Water quality in the Danube river basin: progress in implementing the water framework directive but still some way to go
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(pursuant to Article 287(4), second subparagraph, TFEU)
The ECA’s special reports set out the results of its performance and compliance audits of specific budgetary areas or management topics. The ECA selects and designs these audit tasks to be of maximum impact by considering the risks to performance or compliance, the level of income or spending involved, forthcoming developments and political and public interest.

This performance audit was produced by Audit Chamber II — headed by ECA Member Henri Grethen — which specialises in structural policies, transport and energy spending areas. The audit was led by ECA Member George Pufan, supported by the head of his private office, Patrick Weldon, and Mircea Radulescu, attaché; Alain Vansilliette, head of unit; Marion Colonerus, team leader; Zuzana Gullova, Daniela Jinaru, Maria del Carmen Jimenez, Attila Horvay-Kovacs, Dana Moraru, Radka Papouskova and Ildiko Preiss, auditors.
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Reply of the Commission
**Agglomeration**: Area where the population and/or economic activities are sufficiently concentrated for urban waste water to be collected and conducted to an urban waste water treatment plant or to a final discharge point.

**Agricultural land**: The land area of a country consists of agricultural land, forest land and other land. The agricultural land can be divided into arable land, land under permanent crops, permanent grassland and meadow and other area including kitchen gardens.

**Biochemical oxygen demand (BOD\textsubscript{5})**: Quantity of oxygen consumed by micro-organisms to eliminate biodegradable organic and mineral matter contained in water. BOD\textsubscript{5} is conventionally used to measure oxygen consumption in terms of mg \(O_2/l\) after 5 days. The higher the BOD\textsubscript{5} value, the greater the consumption of oxygen by micro-organisms and the greater the pollution.

**Chemical oxygen demand (COD)**: Quantity of oxygen consumed to oxidise, by chemical means, the organic and mineral matter present in water. COD therefore includes both biodegradable matter characterised by BOD\textsubscript{5} and non-biodegradable oxidisable matter.

**Chemical status of surface water**: Expression of the quality of the waters reflecting the concentration of pollutants which should not exceed environmental quality standards established under the water framework directive (Annex IX). The directive currently identifies 45 pollutants (such as lead, nickel, cadmium, mercury, benzene).

**Cohesion Fund**: The Cohesion Fund aims at strengthening economic and social cohesion within the European Union by financing environment and transport projects in Member States with a per capita gross national product of less than 90 % of the EU average.

**Cross-compliance**: A mechanism under the EU’s common agricultural policy that ties direct payments to farmers and a number of rural development payments to compliance with a series of rules relating to the environment, food safety, animal and plant health and animal welfare and to maintaining agricultural land in good agricultural and environmental condition. Cross-compliance rules in the 2007-2013 programme period relate to 18 statutory management requirements (SMRs) and 15 standards for good agricultural and environmental condition (GAEC). Non-compliance with these standards and requirements can lead to a reduction in payments made to the farmer in the context of the common agricultural policy.

**Diffuse sources of pollution**: Pollution caused by a variety of activities for which there is no specific point of discharge (see point sources of pollution). For example agriculture is a key source of diffuse pollution.

**Direct payments**: Payments granted directly to farmers under an income support scheme. Examples are the single payment scheme and the single area payment scheme.

**Ecological status/potential of surface water**: Expression of the quality of the structure and functioning of aquatic ecosystems. The status is assessed on the basis of the following quality elements: biological elements (fauna and flora), hydromorphological elements, chemical and physico-chemical elements, specific pollutants and some general elements (salinity, nutrient conditions, etc.). The potential rather than the status is assessed for water bodies which have been heavily modified in their physical structure to serve various uses such as navigation, flood protection, hydropower and agriculture. This is due to the fact that, in many cases, it is neither viable nor desirable from an economic point of view to abandon such uses and to remove the physical modifications.

**Effluent**: In the context of this report it means treated waste water discharged into water bodies.
**Glossary**

**Emission limit values**: The concentration and/or level of an emission, which may not be exceeded during any one or more periods of time. An emission is the direct or indirect release of substances from an installation into water.

**European Regional Development Fund**: The European Regional Development Fund aims at reinforcing economic and social cohesion within the European Union by redressing the main regional imbalances through financial support for the creation of infrastructure and productive job-creating investment, mainly for businesses.

**Eutrophication**: The enrichment of water by nutrients especially compounds of nitrogen and phosphorus, causing an accelerated growth of algae leading to the reduction of water oxygen levels and to the disappearance of native aquatic plants, fish and other aquatic animal life.

**Ex ante conditionalities**: In the context of the preparation of rural development programmes and of operational programmes receiving co-financing from the European Structural and Investment Funds in the 2014-2020 programme period Member States have to assess whether pre-defined ex ante conditionalities are fulfilled. If not fulfilled, action plans need to be prepared to ensure fulfilment by 31.12.2016.

**Good agricultural and environmental condition (GAEC) standards**: The obligation to maintain land in good agricultural and environmental condition refers to a range of standards related to soil protection, maintenance of soil organic matter and structure, avoiding the deterioration of habitats, and water management.

**More stringent treatment/tertiary treatment of waste water**: As required by the urban waste water treatment directive it is the biological/chemical phase applied where necessary to reduce the concentration levels of nutrients (nitrogen and phosphorus) in treated waste waters prior to their discharge into receiving waters at risk of eutrophication.

**Operational programme**: An operational programme sets out a Member State’s priorities and specific objectives and how the funding (EU and national public and private co-financing) will be used during a given period (generally seven years) to finance projects. These projects must contribute to achieving a certain number of objectives specified at the level of the priority axis of the operational programme. Programmes may be co-financed by each of the funds in the Cohesion area (i.e. European Regional Development Fund, Cohesion Fund and European Social Fund). An operational programme is prepared by the Member State and has to be approved by the Commission before any payments from the EU budget can be made. They can only be modified during the period covered if both parties agree.

**Plant protection products**: Products used to protect plants or crops from damaging influences such as weeds, diseases or insects.

**Point sources of pollution**: Pollution caused by a variety of activities for which there is a specific point of discharge (such as discharge by an urban or industrial waste water treatment plant).
**Glossary**

‘Polluter pays’ principle: Principle set out in the Treaty on the Functioning of the European Union (Article 191(2)). For example with regard to waste water this implies that dischargers of waste waters should pay for the pollution caused (i.e. households pay for the treatment service via the waste water price, waste water treatment plants pay a pollution charge, etc.).

Population equivalent (p.e.): Quantitative expression of the pollution load of waste water in terms of the number of ‘equivalent’ people that would create that level of waste. One p.e. corresponds to the pollution load of sewage generated by one inhabitant and represents the organic biodegradable load having a 5-day biochemical oxygen demand of 60 g of oxygen per day.

Programme period: The multiannual framework within which Structural Funds and Cohesion Fund expenditure is planned and implemented.

Programme of measures: Part of the river basin management plan which sets out the measures that are necessary for water bodies to achieve good ecological and chemical status considering the characteristics of the river basin district.

River basin: Area of land from which all surface run-off flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta.

Secondary treatment of waste water: Biological phase involving the treatment of waste water to eliminate biodegradable organic pollutants.

Self-checks: In this report, (i) checks carried out regularly by an operator, in the framework of the daily operation of an urban waste water treatment plant, to monitor the quality of the discharged waste water and the content of the sludge and (ii) checks carried out by industrial installations to monitor the quality of waste water discharged into a public sewage network.

Sensitive area: A water body must be designated by the Member States as a sensitive area if it falls into one of the following groups: (i) water body or section of water body at risk of eutrophication, (ii) water body intended for the abstraction of drinking water which could contain too big a concentration of nitrate and (iii) areas where more stringent treatment is necessary to fulfil Council directives. The appropriate designation of sensitive areas is crucial as it dictates the type of waste water treatment that should be put in place to reduce eutrophication-inducing agents.

Sewage network: Physical infrastructure, including pipes, pumps, screens, channels etc., used to convey sewage from its origin to the point of eventual treatment or disposal.

Statutory management requirements (SMRs): EU legislative standards in the field of the environment, food safety, animal and plant health and animal welfare.

Total suspended solids (TSSs): Quantity of mineral and organic particles suspended in water which can be captured on a porosity filter.
**Urban waste water treatment plant:** Infrastructure providing a series of treatment processes aiming to reduce the level of pollution of urban agglomeration waste water received to an acceptable level before discharge into the receiving waters.

**Vulnerable zone:** Areas of land which drain into waters affected — or which could be affected — by pollution caused or induced by nitrates from agricultural sources. These areas contribute to the pollution. Member States have to establish action programmes for these zones.

**Water body:** A body of surface water means a discrete and significant element of surface water such as a lake, a reservoir, a stream, river or canal, part of a stream, river or canal, a transitional water or a stretch of coastal water. A body of groundwater means a distinct volume of groundwater within an aquifer or aquifers.

**Waste water:** Any water that has been adversely affected in quality. It is usually conveyed in a sewage network and treated at a waste water treatment plant. Treated waste water is discharged into receiving water via an effluent sewer. Waste water generated in areas without access to a public sewage network relies on individual systems, such as septic tanks.

**Waste water discharge permit:** Permits issued to dischargers of waste water in accordance with national legal provisions. The permits include inter alia the emission limit values to be respected for a number of parameters and pollutants.
Executive summary

I Europe’s waters are affected by organic and nutrient pollution as well as by pollution from chemical substances. Water pollution originates from various sources such as households, industrial installations and agriculture. The 2000 water framework directive harmonised the previously existing EU legislation in the field of water policy. The directive introduced the river basin management plan as a key implementation tool. The first plans were due in 2009 with updates required in December 2015.

II These plans have to provide information as to the water quality of the various water bodies, reasons for failure to achieve good ecological and chemical status and any necessary remedial measures. These measures are classified into ‘basic measures’, ‘other basic measures’ and ‘supplementary measures’.

