 2010; on Integrated flood management within the EU of 12 May 2011; on Protection of water resources and integrated sustainable water management in the EU and beyond of 21 June 2011; on a [Blueprint to safeguard Europe's water resources](#) of 17 December 2012; on EU water diplomacy of 22 July 2013; and [sustainable water management](#) of 17 October 2016

#### 4. WFD - FINDINGS FROM SECOND RBMPs

The EEA State of Water Report, issued in July 2018<sup>9</sup>, provides detailed information on the status of Europe's water bodies, as reported by the Member States under the WFD.

It shows that 74% of the EU groundwater bodies have by now achieved good chemical status and 89% of them have achieved good quantitative status.

The situation is less encouraging for surface waters: only 38% of them are in good chemical status and just 40% in good ecological status or potential<sup>10</sup>. Few individual pollutants, the most common being mercury<sup>11</sup>, have a large impact on status. Actions are being taken both at EU and at international level to reduce the emissions of mercury and other pollutants, which have resulted in improvements regarding the levels for some individual substances.

Compared to the 2009-2015 cycle, only a limited number of water bodies have improved in status. This may be due to late identification of pressures, the longer time required to design effective policy measures, the slow introduction of measures, the response time of nature before measures take effect, but also heightened quality standards and improved monitoring and reporting that reveals water bodies previously qualified to be in 'unknown' status to actually be 'unsatisfactory'.

Overall, substantial efforts have been made to implement the WFD. Better implementation of other closely linked pieces of EU law also had a positive effect. This concerns in particular the Urban Waste Water Treatment, Nitrates, and Industrial Emissions Directives and EU law on chemicals.

The EEA report concludes that European waters remain under significant pressure from both diffuse (e.g. agriculture, transport infrastructure) and point-source (e.g. industry or energy production) generated pollution, over-abstraction and hydro-morphological changes stemming from a range of human activities.

##### 4.1 Assessment at national or sub-national level

Appropriate **governance** at river basin level is an essential precondition for achieving the WFD's objectives. By now all Member States have designated competent authorities, often several types, and highlight the importance of coordination across them. They used several methods to consult with stakeholders. Many standing advisory bodies are now in place. Stakeholder consultation reportedly led to changes to the draft RBMPs; however, it was not always clear how the contributions influenced the adopted RBMP.

Member States have to provide for each **river basin district (RBD)** an analysis of its characteristics, with a review of the impact of human activity and an economic analysis of water use. This '**characterisation**' needs to be updated every six years. The boundaries and location of each water body also need to be provided. For every cycle this 'delineation' has to be checked and updated, changes in pressures and impacts on water status have to be signalled. The delineation changed in around 4 out of 10 cases, often without clear explanation. Descriptions of important pressures are generally clearer thanks to better defined

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<sup>9</sup> <https://www.eea.europa.eu/publications/state-of-water>

<sup>10</sup> Good Ecological Potential is the objective to be reached by a heavily modified or artificial water body.

<sup>11</sup> Other ubiquitous, persistent, bioaccumulative and toxic substances causing failure to meet good chemical status are pBDEs, tributyltin and certain polycyclic aromatic hydrocarbons (Benzo(a)pyrene, benzo(g,h,i)perylene, indeno(1,2,3-cd)pyrene, benzo(b)fluoranthene and benzo(k)fluoranthene).

criteria. There is nonetheless still scope for improvement, as for a large proportion of water bodies unknown impacts of anthropogenic origin and pressures of unknown drivers (especially hydro-morphological pressures) were reported.

Some methodological improvements enabling easier progress tracking and comparability of data have been made in relation to establishing when, as required by the WFD, a heavily modified water body or an artificial water body can be considered to have achieved **Good Ecological Potential**.

The **monitoring and assessment of ecological and chemical status of surface water bodies** shows a diverse picture in terms of the parameters measured and the comparability of the results. Across the EU, there is a huge variation in the monitoring of Priority Substances<sup>12</sup>, both in terms of the percentage of water bodies and the number of substances. Most Member States monitored all Priority Substances identified as discharged into their RBDs. All Member States reported inventories of emissions, discharges and losses of such harmful substances, but only a few are complete.

The fact that, until early 2018, there was no formal common intercalibration system for many water types<sup>13</sup> makes comparison between water bodies still very difficult in this second reporting cycle.

Nevertheless, for almost all water bodies it has been possible to establish their status, reducing much of the uncertainty previously found. However, important gaps in ecological status monitoring remain.

Overall, monitoring of quality elements in each water category is patchy at best, overly relying on grouping of several different water bodies and expert judgment, rather than on a more thorough assessment of each relevant water body under the specific WFD parameters. Further efforts are needed to have appropriate monitoring networks reach sufficient spatial coverage and assessment reliability.

**The monitoring and assessment of the quantitative and chemical status of groundwater bodies** has improved, although a significant number still lacks proper monitoring sites. Here, the WFD is complemented by the Groundwater Directive; which spells out in particular, the list of relevant pollutants, thresholds values and trends for the assessment of chemical status. Both Directives work in synergy also with other EU law, such as the Drinking Water (DWD) and Nitrates Directives. Chemical status monitoring is still substandard, with a large number of groundwater bodies either lacking or monitoring a limited part of the core parameters.

The **exemptions foreseen in Article 4 of the WFD**<sup>14</sup> currently cover around half of Europe's water bodies. This mainly concerns natural water bodies, but increasingly also heavily modified and artificial water bodies, next to new physical modifications. Whilst the

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<sup>12</sup> Substances presenting a significant risk to or via the aquatic environment, listed in the Environment Quality Standards Directive.

<sup>13</sup> Commission Decision (EU) 2018/229 of 12 February 2018.

<sup>14</sup> Article 4(4) allows for an extension of the deadline for achieving good status or potential beyond 2015 (as set by Article 4(1)). Article 4(5) allows for the achievement of less stringent objectives. Article 4(6) allows a temporary deterioration in the status of water bodies. Article 4(7) sets out conditions in which deterioration of status or failure to achieve the WFD objectives may be permitted for new modifications to the physical characteristics of surface water bodies, alterations to the level of groundwater, or deterioration from high to good status as a result of new sustainable human development activities.

justifications for such exemptions have overall improved, their persistent wide use is an indicator of the significant efforts still needed to achieve good status or potential by 2027. However, and in line with what is required by that same Article, the reported data suggest that Member States need to better ensure that the exemptions applied for one water body do not permanently exclude or compromise the achievement of the environmental objectives in other water bodies (Article 4(8)), and guarantee at least the level of protection provided for in other EU environmental law (Article 4(9)).

The WFD requires Member States to identify a **Programme of Measures (PoM)**<sup>15</sup> to timely achieve good status. As regards water bodies affected by **water abstraction**, the key measures have generally been defined, but their implementation is uneven across Europe and thus pressures are only slowly reduced. The fact that most Member States exempt small abstractions from controls or registration is potentially problematic. A lack of control and registration can be of concern particularly in Member States that already have water scarcity problems and in water bodies that face quantitative problems.

Impacts from **agriculture** are amongst the most significant pressures identified by Member States in most RBDs as posing potential risk of deterioration or non-achievement of the environmental objectives, both in the form of over-abstraction or diffuse pollution. Basic measures<sup>16</sup> are usually in place. In half the cases no ex ante assessment is made of the extent to which the measures taken will be sufficient to close the gap to good status. Much will also depend on the effect of voluntary measures, often in the context of the Common Agriculture Policy (CAP). Aiming to increase the level of environmental ambition, the Commission's proposals for the new CAP set mandatory requirements<sup>17</sup> for farmers. In addition, the intervention strategy defined by Member States in their CAP strategic plan shall take into account the needs identified in the RBMPs and shall contribute to the achievement of the objectives of the WFD. If needed, Member States will have to offer additional support for further water protection interventions through various voluntary schemes<sup>18</sup>.