III The EU provides significant funding to achieve water policy objectives in particular for investments in the field of waste water (6.35 billion euro from the European Regional Development Fund/Cohesion Fund under the 2007-2013 programme period for nine Member States1 in the Danube river basin) and for compensating farmers taking up agri-environmental commitments (6.39 billion euro from the European Agricultural Fund for Rural Development under the 2007-2013 programme period for the same nine Member States).

IV The Court’s audit focused on four Member States in the Danube river basin (the Czech Republic, Hungary, Romania and Slovakia). The Court set out to answer the question: did the Member States’ implementation of the water framework directive lead to an improvement in water quality?

V The Court concludes that the implementation of the measures has led to little improvement in water quality. Member States exempted a significant number of water bodies from the 2015 and 2021 deadlines for reaching good status. However, progress on individual elements assessed for water quality may be masked due to the assessment methodology. The Court recommends that the Commission provides guidelines for a differentiated reporting on progress and that Member States provide clear and valid justifications when granting exemptions.

VI Shortcomings in monitoring systems resulted in a lack of data both on the type and sources of pollution causing a water body to fail. The 2009 river basin management plans provided limited added value as Member States lacked ambition concerning the identification of measures to combat pollution. The measures focused on the implementation of existing EU directives (part of the ‘basic measures’). In that regard, there are either delays (this is the case for the urban waste water treatment directive) or the possibilities offered by the directives are not being fully exploited (this is the case for the nitrates directive where there is scope for further improvement of the requirements aiming to reduce nitrogen emissions).

VII ‘Other basic’ and ‘supplementary measures’ do not adequately cover all pollution issues. There is a lack of targeted measures for water bodies with unsatisfactory quality status. In the field of waste water there is in particular a lack of indication of urban waste water treatment plants or industrial installations needing specific emission limits. In the field of agriculture, there is scope for Member States’ tightening up of some cross-compliance standards. In addition, limiting the phosphorus application on land has not yet been considered. Furthermore, agricultural measures are mainly of a voluntary nature and do not all lead to direct improvement of water quality.

1 Bulgaria, the Czech Republic, Germany, Croatia, Hungary, Austria, Romania, Slovenia and Slovakia.
Executive summary

VIII
The Court recommends that Member States improve their monitoring systems and the diagnosis of water pollution issues. This should allow for a better targeting of measures at water bodies with unsatisfactory water quality and the taking into account of pollution issues not appropriately dealt with so far. Better targeting should also result in more effective measures and a reduction in implementation costs.

IX
The enforcement mechanisms in place are only partially effective, which is either due to a low coverage or to penalties having a limited deterrent effect. The Court recommends that the Commission assesses how to best set binding criteria for Member States’ inspections on urban waste water treatment plants and industrial installations. Furthermore it recommends that the Commission and the Member States in cooperation should assess the effectiveness of the enforcement mechanisms in place in the field of agriculture.

X
The ‘polluter pays’ principle is only partially applied to diffuse pollution from agriculture. Urban waste water treatment plants and industrial installations pay a water pollution charge on their emissions but for a limited number of pollutants only. The charge amounts (by discharge in mg/l) vary significantly from one Member State to another and none of the river basin management plans refer to an assessment of their deterrent effect. The Court recommends that the Commission provides guidance on the possible methods for recovery of environmental damage costs in the field of diffuse pollution. It also recommends that Member States should assess the potential of economic instruments (charges and taxes) for deterring the emission of pollutants.
Introduction

Water framework directive and river basin management plans

01
The main aim of EU water policy is to ensure that a sufficient quantity of good quality water is available for people’s needs and for the environment throughout the EU.

02
In 2000, the European Parliament and the Council adopted the water framework directive\(^2\), whose main objective is to achieve good water quality\(^3\) by 2015. The directive also allows for time extensions (up to 2021 and 2027) as well as less stringent requirements with regard to the water quality under certain conditions.

03
The directive is an overarching piece of legislation that harmonised the previously existing legislation in the field of water policy. Its approach to water management is based on the river basin being considered as an ecological and hydrological unit.

04
The key tool for implementing the directive is the river basin management plan. By December 2009, each Member State had to adopt such plans, including a programme of measures for each river basin district within its territory\(^4\). Updates of the river basin management plans had to be adopted by December 2015. Overall, there are 42 international river basins (such as the Rhine and Danube river basins) in the EU and 172 national river basin management plans. The river basin management plans are not submitted to the Commission for approval.

05
The measures to be included in the programme of measures are those that are necessary to achieve the objectives of the water framework directive for the individual water bodies identified. The water framework directive regards implementation of eleven directives as a minimum requirement (see Table 1 for those of relevance for the current report). The measures to implement them are considered as ‘basic measures’ in the programme together with other compulsory measures included in the directive (see paragraph 33). The reporting in the context of the water framework directive (updates of river basin management plans and progress reporting) has not replaced the reporting necessary under the individual directives.


3 It relates to surface water bodies, groundwater bodies and protected areas. Water quality is expressed in terms of the ecological and chemical status of water bodies.

4 When Member States contain parts of different river basins within their territory (e.g. the Czech Republic has parts of its territory in the Danube river basin, parts in the Oder river basin and parts in the Elbe river basin), plans were required to be established for each of the parts (basin districts).
Introduction

Since 2001, 34 guidance documents covering several aspects of the directive’s implementation have been produced by the Commission in cooperation with the Member States.

While not mentioned in the water framework directive, there are further pieces of EU legislation that play a role when it comes to water quality (see Table 2).

<table>
<thead>
<tr>
<th>Legal base</th>
<th>Importance for water quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban waste water treatment directive¹</td>
<td>All agglomerations ≥ 2 000 population equivalent (p.e.) have to have collection systems in place, or use individual or appropriate systems provided they achieve the same level of environmental protection. Agglomerations ≥ 2 000 p.e. have to respect emission limits for biochemical oxygen demand (BOD₅) and chemical oxygen demand (COD). Agglomerations above 10 000 p.e. in sensitive areas also have to respect emission limits for total nitrogen (Nₜₒₜ) and/or total phosphorus (Pₜₒₜ), except if a minimum reduction rate of Nₜₒₜ and Pₜₒₜ is achieved in the sensitive area as a whole. In agglomerations below 2 000 p.e. where collection systems are in place, appropriate treatment needs to be ensured in case of discharge to fresh-water and estuaries.</td>
</tr>
<tr>
<td>Nitrates directive²</td>
<td>Member States have to monitor surface and ground waters and to designate nitrate-vulnerable zones. In order to reduce water pollution caused by nitrates Member States must adopt action programmes compulsory in nitrate-vulnerable zones. Moreover, Member States have to establish a code of good agricultural practice to be applied on the whole territory on a voluntary basis.</td>
</tr>
<tr>
<td>Integrated pollution prevention and control directive replaced by the industrial emissions directive³</td>
<td>The emission limit values included in the permits of industrial installations are to be based on the application of best available techniques, which are the most effective techniques to achieve a high level of environmental protection.</td>
</tr>
</tbody>
</table>

10

The International Commission for the Protection of the Danube River was established in 1998 in order to implement the Danube River Protection Convention. Since the coming into force of the water framework directive, it also serves as a platform for the implementation of all transboundary aspects of the directive.

11

In 2011, the Council endorsed the EU strategy for the Danube Region presented by the Commission at its request. Among other issues it also deals with water quality.

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**Other EU directives and regulations playing a role with regard to water quality**

<table>
<thead>
<tr>
<th>Legal base</th>
<th>Importance for water quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation on detergents¹</td>
<td>Detergents contain an important pollutant: phosphorus. Consumer laundry detergents and consumer automatic dishwasher detergents that exceed a specified quantity of phosphorus are not allowed to be placed on the market from 30 June 2013 and 1 July 2017 respectively.</td>
</tr>
<tr>
<td>Pesticides directive²</td>
<td>Member States had to adopt and communicate action plans to the Commission by 26 November 2012 including measures to reduce the risk and impact of pesticide use on human health and the environment.</td>
</tr>
</tbody>
</table>

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**Cooperation in the Danube river basin**

08 The Danube river basin encompasses territory of 19 different countries, of which 11 are Member States (see map in Annex I). With an area of 807,827 km², it is the largest river basin district in the EU.

09 Cooperation in the Danube river basin started in 1985 and in 1998 the Danube River Protection Convention⁵ came into force. One of its objectives was to achieve ‘the goals of a sustainable and equitable water management, including the conservation, improvement and the rational use of surface waters and ground water in the catchment area as far as possible’.

5 14 countries have catchment areas greater than 2,000 km² (nine Member States and five non-member countries). These countries as well as the European Union are contracting parties to the convention.
Main types and sources of pollution in the Danube river basin

In addition to the national river basin management plans adopted by the Member States, the International Commission for the Protection of the Danube River published a river basin management plan for the whole of the Danube river basin in 2009. This plan and the 2013 update of the Danube Basin analysis report identified various types of pollution of international importance which have an impact on water quality (see Table 3).

Types and sources of pollution in the Danube river basin

<table>
<thead>
<tr>
<th>Types of pollution</th>
<th>Sources of the pollution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic pollution (non-toxic organic substances)</td>
<td>The key emitters of organic pollution are point sources: waste water from agglomerations (households) and from industrial installations and in particular collected but untreated waste water and waste water which is not appropriately treated.</td>
</tr>
<tr>
<td>Nutrient pollution (nitrogen and phosphorus)</td>
<td>The majority of the nutrient emissions come from diffuse sources (89 % for total nitrogen emissions and 78 % for total phosphorus emissions) such as emissions from agricultural fields (due to fertiliser or manure application and atmospheric deposition), soil erosion and surface run-off.</td>
</tr>
<tr>
<td>Hazardous substances' pollution</td>
<td>These toxic substances can be emitted from both point sources (urban and industrial waste water) and diffuse sources (such as surface run-off, use of pesticides in agriculture, contaminated and mining sites).</td>
</tr>
<tr>
<td>Hydromorphological alterations</td>
<td>These alterations lead to interruption of river and habitat continuity, disconnection of adjacent wetlands or floodplains and changes in the quantity and conditions of flow. They are caused mainly by hydropower installations, navigation works and flood protection infrastructure.</td>
</tr>
</tbody>
</table>

1 The water framework directive provides a list of so-called priority substances and other pollutants (initially 33, later increased to 45, substances or groups of substances) of which some are considered priority hazardous substances. Hazardous substances include for example pesticides, metals and pharmaceuticals.