Basic measures to deal with pressures from **sectors other than agriculture**, such as industry or energy generation, are generally in place as well. These are, in most cases, specific measures to deal with pollutants which are causing failures of chemical or ecological status, such as, for example, measures to reduce or stop the release into water of certain pollutants. However, more progress is needed.

On existing physical modifications of water bodies, most Member States have reported measures (fish ladders, removal of structures, etc.) aimed at reducing the negative

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<sup>15</sup> The next interim reports on the implementation of the planned PoMs should be reported to the Commission by 22 December 2018.

<sup>16</sup> Within each RBD, a PoM is to be established to address the significant issues identified and allow the achievement of the Article 4 objectives. PoMs shall include as a minimum 'basic measures' and where necessary to achieve objectives 'supplementary measures'.

<sup>17</sup> Notably New Statutory Requirement No 1 related to Directive 2000/60/EC: Article 11(3)(e) and Article 11(3)(h) as regards mandatory requirements to control diffuse sources of pollution by phosphates, SMR 2 on Nitrates directive obligations, [GAEC 2 on appropriate protection of wetland and peatland](#), GAEC 4 on buffer strips, GAEC 5 on the Use of Farm Sustainability Tool for Nutrients, and [GAEC 7 on no bare soil in most sensitive period](#).

GAEC: Good Agricultural and Environmental Conditions [https://ec.europa.eu/agriculture/direct-support/cross-compliance\\_en](https://ec.europa.eu/agriculture/direct-support/cross-compliance_en).

<sup>18</sup> Member States will have to propose support to voluntary eco-schemes for farmers to carry out agricultural practices beneficial for the environment and the climate under the CAP first pillar. In addition, support to voluntary agri-environment commitments will remain obligatory under the second pillar.

environmental impacts of significant **hydromorphological pressures**. There is also a clearer link between the measures, the pressures and the water uses or economic sectors. Minimum ecological flows need to be better defined and implemented and river continuity and appropriate sediments management needs to be ensured.

A number of Member States have upgraded their **water pricing** policies by fulfilling the ex-ante conditionality for water under the Common Provisions Regulation for the European Structural and Investment Funds for the period 2014-2020. Steps were made in defining water services, calculating financial costs, metering, performing **economic analysis** and assessing both environmental and resource costs when calculating the cost recovery amounts for water services. However, significant gaps remain in translating these improved elements of economic analysis into concrete measures and achieving more harmonised approaches to estimate and integrate environmental and resource costs. Increased investments are essential to meet the objectives of the WFD. Further progress in the economic underpinning of the Programme of Measures would greatly facilitate water-related decisions and investments.

Little progress has been made with regard to **protected areas for drinking water** and for **nature protected areas**. The evaluation of the 1998 DWD assessed its coherence with the WFD and identified a missing link as regards protecting drinking water resources. Therefore, the 2018 proposal for a DWD recast introduces a risk-based approach from abstraction to tap, whilst promoting better communication between Member States' authorities and water suppliers to ensure a full governance cycle. The proposal aims to improve coherence between the two Directives and ensure the polluter pays and precautionary principles both apply.

For a large part of protected areas knowledge about, for example, status and pressures is lacking and no objectives are set. Reporting of monitoring specifically targeted towards protected areas, including for shellfish, is very limited and sometimes missing completely.

In about half of the Member States **droughts** were considered as a relevant feature for water management. One of the key measures to mitigate drought impacts is a Drought Management Plan, but this was not adopted in all relevant RBDs.