3 Polluting substances (such as fertilisers) leach into surface or groundwater as a result of rainfall, soil infiltration and surface run-off.

The EU supports its water policy by providing financial resources and by legal and regulatory instruments. The main funding sources from the EU budget are:

- the European Regional Development Fund and the Cohesion Fund: the bulk of the funding allocated in the 2007-2013 programme period went to infrastructure projects in the field of waste water. Other fields of intervention where a positive impact on water quality is possible are integrated pollution prevention and control and rehabilitation of industrial and contaminated sites;

- the European Agricultural Fund for Rural Development: a number of measures in the rural development programmes can have either a direct or an indirect impact on water quality. Agri-environmental payments are an example of a measure that can have a direct impact. They are granted to farmers who make agri-environmental commitments going beyond compulsory legislation on a voluntary basis.

Table 4 shows the EU contribution allocated to Member States having part or all of their territory in the Danube river basin.

The main legal instrument used in addition to the directives and regulations mentioned in Tables 1 and 2 is the cross-compliance mechanism. It ties direct payments made to farmers in the context of the common agricultural policy and a number of payments under rural development programmes to (i) compliance with a series of rules relating to the environment, food safety, animal and plant health and animal welfare, the so-called statutory management requirements (SMRs) and (ii) maintaining agricultural land in good agricultural and environmental condition, the so-called GAEC standards. Non-compliance with these standards and requirements can lead to a reduction in the aid amount granted to a farmer.

In the 2007-2013 programme period there were 18 SMRs and 15 GAEC standards.

### Table 4

<table>
<thead>
<tr>
<th>Funding source</th>
<th>Area of intervention</th>
<th>Amount in billion euro</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Regional Development Fund and Cohesion Fund</td>
<td>Waste water</td>
<td>6.35</td>
</tr>
<tr>
<td>European Agricultural Fund for Rural Development</td>
<td>Agri-environmental payments</td>
<td>6.39</td>
</tr>
</tbody>
</table>

1. The amounts relate to the nine Member States that have more than 2 000 km² of their territory in the Danube river basin.
2. For Germany the amount taken into account relates to the two regions that are in the Danube river basin (Baden-Württemberg and Bayern).

Audit scope and approach

16 Through this audit the Court assessed whether the implementation of the water framework directive by the Member States led to an improvement in water quality.

17 The audit focused on surface water quality in four Member States of the Danube river basin covering the upper, central and lower part of the basin: the Czech Republic, Hungary, Romania and Slovakia. It covered three main aspects: pollution from agglomerations, from industrial installations and from agriculture.

18 The Court addressed the following three questions:

(a) Were the measures in the 2009 river basin management plans well targeted and of a type and extent necessary to ensure the achievement of good water quality in 2015?

(b) Are the measures and instruments implemented by the Member States appropriate to reduce pollution by waste waters?

(c) Are the measures and instruments implemented by the Member States appropriate to reduce diffuse pollution from agriculture?

19 The visits to the Member States were conducted between March 2013 and January 2014. The periods to which the various pieces of evidence collected relates are mentioned in the different sections of this report. Documentary reviews and analyses continued to be carried out after January 2014, in particular to take into account the updates of the river basin management plans (published for consultation starting in December 2014) and the new rural development programmes (2014-2020 programme period) approved in 2015.

20 Water bodies can also be affected by hydrological and/or morphological alterations as well as other types of pollution that prevent them from achieving good water quality status. These were not within the scope of the audit.

21 The Court has already published other special reports in related fields.

9 Part of the Czech Republic, a major part of Slovakia and the whole of Romania and Hungary are in the Danube river basin. The total area of these Member States (expressed in km²) represents around half (49.4%) of the Danube river basin.

10 By December 2015 Member States had to adopt the second river basin management plans. According to the water framework directive, the draft river basin management plans are subject to a consultation procedure with the parties interested in the implementation of the directive.

River basin management plans as a tool for achieving good water quality by 2015

According to the water framework directive, Member States have to assess water quality using the results of their national water monitoring network. The assessment is made at water body level\(^{12}\) on the basis of the systems and methods defined by the Member States within the rules specified by the water framework directive. There are two components to assessing water quality:

- the ecological status/potential\(^{13}\): Member States have to make the assessment by taking into account various factors, called ‘quality elements’: biological elements (such as aquatic flora and fish fauna), hydromorphological elements and chemical and physico-chemical elements\(^{14}\). The latter include organic pollution (measured by the parameters biochemical oxygen demand (BOD\(_5\)) and chemical oxygen demand (COD)), nutrient conditions and selected chemical substances\(^{15}\). The classification is made according to five categories: high, good, moderate, poor and bad;

- the chemical status: Member States have to assess whether the environmental quality standards\(^{16}\) for the substances defined by EU legislation were respected or not (i.e. 41 priority substances or groups of substances were to be evaluated for the 2009 river basin management plans). The classification results in a score of either ‘good’ or ‘fail’.

The overall classification of the ecological status is defined by the lowest observed individual quality element. Equally, the chemical status can be rated as ‘good’ only when the standards for all substances are complied with. This is known as the ‘one-out all-out’ rule. The application of such a rule may mask progress with regard to individual quality elements.

A river basin management plan has to include information on the pollution sources that water bodies are subject to, on the status assessment and on the measures to be implemented to achieve good water quality as well as their total cost. The plans also have to provide justification for granting a water body an exemption from the deadlines for achieving good water quality (the first deadline being 2015, see paragraph 2).
Observations

The Court examined whether:

— surface water quality improved as a result of measures implemented by the Member States;

— in the 2009 river basin management plans the pollution sources had been identified for each water body;

— the measures identified in the 2009 river basin management plans adequately address the identified pollution sources;

— Member States aimed at achieving the 2015 deadline for the majority of their water bodies;

— the Commission had taken any action in cases where it considered the 2009 river basin management plans as being inadequate.

Little improvement in the ecological and chemical status of water bodies

Figures 1 and 2 present the changes between the 2009 river basin management plans and the 2015 draft plans, with regard to the ecological and chemical status of the surface water bodies in the four Member States visited.

Ecological status/potential presented in the 2009 river basin management plans and the 2015 draft plans (expressed as % of total number of surface water bodies)

Source: Information provided by the Member States via WISE and the draft 2015 river basin management plans.

1 WISE (Water Information for Europe) provides a wide range of data and information on water issues collected by EU institutions.
Observations

Based on the data included in the river basin management plans, the changes in water quality status do not appear to be significant and the 2015 deadline for achieving good status was not met. The bodies with ecological status/potential that was ‘good or high’ only increased by a small percentage, with the biggest increase for the Czech Republic. For the chemical status, the situation deteriorated in the Czech Republic. Hungary managed to significantly reduce the number of water bodies with unknown status, which explains the increase in the number of water bodies either having scores of ‘good’ or ‘fail’ chemical status.

Identification of the pollution sources at water body level suffered from lack of comprehensive data

Given a lack of monitoring data, Member States partly based their status assessment on indirect methods such as risk analysis and estimation, which has an impact on the degree of confidence with regard to the status classification. While Romania and Slovakia have a high number of water bodies classified as ‘good’ and ‘high’ in the 2009 plans (see Figures 1 and 2), the confidence in the classification was low for a significant number of water bodies. The lower the degree of confidence in a status classification, the more difficult it is to identify the appropriate measures to remedy the situation.
Observations

29 Also, the number of specific physico-chemical substances assessed for the ecological status (see paragraph 22) varied significantly from one Member State to another (from four in Hungary to more than 80 in the Czech Republic) sometimes due to a lack of proper identification. This can lead to an overoptimistic classification of water bodies.

30 Annex II presents the percentage of water bodies that were subject to pollution from point and diffuse sources as well as the percentage of water bodies subject to organic enrichment, to nutrient enrichment and to contamination by priority substances or other specific pollutants.

31 The Court’s analysis showed that there were insufficiencies regarding the information by water body presented in the 2009 river basin management plans: they do not always indicate whether organic pollution (BOD₅ and COD), nutrients (nitrogen and phosphorus), physico-chemical and priority substances and pesticides pose a problem to the water quality of the body concerned.

32 Equally the river basin management plans suffer from insufficiencies and difficulties regarding the information available by pollution source:

— when it comes to point sources of pollution (such as urban waste water treatment plants and industrial installations) there was a lack of data in particular with regard to the discharge of physico-chemical and priority substances. Most information was available for organic and nutrient emissions from urban waste water treatment plants;

— when it comes to diffuse pollution the calculation of the share of the various sources (fertiliser use, erosion, atmospheric deposition, etc.) is difficult and therefore estimations were mainly based on statistical models;

— when it comes to contaminated and waste disposal sites no quantified information on the importance of the source was available.

Measures identified in the river basin management plans are not sufficient to adequately address pollution sources

33 According to the 2009 guidance document No 21 for reporting under the water framework directive Member States had to present the measures in their river basin management plan according to three categories: ‘basic measures’ (measures required to implement EU Directives), ‘other basic measures’ (measures additionally introduced by the Water Framework Directive) and ‘supplementary measures’.

18 This does not preclude that other information is available at Member State level but not presented in the river basin management plans.

19 These include (i) for point source discharges: a requirement for prior regulation or for prior authorisation, or registration based on general binding rules and (ii) for diffuse sources: measures to prevent or control the input of pollutants and (iii) measures deemed appropriate to recover the costs of water services.
34
The 2009 river basin management plans of the four Member States gener-
ally lacked information on the achieve-
ments to be expected from the im-
plementation of the ‘basic measures’
and the resulting need for additional
measures to achieve good status.

Pollution from agglomerations:
measures in addition to the
urban waste water treatment
directive miss out some
important aspects

35
The ‘basic measure’ for tackling pollu-
tion from agglomerations is the imple-
mentation of the urban waste water
treatment directive (see Table 1).

With regard to ‘other basic’ and ‘sup-
plementary measures’, the Court
identified the following shortcomings
in the 2009 river basin management
plans of the four Member States:
— for agglomerations below 2 000
p.e. the river basin management
plans of the Czech Republic,
Hungary and Slovakia failed to
indicate how many of these ag-
glomerations are of importance for
water quality and thus would need
specific measures;
— the water quality situation of
water bodies may require setting
emission limits that go beyond
the requirements of the urban
waste water treatment directive
(see Annex III). The review of the
adequacy of emission limit values
as defined in the national legal
provisions was mentioned for
Hungary and Romania. The Czech
Republic did not include such
a measure as the limits set by law
had been updated in 2007, thus
shortly before the approval of the
river basin management plan. For
Hungary the scope of the measure
was not provided. For Romania the
plan indicated that more stringent
limits are required in a limited
number of agglomerations but it is
not clear whether this is sufficient
in terms of covering all water bod-
ies subject to important organic
and nutrient pollution;
— the issue of rainwater manage-
ment was only partially addressed
by the Member States. Both over-
flows — occurring during heavy
rainfall when the capacity of a sew-
age network and/or a treatment
plant is not sufficient — and urban
run-off can lead to water pollu-
tion. Hungary included a specific
measure consisting mainly in the
establishment of a national rain-
water management plan and Ro-
mania identified agglomerations
which need rainwater collection
systems. None of the plans includ-
ed specific measures to deal with
overflows;
— the water quality situation of
water bodies may require setting
emission limits that go beyond
the requirements of the urban
waste water treatment directive
(see Annex III). The review of the
adequacy of emission limit values
as defined in the national legal
provisions was mentioned for
Hungary and Romania. The Czech
Republic did not include such
a measure as the limits set by law
had been updated in 2007, thus
shortly before the approval of the
river basin management plan. For
Hungary the scope of the measure
was not provided. For Romania the
plan indicated that more stringent
limits are required in a limited
number of agglomerations but it is
not clear whether this is sufficient
in terms of covering all water bod-
ies subject to important organic
and nutrient pollution;
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rainfall when the capacity of a sew-
age network and/or a treatment
plant is not sufficient — and urban
run-off can lead to water pollu-
tion. Hungary included a specific
measure consisting mainly in the
establishment of a national rain-
water management plan and Ro-
mania identified agglomerations
which need rainwater collection
systems. None of the plans includ-
ed specific measures to deal with
overflows;

20 Due to the fact that in urban
areas there are a lot of
impervious surfaces, the water
from rain falls or snow melts
cannot soak into the ground
and thus the water runs off,
carrying all kind of pollutants.

21 In Special Report No 2/2015
(paragraphs 53 to 55) the
Court noted that for overflows
there is a general lack of
information on their quantity
and pollution parameters.
Moreover, in the Czech
Republic, Hungary and
Romania there are no legal
requirements for either an
admissible number and
volume of overflows or for
a dilution ratio. In Slovakia
such requirements exist and
determine the required size of
the overflow chambers.
However, neither the volume
nor the dilution ratio of the
overflows has to be
monitored.
Observations

— since the late 1990s the presence of micropollutants has increasingly been recognised as an issue in the context of water quality. Micropollutants are typically found in pharmaceutical products, personal care products and food additives. Despite its increasing importance the issue of micropollutants was not addressed by the four Member States in their 2009 river basin management plans. Measures available to address this issue are: (i) prevention/reduction of pollution where it is occurring ('at source') and (ii) treatment of the polluted water ('end-of-pipe' measures).

Pollution from industrial installations: lack of targeted measures

37 A ‘basic measure’ for tackling pollution from industrial installations is the implementation of the industrial emissions directive (see Table 1).

38 With regard to ‘other basic’ and ‘supplementary measures’, the Court identified the following shortcomings in the 2009 river basin management plans of the four Member States:

— in order to reduce pollution from hazardous substances, measures are required that target those substances which prevent water bodies from achieving good ecological and chemical status. However, none of the four Member States had measures targeting specific substances;

— while all four Member States included measures regarding the rehabilitation of contaminated and/or waste disposal sites, only the plans of the Czech Republic and Slovakia identified sites that were considered as posing a risk to water quality. Nevertheless, the Court found that the selected sites did not necessarily correspond to those sites prioritised for decontamination by the national bodies responsible for decontamination strategy.

Pollution from agriculture: measures in addition to the nitrates directive are mainly of a voluntary nature

39 The ‘basic measure’ for tackling pollution from agriculture is the implementation of the nitrates directive (see Table 1).

40 With regard to ‘other basic’ and ‘supplementary measures’, the river basin management plans of the four Member States mainly referred to the measures under the rural development programmes where farmers can engage in actions going beyond compulsory legislation (such as fertilisation rules stricter than those of the nitrates directive). These measures are however of a voluntary nature only and thus may not cover the areas where water pollution is most significant (see also paragraphs 145 to 157).

22 In Special Report No 23/2012 ‘Have EU structural measures successfully supported the regeneration of industrial and military brownfield sites?’ the Court indicated a number of obstacles that hinder the setting of priorities with regard to the regeneration of sites (such as a lack of complete and appropriate registers on contaminated sites) (see paragraphs 37 to 44) (http://eca.europa.eu).

23 In this context an OECD paper on ‘Water quality and agriculture: meeting the policy challenge’, published in 2012, mentions that meeting the challenges of sustainable management of water quality in agriculture requires a high level of political commitment.
Observations

41 The Court also identified the following shortcomings in the 2009 river basin management plans of the four Member States:

— although phosphorus from diffuse pollution plays a significant role in the nutrient pollution of water bodies, there was no indication — in any of the programmes — of measures directly targeted at limiting the amount of phosphorus to be applied on land (kg/ha)\(^43\);

— measures targeted at reducing erosion — which contributes significantly to phosphorus pollution — were indicated in the programmes of measures of the Czech Republic, Hungary and Romania. Nevertheless, in Hungary the measure refers to the application of the relevant GAEC standard (see Box 3), whereas, in the programmes of the Czech Republic and Romania, there is a lack of detail as to how the measures are to be carried out;

— measures targeted at reducing the use of pesticides were mentioned in the programmes of measures of all four Member States. However, the measures were vague or they referred to the pesticide action plans that were to be adopted and communicated to the Commission by 26 November 2012 as requested by the pesticides directive (see Table 2).

42 The Court found that an estimation of the costs was not provided for all measures set out in the 2009 river basin management plans. Information on the sources and availability of funds was only partial for the four Member States.

43 The absence of information on costs and on the expected results of the measures (see paragraph 34) hinders the identification of the most cost-effective measures.

44 Funding provided outside of EU programmes is rare. The major funding sources are the programmes co-financed by the EU via the European Regional Development Fund/Cohesion Fund as well as the European Agricultural Fund for Rural Development. The priorities and financial allocation decided in these programmes thus have an impact on progress in the field of water quality. However, coordination between the bodies approving priorities and projects and the bodies approving the programme of measures of the river basin management plans has not always been achieved (see also paragraph 38).

Meaningful information regarding the funding of the measures is missing

24 Fertilisers include as active substances in particular one or more of the following: nitrogen, phosphate and potash.
Significant number of water bodies exempted from the 2015 and 2021 deadlines

According to the 2009 river basin management plans, the four Member States exempted a significant number of water bodies from the 2015 deadline (see Table 5) but without providing clear justifications for the time extensions granted.

Surface water bodies exempted (as % of the total number of surface water bodies)

<table>
<thead>
<tr>
<th>Member State</th>
<th>2009 river basin management plans</th>
<th>2015 draft river basin management plans</th>
<th>2009 river basin management plans</th>
<th>2015 draft river basin management plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>90 %</td>
<td>63 %</td>
<td>31 %</td>
<td>36 %</td>
</tr>
<tr>
<td>Hungary</td>
<td>88 %</td>
<td>84 %</td>
<td>44 %(^1)</td>
<td>75 %</td>
</tr>
<tr>
<td>Romania</td>
<td>36 %</td>
<td>14 %</td>
<td>6 %</td>
<td>2 %</td>
</tr>
<tr>
<td>Slovakia</td>
<td>1 %</td>
<td>47 %</td>
<td>1 %</td>
<td>1 %</td>
</tr>
</tbody>
</table>

1 Slovakia provided a figure (37 %) which relates to both ecological and chemical status taken together.
2 The percentage was calculated on the number of bodies with known status.

Source: Information provided by the Member States via WISE or in the river basin management plans.

Close follow-up by the Commission but improvements depend on Member States’ willingness to act

The Commission is not responsible for approving the river basin management plans adopted by the Member States.

Nevertheless, if a Member State fails to comply with EU law, the Commission has the power to initiate an infringement procedure and ultimately to refer the case to the Court of Justice of the European Union. In 2008, the Commission introduced what is known as the EU ‘pilot procedure’, which is used as a first step to try to resolve problems so that, if possible, formal infringement proceedings are avoided.
Observations

48 The Commission reviewed the 2009 river basin management plans of all Member States and presented specific observations and recommendations by Member State in two reports accompanying two Commission communications. The Commission also organised bilateral meetings in 2013 and 2014 with all four Member States where it addressed its main concerns.