*For the third RBMPs Member States should*

- Continue improving stakeholder involvement, with active participation in the planning process and the integration of their contributions in the RBMPs.
- Clearly identify the gap to good status for individual pressures and water bodies and design, fund and implement targeted PoMs to close it.
- Reduce reliance on exemptions to ensure a timely achievement of the WFD objectives and improve transparency in relation to the justifications used.
- Ensure the proper implementation of Article 9 on cost recovery, including the calculation and internalisation of environment and resource costs for all activities with a significant impact on water bodies and the economic analysis to underpin the PoM.

## **4.2 Transboundary cooperation under the WFD**

For river basins crossing national borders, the WFD requires Member States to coordinate amongst each other and make reasonable efforts also with non-EU countries, where relevant.

Many European rivers flow beyond EU borders, including for example the Rhine and Danube. The degree of cooperation differs. Usually, an international agreement is in place, often also an international coordinating body and, less frequently, a joint RBMP. Only few basins in the EU have none of these.

Overall, compared to the first cycle, governance structures were further formalised, international RBMPs increasingly developed and comparability of findings improved as did the compatibility of approaches in response to pressures.

#### **4.3 Issues which could not be dealt with at Member State level**

The WFD Article 12 procedure for issues which cannot be dealt with at Member State level was invoked once. In 2016 Denmark stressed that, to meet the WFD objectives, other Member States need to take action to reduce their nitrogen load in shared water bodies. Asked to intervene, the Commission stressed that Member States are primarily responsible to secure WFD objectives and noted that Article 3 envisages coordination within RBDs, including international ones. It suggested to first exhaust bilateral cooperation opportunities including under the Marine Strategy Framework Directive.

### **FD - FINDINGS FROM FIRST FRMPs**

#### **5.1 Assessment at national level**

Human choices, historic but also still widespread today, have a significant effect on the occurrence and impacts from flooding<sup>19</sup> and there is evidence that the number of large flood events has increased over the years.<sup>20</sup> Projections are a cause for concern; under a no-adaptation scenario (i.e. assuming continuation of the current protection against river floods up to a current 100-year event), damages in the EU from the combined effect of climate and socioeconomic change 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.<sup>21</sup> It is therefore logical that 27 out of 28 Member States included floods as a main risk in their national risk assessments.<sup>22</sup>

Establishing FRMPs, a management tool employed for the reduction of potential adverse consequences from flooding, was the third step of the cyclical approach to flood risk management introduced by the FD. Previously, Preliminary Flood Risk Assessments<sup>23</sup> were undertaken (in 2011) and Flood Hazard and Risk Maps prepared (in 2013) by the Member States.

In terms of completeness, almost all Member States reported the conclusions of their Preliminary Flood Risk Assessments and Flood Hazard and Risk Maps in their FRMPs. All

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<sup>19</sup> Locating assets within floodplains or near the coast, the reduction of water-retaining surfaces, interventions to water courses or their surroundings and man-instigated climate change, all contribute to an increase in the likelihood and adverse impacts of flood events.

<sup>20</sup> Zbigniew W. Kundzewicz, Iwona Pińskwar & G. Robert Brakenridge (2012): Large floods in Europe, 1985–2009, *Hydrological Sciences Journal*.

<sup>21</sup> Rojas et al. (2013) Climate change and river floods in the EU: 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#>

<sup>22</sup> Commission Staff Working Document – Overview of natural and man-made disaster risks the European Union may face (SWD (2017)176 final); <https://publications.europa.eu/en/publication-detail/-/publication/285d038f-b543-11e7-837e-01aa75ed71a1/language-en>

<sup>23</sup> There are nearly 8 000 areas of potential significant flood risk (APsFRs) in the EU.

Member States set objectives for the management of flood risks, and in 20 of 26 Member States assessed, these are at the national level or by adapting national level objectives to regional/local circumstances. Some set a few broad objectives, others presented a larger number of more detailed ones. All Member States included measures for achieving the objectives. However, not all objectives are sufficiently elaborated to allow for implementation monitoring and not all measures are clearly linked to objectives; taken together, these deficiencies may pose a challenge for the second cycle (2016-21), when Member States are expected to assess progress.

The number of measures varies significantly across Member States, ranging from few individual measures to thousands of measure groups. About 50% of measures relate to prevention and preparedness, around 40% to protection from flood damage and the remaining 10% concern recovery. In terms of non-structural initiatives<sup>24</sup>, all assessed FRMPs refer to spatial planning. All 26 Member States' assessed include nature-based solutions in some or all FRMPs, either as projects or preparatory studies. Although the FD does not mention insurance coverage against flood risks, more than half of the assessed FRMPs mention at least some related measures, including awareness raising.

All Member States reported on the prioritisation of measures, or provided a timeframe for their implementation. To illustrate, around 10% of the measures reported were of critical, 60% of very high or high, 20% of moderate and the remainder of low priority. 19 of 26 Member States assessed made some analysis of costs and benefits of measures. For nearly all, a national approach was developed<sup>25</sup>. Fewer (11) Member States used a cost-benefit analysis (CBA) in all Units of Management (UoMs)<sup>26</sup> assessed. 21 of 26 Member States explicitly refer to coordination with the environmental objectives of Article 4 of the WFD in all or at least some UoMs.

About half of the Member States assessed made estimates of the costs of flood measures available, though, in many cases, not covering all FRMPs or measures. In 23 of 26 Member States, most of the FRMPs identified funding sources, however, in many cases this concerns possible funding mechanisms at large, e.g. the European Structural and Investment Funds.

A variety of consultation channels with the public and stakeholders was used and, overall, a broad range of stakeholders were involved in the preparation of the first FRMPs, however, it was not always clear how the contributions influenced the FRMPs which were adopted at various administrative levels and through various acts.

*For the second FRMPs Member States should*

- Clearly link the implementation of measures to the achievement of objectives to be able to assess progress from the second cycle onwards;
- Identify specific funding sources to secure the implementation of measures.

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<sup>24</sup> Measures not involving civil engineering structures.

<sup>25</sup> In November 2017, the European Commission proposed to strengthen the EU Civil Protection Mechanism by encouraging a stronger collective European response with the development of a reserve capacity (known as 'rescEU') to complement national capacities, and by stepping up disaster prevention and preparedness in Participating States to the Mechanism ([http://europa.eu/rapid/press-release\\_IP-18-6766\\_en.htm](http://europa.eu/rapid/press-release_IP-18-6766_en.htm)).

<sup>26</sup> UoMs coincide, in most Member States, with the River Basin Districts under the WFD. Member States have designated a total of 196 UoM for the implementation of the FD.

## 5.2 Impact of Climate Change

There is growing evidence that climate change will have a substantial impact on the occurrence and severity of floods in much of Europe<sup>27</sup>. Over half of the Member States considered climate change at the Preliminary Flood Risk Assessments and Flood Hazard and Risk Maps steps. From the FRMPs assessed and Member State reporting, 24 of the 26 Member States considered at least some aspects and ten provided evidence that climate change impacts were considered. Fourteen Member States discussed future climate scenarios in their FRMPs with varying time-frames (about half have scenarios for 2050, and scenarios for 2100 are also in about half). Less than half refer to the national adaptation strategies prepared by Member States under the EU Climate Change Adaptation Strategy. In about a quarter of Member States all FRMPs assessed referred to such national strategies; in a further few Member States some, but not all FRMPs assessed, had such references.

*For the second FRMPs Member States should*

- In accordance with Article 14 of the FD, factor in the likely impact of climate change on the occurrence of flooding and adapt measures accordingly making appropriate use of EU modelling tools such as those available through the Copernicus Climate Change Service<sup>28</sup>;
- Consider national climate change strategies and coordinate with measures included therein.