49 In the context of the approval of the partnership agreements and the operational programmes on environment for the 2014-2020 programme period, the Commission assessed the ‘adoption of a river basin management plan’ as a criterion for fulfilment of an ex ante conditionality. In the Czech Republic, Hungary and Slovakia this criterion was not considered as having been fulfilled. The operational programmes include actions to be taken as a consequence, but they do not cover all weaknesses identified during the bilateral meetings for Hungary and Slovakia (see paragraph 48). Instead the Commission considers the actions detailed in the minutes of these bilateral meetings as actions to be taken by Member States. However, these minutes do not have the same contractual force as the operational programmes. Only for the Czech Republic was specific reference made in the operational programme to Commission requests made during the bilateral meeting. Overall this way of action weakens the effect of the ex ante conditionality.

50 The draft 2015 river basin management plans still present a number of the shortcomings found by the Court and the Commission in the 2009 plans regarding the identification of suitable measures.

Measures and instruments implemented by the Member States in order to reduce pollution caused by waste waters

51 The Court examined whether the measures and instruments as implemented in the four Member States are appropriate in addressing pollution from waste waters emitted by agglomerations and industrial installations.

Pollution from agglomerations: progress in the treatment of waste water but available instruments could be used to better effect

52 An important way to reduce pollution from agglomerations for the four Member States was to increase the percentage of properly treated waste water. Therefore the Court examined whether the four Member States:

— had made progress with regard to the quantity of waste water that is properly treated;
Observations

— had an inspection system ensuring the enforcement of the emission limits set in the waste water discharge permits;

— used the water pollution charge to be paid by urban waste water treatment plants as an instrument to deter the emission of pollutants.

Progress has been made with regard to the quantity of waste water being treated

53 The four Member States have to achieve the objectives set by the urban waste water treatment directive (see Table 1) according to the deadlines agreed in the Accession Treaties.

54 According to Article 5 of the urban waste water treatment directive, Member States had to identify sensitive areas, in particular areas at risk of eutrophication. The Czech Republic, Romania and Slovakia designated their whole territories as being sensitive areas. This is a positive aspect from the point of view of water quality as in these areas more stringent treatment/tertiary treatment of waste water is required for agglomerations above 10 000 p.e., i.e. reduction of nutrients that are responsible for eutrophication (see Annex III). For Hungary, see paragraph 64.

In order to make progress, Member States needed to increase the share of the population connected to a treatment plant and had to improve the treatment technology, i.e. ensure the respect of emission limits for organic pollution (BOD, and COD) through secondary treatment and nutrient pollution (N$_{tot}$ and P$_{tot}$) through more stringent treatment/tertiary treatment. In addition, the emission limits set by a treatment plant should reflect the water quality in the body receiving the waste water.

Progress made in terms of connection to the sewage network and treatment plants but gaps remain in particular in two Member States …

56 Figure 3 shows the progress with regard to the connection rate of the total population to both public sewage networks and treatment plants. In all four Member States the connection rates increased between 2008 and 2012. Romania, having joined the EU 3 years later than the other three Member States, had the lowest connection rates overall.

The difference between the percentage of the total population connected to public sewage networks and the percentage connected to an urban waste water treatment plant illustrates that not all of the waste water from the connected population is being treated by a waste water treatment plant. This difference is highest in Hungary and lowest in Slovakia.

Observations

The total population that is not yet connected to a public sewage network can be split as follows:

- the population from agglomerations equal to or above 2,000 p.e. for which there is no collection yet. This is the case for Romania, where 39.8% of the load\(^{30}\) had not been collected at the end of 2012. Romania has until 2018 to meet its obligations under the urban waste water treatment directive;

- the population from agglomerations equal to or above 2,000 p.e. for which the load is collected by individual systems (such as septic tanks)\(^{31}\). For the four Member States the load collected by individual systems was: the Czech Republic: 7%, Hungary: 14%, Romania: 1%, Slovakia: 13%;

- the population from agglomerations below 2,000 p.e. for which there is no collection.

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\(^{30}\) The load is the organic biodegradable load of an agglomeration expressed in p.e. One p.e. corresponds to the pollution load of sewage generated by one inhabitant and represents the organic biodegradable load having a 5-day biochemical oxygen demand of 60 g of oxygen per day.

\(^{31}\) See Special Report No 2/2015, paragraphs 21 and 22.
With regard to the individual systems, the urban waste water treatment directive requires that they provide a similar level of environmental protection as for urban waste water discharged into collection systems. The Court concludes that on the basis of the information provided to the Commission by Member States an assessment cannot be made as to whether these systems comply with the directive. Likewise, the 2009 river basin management plans do not provide information on this. In the second half of 2014 the Commission asked Member States to provide explanations as to how compliance has been achieved.

With regard to agglomerations with a p.e. below 2 000, the directive requires that where collection systems are in place, appropriate treatment is to be ensured in the case of discharge to fresh water and estuaries. However, the 2009 river basin management plans of the Czech Republic and Hungary did not provide any information on the number of agglomerations where collection systems were in place but where there were no urban waste water treatment plants. In addition to the requirements from the urban waste water treatment directive, Member States, in line with the water framework directive, have to set measures for those agglomerations where the discharge of waste water has a negative impact on water quality. However, the measures in the 2009 river basin management plans are vague (see paragraph 36).
... and significant progress made in terms of secondary and tertiary treatment of waste water in three of the Member States, but all are still behind schedule

61 The progress in terms of secondary treatment of urban waste water from agglomerations equal to or above 2 000 p.e. over the period 2007/2008 to 2011/2012\(^2\) was significant (see Figure 4). At the end of 2012 in three of the four Member States over 90 % of the urban waste water of the agglomerations complied with the emission limits imposed by the directive for BOD\(_5\) and COD.

62 The lower percentage of secondary treatment for Romania (39 %) is partly due to the fact that it joined the EU 3 years later than the other Member States. In 2012, Romania was also behind schedule with regard to its interim deadline for the urban waste water treatment directive concerning secondary treatment (by 2010, 51 % of the load was to be properly treated).

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**Figure 4**

Progress over the 2007/2008 to 2011/2012\(^1\) period regarding secondary treatment of urban waste water for agglomerations ≥ 2 000 p.e. (expressed as % of the total load of these agglomerations excluding the load going into individual systems)

<table>
<thead>
<tr>
<th></th>
<th>2007/2008</th>
<th>2011/2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>99 %</td>
<td>92 %</td>
</tr>
<tr>
<td>Hungary</td>
<td>56 %</td>
<td>39 %</td>
</tr>
<tr>
<td>Romania</td>
<td>26 %</td>
<td>44 %</td>
</tr>
<tr>
<td>Slovakia</td>
<td>97 %</td>
<td></td>
</tr>
</tbody>
</table>

---

1 The data for Hungary relates to 2007 and 2011, for Romania to 2007 and 2012, and for the Czech Republic and Slovakia to 2008 and 2012.

2 The data for the Czech Republic relates to the whole territory and thus not just to the part in the Danube river basin.

Source: ECA analysis of data provided by the Member States to the Commission.
The progress in terms of tertiary treatment of urban waste water over the period 2007/2008 to 2011/2012 was equally significant. **Figure 5** shows the situation for the load of all agglomerations above 10 000 p.e. It indicates the percentage of the total load (excluding the load going into individual systems) meeting the urban waste water treatment directive emission limits for $N_{\text{tot}}$ and $P_{\text{tot}}$.

Hungary did not declare its whole territory as being sensitive area but applies Article 5(4) of the urban waste water treatment directive. This means that it is not the individual waste water treatment plants that need to apply the limits for $N_{\text{tot}}$ and $P_{\text{tot}}$, as long as it can be shown that the minimum percentage of reduction of the overall load entering all plants (equal to or above 2 000 p.e.) is at least 75% for both $N_{\text{tot}}$ and $P_{\text{tot}}$. While Hungary’s overall treatment rate was significantly lower than in the Czech Republic and Slovakia, it was close to complying with the 75% requirement at the end of 2012.

According to 2012 data provided by the Member States to the Commission, the load from agglomerations equal to or above 2 000 p.e. that respected the limits of the directive is as follows: (i) for $N_{\text{tot}}$: the Czech Republic: 83%, Hungary: 33%, Slovakia: 60% and (ii) for $P_{\text{tot}}$: the Czech Republic: 77%, Hungary: 39%, Slovakia: 86%.

According to information provided by the Hungarian authorities to the Commission, the percentage of reduction of the load entering treatment plants was 73.1% for $N_{\text{tot}}$ and 74.4% for $P_{\text{tot}}$.

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**Progress over the 2007/2008 to 2011/2012 period regarding tertiary treatment of urban waste water for agglomerations above 10 000 p.e. (expressed as % of the total load of these agglomerations excluding the load going into individual systems)**

<table>
<thead>
<tr>
<th>Country</th>
<th>$N_{\text{tot}}$</th>
<th>$P_{\text{tot}}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>31%</td>
<td>32%</td>
</tr>
<tr>
<td>Hungary</td>
<td>78%</td>
<td>96%</td>
</tr>
<tr>
<td>Romania</td>
<td>10%</td>
<td>3%</td>
</tr>
<tr>
<td>Slovakia</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: ECA analysis of data provided by the Member States to the Commission.

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1 See note 1 of **Figure 4** for the reference dates.

2 For the Czech Republic the treatment plant of Prague which treats 15% of the total load for agglomerations equal to or above 2 000 p.e was not compliant with the directive requirements in 2012. It is expected that the waste water of Prague will be receiving adequate treatment by 2018.

3 For Slovakia separate data for $N_{\text{tot}}$ and $P_{\text{tot}}$ was not available. The data used corresponds to the load meeting the emission limits for one or both of the parameters.
Observations

65 Despite the progress achieved mainly thanks to resources from the European Regional Development Fund and Cohesion Fund\(^{35}\) the Court notes that all four Member States are behind schedule with regard to the interim and/or final deadlines for implementation of the directive\(^{36}\). It also notes that the financial sustainability\(^{37}\) of the newly built or rehabilitated infrastructure cannot be guaranteed, which is a risk to water quality in the long run.

Emission limit values going beyond the requirements of the directive in 25 % of cases examined by the Court

66 The water quality situation of a water body can be such that limits stricter than the ones imposed by the urban waste water treatment directive need to be set for an urban waste water treatment plant. Out of a sample of 28 urban waste water treatment plants examined by the Court, the waste water discharge permits for seven plants (25 %) included limits that were stricter than the ones imposed by national\(^{38}\) law: three cases out of four examined in the Czech Republic\(^{39}\) (all concern nutrients) and four cases out of seven examined in Hungary (two of which concern the nutrient P\(_{\text{tot}}\)).

67 On the other hand, in Hungary, three out of seven plants examined had the technical capacity to remove nutrients (N\(_{\text{tot}}\) and P\(_{\text{tot}}\)) and thus to improve the quality of the effluents but were not required to do so by the discharge permit.

68 According to data provided by the Member States to the Commission, around 20 %\(^{40}\) of the waste water treated from agglomerations between 2 000 and 10 000 p.e. respected in 2012 the limits of the directive for N\(_{\text{tot}}\) and P\(_{\text{tot}}\). This is not a requirement of the directive but is positive for water quality.

69 The national legal provisions in the four Member States do not set emission limits for micropollutants. A major improvement in current treatment processes would be required to remove such substances (see paragraph 36).

70 Initiative was taken at EU level as the water framework directive was amended in 2013\(^{41}\) by the European Parliament and the Council inter alia requesting the Commission to develop by September 2015 a strategic approach to the pollution of water by pharmaceutical substances and to propose by September 2017, measures to be taken at EU and/or Member State level to implement such an approach. The concept of a watch list of substances for which EU-wide monitoring data is to be gathered was introduced with the same amendment. The first watch list of 10 substances was established in March 2015 and includes pharmaceutical substances and pesticides.

35 As of 31.12.2014 the EU contribution allocated to waste water in the budget of the operational programmes in the four Member States visited was 5.07 billion euro.


37 See Special Report No 2/2015, paragraphs 89 to 105.

38 For certain parameters, national law in all four Member States imposes limits that are stricter than the ones of the urban waste water treatment directive.

39 In 2011 the Czech law introduced a set of emission limit values that result from the application of best available techniques. These are the limits that the authorities issuing the permit should take into account when they want to impose limits stricter than the standard set by law. In practice this means that these limits have become the maximum that the authorities can impose. Most of the emission limit values for the four waste water treatment plants examined that were stricter than the directive and the standard set by the national law correspond to these maximum limits.

40 In the Czech Republic the load complying with the limits for P\(_{\text{tot}}\) is even higher: 97 %.

Observations

Deterrent effect of the inspection system is limited

71 Properly set emission limits will only have an impact on water quality if they are complied with. Hence the importance of an effective inspection system to ensure that the limits specified in the waste water discharge permits for urban waste water treatment plants are being adhered to.

72 Compliance is ensured by two types of checks:

- those carried out by the operators of the treatment plants on the basis of water samples drawn by themselves (hereafter referred to as self-checks);
- those carried out by public inspection bodies.

73 With regard to the self-checks, the Court concludes that out of a sample of 28 urban waste water treatment plants examined all but one plant respected the requirements of the urban waste water treatment directive in terms of number of checks. Moreover in 2012, 25 out of the 28 plants respected the limits specified in their permits.

74 With regard to the checks carried out by public inspection bodies, their frequency is not prescribed in any of the four Member States. It is thus at the discretion of the authority concerned, taking into account its resource constraints. The actual frequency achieved varies by Member State (see Table 6). For the Member States that submitted data to the Court, Slovakia carried out checks least often. No data on frequency was received from Hungary. In Slovakia, the inspection body rarely takes its own samples of the effluent, relying instead on operators’ self-checks carried out by accredited laboratories.

75 When emission limits are exceeded and this is observed by the public inspection bodies, fines are due according to the national legal provisions in all four Member States.

76 In Hungary and Romania the fines are applied per pollutant for which the limit was exceeded. The amount per kg of pollution in excess of the limit varies by pollutant concerned. In Romania, the seriousness of the offence is also assessed so that the inspection body can opt for issuing a warning rather than a fine. The Romanian statistics on the results of the 2012 inspections show that five times more warnings than fines were issued.

42 At EU level there is Recommendation 2001/331/EC of the European Parliament and the Council of 4 April 2001 providing for minimum criteria for environmental inspections in the Member States (OJ L 118, 27.4.2001, p. 41). It provides guidelines for the organisation (establishment of inspection plans) and the carrying out of checks (site visits and reporting).

43 These bodies are the following: in the Czech Republic: the Czech Environmental Inspectorate (CZIP), in Hungary: the National Directorate General for Disaster Management of the Ministry of the Interior (since April 2014, in Romania: the National Administration ‘Romanian Waters’ (ANAR), in Slovakia: the Slovak Environmental Inspectorate (SZIP). Other bodies may also carry out checks at the level of the waste water treatment plants such as the authorities which establish the permit. These checks were not included in the Court’s assessment.

44 See Special Report No 2/2015, paragraphs 48 and 50.

45 Council conclusions of 11 June 2012 called for an improvement of inspections and an opinion of the Committee of the Regions stressed that an EU-wide framework for national inspections can ensure a level playing field and consistency in legal action. It also pointed out the value of a well-defined inspection-related role of the Commission.

46 Sanctions under criminal law (such as prison sentences) are not addressed in this report.

47 For example in Hungary the amount per kg of pollution (converted from HUF at the exchange rate of 31.12.2014: 315.54) is 1.11 euro for N\textsubscript{tot} and 7.29 euro for P\textsubscript{tot}. In Romania, the amount per kg of pollution (converted from RON at the exchange rate of 31.12.2014: 4.4828) is 1.71 euro for N\textsubscript{tot} and P\textsubscript{tot}. 
In the Czech Republic and Slovakia, the fine does not depend on the pollutant concerned or the amount of pollution in excess of the limit. Instead, the amount is fixed depending on the seriousness of the non-compliance with the permit conditions as assessed by the public inspection body (with a maximum amount set by the national legal provisions).

None of the 2009 river basin management plans included a measure aimed at assessing the effectiveness and deterrent effect of the inspection system.

Water pollution charge partially used as an instrument to deter the emission of pollutants

The legal framework of all four Member States provides for the application of a water pollution charge, to be paid by those discharging polluted water. It is based on the quantity and/or concentration (mg/l) of the discharged pollutants. Such a charge is in line with the ‘polluter pays’ principle according to which polluters have to bear the cost of reducing the pollution caused. A water pollution charge can serve three purposes: (i) to raise money, (ii) to be an incentive to comply with the emission limits set in the dischargers’ permits and/or (iii) to act as an incentive to further reduce pollution by going beyond the set limits.
80 The charge to be paid for the discharge of waste water into surface water is limited to a number of pollutants (see Annex IV). With regard to organic pollution, no charge is due for BOD$_5$ in three of the four Member States. With regard to nutrient pollution, in the Czech Republic and Hungary there is no charge set for N$_{tot}$ but there is one for N$_{inorg}$ (which is an element of N$_{tot}$). The charge expressed in euro/tonne by pollutant varies significantly between the four Member States.

81 Generally all urban waste water treatment plants are liable to pay a water pollution charge with the exception of smaller dischargers in Slovakia (discharging less than 10 000 m$^3$/year or 1 000 m$^3$/month). Nevertheless,

— in the Czech Republic and Slovakia no charge by pollutant is due below certain thresholds set by law;

— in Romania, no charge by pollutant is due when the effluent is less polluted than the receiving surface water body. This will for example favour those that discharge into water bodies with a high degree of pollution.

82 The 2009 river basin management plans did not include measures to assess the appropriateness of the charge amounts.

83 Member States have two important means at their disposal to influence the emission of polluting substances by industrial installations: limits in their permits and the water pollution charge.

84 Industrial installations can discharge their waste water either directly into water courses or indirectly via a public sewage network for treatment by an urban waste water treatment plant.

85 According to the industrial emissions directive (see Table 1), industrial installations carrying out defined activities must have a permit to operate their installation. The permit has to include emission limits for polluting substances as well as emission monitoring requirements. These limits should not exceed the emission levels associated with the ‘best available techniques’ as adopted by the Commission, assisted by an expert committee. As of November 2015, seven such ‘conclusions on best available techniques’ were adopted. Urban waste water treatment plants, in principle, do not fall under the scope of this directive.

50 In practice this means that only around 30 % of dischargers in Slovakia are under charge obligation.

51 In the Czech Republic a charge is also due for the volume of waste water discharged where such volume exceeds 100 000 m$^3$/year and this charge is independent of the degree of pollution in the waste water.

52 The thresholds relate to (i) the volume of the pollution in kg/year and (ii) the concentration of the pollutant in the discharged water (in mg/l). The thresholds are such that in the Czech Republic plants with a capacity above 10 000 p.e. are unlikely to pay a charge for P$_{tot}$ and for N$_{tot}$ and in Slovakia plants equal to or above 2 000 p.e. are unlikely to pay a charge for total suspended solids (TSS) and plants above 10 000 p.e. are unlikely to pay a charge for N$_{tot}$ and P$_{tot}$.

53 A charge is always due in the case of discharge into groundwater.

54 A study of the European Parliamentary Research Service on ‘Water legislation, cost of non-Europe report’ notes that ‘barriers to the sufficient use of economic instruments are caused by inadequate knowledge regarding the use of such instruments […]’. Document PE 536.369 published in May 2015.


56 The directive covers inter alia the energy industries, the production and processing of metals and the mineral, chemical and waste management industries.
The Court examined whether in the four Member States visited:

— there was a procedure for setting emission limits;
— an inspection system was in place to ensure the enforcement of the limits;
— the water pollution charge to be paid by industrial installations was used as an instrument to deter the emission of pollutants.