## 5.3 Transboundary co-operation under the FD

Under the FD Member States are required to coordinate with each other in transboundary river basins and also make efforts to coordinate with third countries. Where coordination structures are established, the development of an international Flood Risk Management Plan (iFRMP) led invariably to common objectives for flood risk management and, in almost all cases, to the definition of a number of coordinated measures. Extensive public consultation took place for some of the basins where a river commission has been established, such as in the Danube, the Rhine, the Elbe and the Odra; consideration of climate change at the basin level is more developed where a river commission is tasked with coordination.

*For the second cycle Member States with transboundary river basins should*

- Further develop common approaches, taking account, at the basin scale, of the upstream and downstream effects of flood risk reduction measures not located in the vicinity of national borders and extend the practice of international public consultations.

## 6. CONCLUSIONS

Overall, knowledge and reporting on the Water Framework Directive have significantly improved compared to the previous cycle. More Member States reported in a timely manner and with more comprehensive, relevant and reliable information.

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<sup>27</sup> The October 2018 report of the Intergovernmental Panel on Climate Change mentioned that flooding is projected to be substantially lower at 1.5°C as compared to 2°C of global warming, although projected changes create regionally differentiated risks (<http://www.ipcc.ch/report/sr15/>).

<sup>28</sup> <https://climate.copernicus.eu/>

Compliance with the Water Framework Directive objectives is reported as increasing gradually. Although in a number of Member States good policy measures were taken and a number of financial investments made, in many river basins improvements in water quality will still take some time. Indeed, while a large majority of groundwater bodies has achieved good status, less than half of surface water bodies is in good status, although trends in several underlying individual quality elements and substances are more positive.

Much remains to be done to fully achieve the objectives of the Water Framework Directive and related Directives, first and foremost by the Member States. Member States will benefit from a greater involvement of all relevant market and civil society actors to secure a better enforcement of the polluter pays principle. EU funds will continue to support these implementation efforts, including funding of research and innovation and efforts<sup>29</sup> towards a Digital Single Market for Water Services<sup>30</sup>. The path towards full compliance with the WFD's objectives by 2027, after which exemption possibilities are limited, seems at this stage very challenging. Reporting showed indeed that, although further measures will be taken until 2021, many others will be needed beyond 2021.

For the Floods Directive, very important steps have been taken. Although these are the first FRMPs, it is clear that all Member States have fundamentally embraced the concept of flood risk management even if the practical degree of elaboration varies. Achieving the key objective of the Floods Directive of reducing the potential adverse consequences from significant flooding will require sustained efforts from the part of the Member States in the following cycles.

The Commission will follow-up as relevant with the Member States on the recommendations contained in this report and its accompanying documents, to secure a better implementation of the requirements under the Water Framework and the Floods Directives. A stepped up enforcement of the legal obligations covering key pressures on the aquatic environment, such as those stemming from the Nitrates and Urban Waste Water Treatment Directives, will also be pursued.

Next to continue working with Member States, the Commission will further engage with citizens and all relevant stakeholders to promote compliance, also through the Environmental Implementation Review. Where possible, reporting will be further streamlined or simplified. Attention will be paid to new emerging pollutants, e.g. microplastics and pharmaceuticals.

The present report will feed into the ongoing Fitness Check of EU water law and the evaluation of the Urban Waste Water Treatment Directive. It also contributes to assessing progress made towards the achievement of the objectives of the EU's 7<sup>th</sup> Environmental Action Programme and the global 2030 Sustainable Development Agenda.

Europe's waters are increasingly affected by climate change. Compliance with EU water law is already helping to manage the effects of a changing climate, by anticipating more droughts and floods. EU water policy holds considerable potential to mitigate climate change, provided effective action is taken now.

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<sup>29</sup> Relevant projects developing solutions like decision support systems for the measurement of water quality and quantity, interoperability between water information systems at EU and national levels and efficiency of water resources management are represented in the ICT4Water Cluster: <https://www.ict4water.eu/>

<sup>30</sup> As described in the Digital Single Market for Water Services Action Plan: <https://ec.europa.eu/futurium/en/system/files/ged/ict4wateractionplan2018.pdf>