The authorities that set emission limits are often dependent on information provided by the dischargers themselves

In the case of direct discharge of waste water a water discharge permit is required in all four Member States. The permit is valid for 4 to 10 years depending on the Member State. In all four Member States the legal framework provides that the competent authorities can revoke or amend the permit at any time if so required for water quality reasons of the receiving water bodies.

For direct discharge, national legislation in the four Member States sets limits for a number of substances often specified by type of industry. The permit issuing authorities can also set limits for substances that are not included in the legal provisions.

Nevertheless, due to the complexity of certain processes and continuous technological evolution, the issuing authority is dependent upon the information provided by the installations themselves, both for the type of pollutants and the emission limits that are reasonably achievable. This leaves room for influence by the industrial installations, particularly those for which best available techniques have not been adopted.

While industrial installations discharging directly into water bodies generally have limits for chemical substances in their permits, urban waste water treatment plants, although often receiving waste water from industrial installations, only rarely have such limits. It was mainly in the permits of the 12 Romanian urban waste water treatment plants examined that the Court found more substances than are required by the urban waste water treatment directive (see Annex III).

In the case of indirect discharge of waste water, it is the contract between the operator of a sewage network/treatment plant and an industrial installation which sets the limits to be respected by the industrial installation. For those substances where the national legislation either sets limits only for guidance (the Czech Republic and Slovakia) or does not set any limits (see examples in Annex V), the agreed emission limits depend on the negotiation power of the parties involved.

If an industrial installation falling under the industrial emissions directive discharges into a public sewage system the limits should be set according to the permit given as a result of the application of this directive.
Hungary and Slovakia included the review of existing permits or of the permit issuance procedure as measures in their river basin management plans. The Czech Republic had a measure which referred merely to the use of best available techniques. In the case of Hungary, the scope of the measure was not indicated. In addition, there is no database in Hungary for water discharge permits issued for industrial companies not falling under the industrial emissions directive, thereby restricting any comprehensive review exercise. In Slovakia the Court identified shortcomings regarding the review of the permits of two installations examined.

### Weaknesses in the inspection system

Compliance with emission limits is ensured in two ways: self-checks carried out by the dischargers of waste water and checks carried out by public inspection bodies.

In the four Member States visited, industrial installations discharging directly into surface water are obliged by law to carry out self-checks on their effluent. The frequency of these self-checks is generally indicated in the waste water discharge permit. In Hungary, Romania and Slovakia national legislation provides the yearly minimum number of checks.

For checks carried out by public inspection bodies, their frequency is not provided for in any of the four Member States, the only exception being checks on industrial installations falling under the industrial emissions directive. For such checks, the directive specifies the minimum frequency required. According to the statistics provided by the Member States for 2012-2013, the Court concludes that:

- the coverage of the installations falling under the latter directive was compliant with the requirements;
- for direct discharge by installations not falling under the scope of the industrial emissions directive the situation on the actual frequency of the public inspections is very similar to the one presented in Table 6: the frequency was lowest in Slovakia and for Hungary no data was received allowing an assessment of the frequency of inspections;
- for indirect discharge, public inspection bodies carry out few checks at the industrial installations concerned as it is primarily the responsibility of the operator of the urban waste water treatment plant to ensure the respect of the emission limits set by contract. The Court found that for 22 out of 26 urban waste water treatment plants analysed (85%) the operators carried out on-the-spot checks. For three of the remaining four plants, the operators relied on the results of the industrial dischargers’ self-checks.

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59 For self-checks in case of indirect discharge, see Special Report No 2/2015, paragraph 60.

60 The operators of the sewage networks/urban waste water treatment plants that receive the waste water are obliged by law in the Czech Republic, Romania and Slovakia to carry out on-the-spot checks.
One measure in the 2009 river basin management plan of Slovakia was to tighten the inspection system. However, there was no indication on how and when this measure would be implemented and lack of funding for implementing the system was mentioned as the main problem.

When it has been observed that emission limits have been exceeded, fines are due according to the legal provisions in all four Member States:

— in the case of direct discharge, the fines are imposed by the public inspection body. The procedure is the same as the one applied for urban waste water treatment plants (see paragraphs 76 and 77);

— in the case of indirect discharge, the fines are imposed by the operators of the urban waste water treatment plants. While for Hungary and Romania the fine relates to the quantity of pollution discharged between two measurements (in a year), in the Czech Republic and Slovakia the amount calculated generally refers to the quantity of pollution discharged on the day the measurement took place. The Court considers that in such cases the amount due is likely to be small and the deterrent effect will be limited.

The number of pollutants for which a charge is due is particularly limited in the Czech Republic, Hungary and Slovakia (see Annex IV). Therefore the charge can rarely serve as an incentive either to comply with or to go beyond the limits set in the permit.

An important way to reduce emissions from agriculture is to regulate farming practices (e.g. rules on the use of fertilisers, the storage of manure, the use of pesticides, crop rotation, etc.). Several instruments are available (see paragraph 15) for imposing or encouraging good farming practices and promoting the compliance of farming activities with environmental legislation.

61 This corresponds to the quantity discharged in excess of the consented quantity (volume multiplied by a concentration expressed for example in mg/l).

62 Contracts generally specify a standard time period (usually ranging from 5 to 30 days) if the precise time period during which emission limits were exceeded cannot be specified.
Therefore the Court examined whether:

- the nitrates directive is used to best effect as an instrument to address nitrate pollution;
- the national pesticides action plans show a clear commitment towards a reduction of the risks and the impacts associated with the use of pesticides;
- cross-compliance is effective in requiring good farming practices and ensuring compliance with these practices;
- the potential of rural development measures to address water quality issues is being adequately exploited;
- the ‘polluter pays’ principle is being applied in the case of diffuse pollution from agriculture.

Member States not using all possibilities offered by the nitrates directive

According to the nitrates directive (see Table 1), Member States have to designate nitrate-vulnerable zones and review them at least every 4 years. One of the criteria for the designation is the eutrophication status of water bodies\(^63\). The 1991 nitrates directive left it to the Member States to define classification criteria for the eutrophication concept. A guidance document on eutrophication assessment in the context of European water policies was only approved in May 2009 by the water directors of the Member States (and Norway).

Member States had to adopt action programmes specifying the requirements that are to be respected by farmers in nitrate-vulnerable zones. These action programmes have to be reviewed and, if necessary, revised every 4 years. Member States also had to adopt a code of good agricultural practice for voluntary application by those farming outside nitrate-vulnerable zones. The action programmes and the codes are not formally approved by the Commission. If the Commission assesses their quality to be insufficient it is limited to taking legal action (see paragraph 47).

Most Member States gradually strengthened the requirements to be respected by farmers in nitrate-vulnerable zones but there is scope for further improvement

Since their accession to the EU in 2004 and 2007, the Czech Republic, Hungary and Romania have gradually increased their zones designated as nitrate-vulnerable, whereas in Slovakia there has been a reduction of 5%. Table 7 shows the percentage of agricultural land that is currently designated as nitrate vulnerable in the four Member States.

Other criteria: (i) groundwaters containing more than 50 mg/l nitrates or that could contain more than 50 mg/l nitrates if action is not taken and (ii) surface freshwaters in particular those used or intended for the abstraction of drinking water containing or that could contain more than 25 or 50 mg/l nitrates as specified in Council Directive 75/440/EEC of 16 June 1975 concerning the quality required of surface water intended for the abstraction of drinking water in the Member States (OJ L 194, 25.7.1975, p. 26).
Romania’s decision to apply the action programme to the whole country is in principle positive from the point of view of water quality, particularly considering that Romania has the lowest number of water bodies subject to nutrient enrichment (see Annex II). However, increasing the zone is by itself not sufficient to achieve nitrate reduction in water. In the previously designated zone (made up of only 58% of the agricultural land) little progress was made in achieving appropriate manure storage, one of the requirements of the action programme (see also paragraph 122).

The Court found that the requirements of each revision of the action programmes of the Czech Republic, Hungary and Romania either increased in number or became stricter, whereas in Slovakia some of the requirements were eased. The strengthening of the requirements is partially due to Commission action (see examples in Box 1). The fact that a number of requirements also became more precise aids their application and enforcement.

### Table 7

<table>
<thead>
<tr>
<th>Member State</th>
<th>Percentage of agricultural land in nitrate-vulnerable zones</th>
<th>Change since the first designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>49%</td>
<td>+ 15%</td>
</tr>
<tr>
<td>Hungary</td>
<td>63%</td>
<td>+ 42%</td>
</tr>
<tr>
<td>Romania</td>
<td>58%</td>
<td>+ 625%</td>
</tr>
<tr>
<td>Slovakia</td>
<td>57%</td>
<td>- 5%</td>
</tr>
</tbody>
</table>

In 2013 the Romanian government decided that the action programme applies to the whole Romanian territory.

1 According to Article 3(5) of the nitrates directive, Member States are exempt from the obligation to identify specific vulnerable zones if they establish and apply action programmes throughout their national territory.

Source: ECA analysis of national legal provisions.
Observations

Box 1

Examples of the effects of Commission requests made to the Czech Republic and Hungary

Member States had to define the capacity of storage vessels for livestock manure. The capacity should be such that the vessel can store the manure produced for a period at least as long as the period during which no manure is allowed to be applied on the land. The capacity is thus expressed in months. In the Czech Republic the capacity was increased as a result of Commission action. Immediate compliance with the requirement was not requested from those farmers that newly came under the obligation in 2012 with the increase in nitrate-vulnerable zones. Instead they benefited from a transitional period (deadline for compliance: end of 2015). This period was abolished as a result of Commission action with effect from mid-2014.

In Hungary, the Commission discussed storage obligations and transitional periods with the competent authorities. For certain farmers the initial deadlines were extended until 31 December 2014. These farmers thus had 10 years from the country’s accession to comply with the requirements. For farmers in areas newly designated as nitrate vulnerable in 2013, the deadline was 31 December 2014 for slurry storage and 22 December 2015 for manure storage. However, these transitional deadlines set by the Hungarian authorities were not challenged by the Commission.

Picture 2 — Storage vessel for slurry
Source: ECA.
Even though the requirements have been tightened up they are still less demanding than those set out in a 2011 study conducted on behalf of the Commission. Examples are given in Box 2.

Several issues for which Member States had or could define requirements under the nitrates directive became issues for which Member States had to define standards under GAEC. The Court found that the GAEC standards for ‘land management’ and ‘maintenance of a minimum soil cover’ are either identical or even stricter than what is included in the action programmes of the four Member States. In addition, there is scope for further enhancement of the standards (see paragraph 135).

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**Box 2**

**Examples of requirements in Hungary and Romania that are less demanding than the recommendations in the study conducted on behalf of the Commission**

In Hungary the period during which the land application of certain types of fertiliser is prohibited runs from 31 October to 15 February (3 ½ months). The recommendations suggested a period from 1 August to 1 February (6 months) for arable lands with a likely uncertainty of plus/minus 1 month.

In Romania the general rule is that fertiliser application is not allowed within 1 metre of a watercourse on a physical block of land with an average slope up to 12 % and within 3 metres on a physical block of land with a slope above 12 %. There are other specific rules for various types of water protection areas.

The recommendations suggested buffer strips of at least 25 metres in width and in the case of sloping land (above 8 %) the buffer strips should be doubled or even tripled. In its correspondence with Romania the Commission also was of the opinion that the buffer strips were not wide enough but did not pursue this issue.

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65 See final report presented to the Commission in December 2011 ‘Recommendations for establishing action programmes under Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources’ by a consortium (DLO-Alterra Wageningen UR, DLO-Plant Research International Wageningen UR, NEIKER Tecnalia, Derio, Spain, Institute of Technology and Life Sciences (ITP), Warsaw, Poland, Swedish Institute of Agricultural and Environmental Engineering (JTI), Uppsala).

66 These recommendations by climatic zone were only made available in 2011, thus 20 years after the approval of the nitrates directive.

67 The general agricultural and environmental conditions concerned are: soil erosion (including minimum land management reflecting...
With regard to fertilisers, Member States specified limitations as to the amount of nitrogen to be applied (kg/ha). However, they did not use the opportunity to provide similar limitations for phosphorus.

Shortcomings in the Slovak and Czech action programmes have led to further Commission actions

In November 2012 the Commission started an infringement procedure against Slovakia on the second action programme which had been approved in 2011. A ‘pilot procedure’ with the Czech Republic was begun in January 2013 on the third action programme approved in 2012.

As of November 2015, there was not yet a final position of the Commission as a result of the information provided by the two Member States concerned and the actions taken by them.

Action programmes have no effect yet on fertiliser consumption and effect on eutrophication is difficult to assess

One indicator that can capture the adequacy of the requirements imposed on farmers is the evolution of nitrogen fertiliser consumption. Mineral fertiliser consumption increased in all four Member States over the 2004-2012 period while the arable land surface did not change significantly. At the same time consumption of organic fertilisers (such as manure) does not show a clear trend, either upwards or downwards.

Another useful indicator for assessing the effectiveness of the action programmes is the evolution of the eutrophic status of the waters, even though the eutrophic status is the result of the impact of all pollution sources not just agriculture.

Member States had to draw up water monitoring programmes to measure the nitrate concentrations in freshwaters and to review the eutrophic status of their waters at least every 4 years. The latest implementation reports were submitted by the Member States in 2012 and relate to the 2008-2011 period. The next report is due in June 2016 on the 2012-2015 period. The reporting period under the nitrates directive is not harmonised with the timetable for adoption of the river basin management plans.
Observations

114  Drawing conclusions on the evolution of the eutrophic status of water bodies is difficult as the datasets for the 2004-2007 and 2008-2011 periods are not comparable\(^{73}\). Neither was the data from the 2012 reports on the implementation of the nitrates directive directly comparable with the data in the river basin management plans due to the use of different assessment criteria (see paragraph 101).

115  On the basis of the data reported for 2008-2011, in the Czech Republic, Hungary and Slovakia, between 31 % to 65 % of the surface water was eutrophic. In Romania less than 15 % of the rivers were eutrophic; the situation for other waters (such as lakes and coastal waters) was judged to be not as good.

Mechanism to enforce the nitrates directive lacks deterrent effect

116  The nitrates directive did not include any specific provisions regarding the enforcement mechanism.

117  With the introduction of cross-compliance (see paragraph 133), Member States have to verify the application of certain standards and to reduce aid payments when non-compliances are found. Under statutory mandatory requirement 4\(^{74}\) (SMR-4) Member States have to check the application by farmers of the nitrates action programmes. Farmers that do not receive aid (direct payments) under the common agricultural policy and/or aid under certain measures of the rural development programmes are not subject to SMR-4 checks.

118  In addition to the SMR-4 checks, all four Member States carry out checks on the application of the nitrates directive, hereafter referred to as ‘national checks’. Legal requirements with regard to the coverage of the ‘national checks’ (percentage of the total population to be checked) and with regard to the sample selection did not exist in any of the four Member States visited. The actual percentage of the population of farmers covered by these national checks in 2012\(^{75}\) was very low (less than 3 %).

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73 This is for example due to different assessment methods or an important difference in the number of monitoring stations.

74 Applicable in the Czech Republic, Hungary and Slovakia since 2009 and in Romania since 2012. For the 2014-2020 programme period the number has changed to SMR-1.

75 For Romania, the data relates to the 2008-2011 period.
Observations

119
In the Czech Republic and Slovakia the ‘national checks’ and SMR-4 checks are carried out by the same authority and in the other two it is different authorities. With regard to the requirements actually covered by the ‘national checks’, the situation varies by Member State:

— nearly all requirements of the action programmes are part of the national checks in Hungary and Slovakia;

— in the Czech Republic some of the requirements of the action programme are checked under the ‘national checks’ and others under SMR-4 checks. As the sample is the same for both checks, nearly all requirements are checked in practice, but the penalties to be applied are different (see paragraphs 120 and 144);

— in Romania, a number of requirements are not included in the instructions to be followed by the inspectors for farms having between 8 and 100 livestock units.

120
The Court found that when a non-compliance with the requirements is discovered by ‘national checks’, penalties are not necessarily applied or when fines are imposed, the amounts are low, thereby limiting the deterrent effect:

— in Romania, for the checks covering farms having between 8 and 100 livestock units, generally no penalties are applied but remedial action is required instead;

— in Slovakia, there are no penalties set by law for a number of issues (such as non-respect of storage requirements or non-respect of the prohibition period for the land application of fertilisers);

— in Hungary, the legal framework provides for a penalty where there is a lack of data provision or nitrate pollution. The maximum fine in both instances is relatively low however. In addition, the penalty for nitrate pollution is difficult to apply as it requires (i) proof that it was the non-respect of fertiliser application rules which led to pollution and (ii) an assessment of the extent of the pollution;

— in the Czech Republic, penalties are applied for the non-respect of fertiliser and storage conditions but the average fine imposed by type of infringement in 2010 to 2013 was relatively low.

121
Overall the Court found that the information included in the 2012 implementation report sent to the Commission on the checks carried out and non-compliances found was very general and sometimes incomplete. Moreover, figures were not always found to be reliable. This will significantly hamper any assessment of the overall situation by the Commission.

76 For Hungary, this relates to the checks done on non-livestock farmers.

77 Farms above 100 livestock units are checked by another authority. According to the information included in the implementation report presented to the Commission in 2012 with regard to the nitrates directive the checks mainly include the issue of storage capacity. No information was received by the Court on whether checks are carried out for farmers that do not have livestock and there was no such information in the implementation report presented to the Commission in 2012.
Observations

122 Non-respect of the requirement on storage capacity for livestock manure was frequently observed by these checks. One of the reasons reported was the lack of financial resources for financing the construction of appropriate storage vessels.

Pesticide action plans suffer from shortcomings

123 Member States had to adopt national action plans containing quantified objectives, targets, measures and timetables aimed at reducing risks and impact of pesticide use (see Table 2). These action plans were to be adopted and communicated to the Commission by 26 November 2012.

Action plans lack quantified objectives and deadlines for implementation of the measures

124 The Court found that the national action plans did not include:

— a timetable for implementation of the measures in Hungary and Slovakia;

— the amount of financial resources required for the implementation of the suggested measures in Hungary, Slovakia and Romania;

— overall quantitative targets such as the rate of reduction in pesticide use or reduction of the treatment frequency index (intensity of pesticide use).

125 On the positive side it is noted that the action plans of the Czech Republic, Romania and Slovakia include measures regarding the establishment of appropriately sized buffer zones where pesticides may not be used. For Romania see also paragraph 135. Hungary has a measure on buffer strips in its 2009 river basin management plan.

126 The Commission’s report on the evaluation of the action plans due by December 2014 had not been published by mid-2015. The Commission has not launched any infringement procedures for insufficiency regarding the content of the measures included in the action plans.

Integrated pest management will only gradually be applied

127 According to the pesticides directive Member States have to ensure from 1 January 2014 onwards that the general principles of integrated pest management are applied. The main aim is to ensure that the use of plant protection products is kept to the minimum necessary.

78 Integrated pest management means careful consideration of all available plant protection methods and subsequent integration of appropriate measures. These measures should discourage the development of populations of harmful organisms and keep the use of plant protection products and other forms of intervention to levels that are economically and ecologically justified and reduce or minimise risks to human health and the environment. Integrated pest management emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms.

79 The term pesticide (including amongst others herbicides, fungicides and insecticides) is often used interchangeably with plant protection product. However, pesticide is a broader term that also covers non plant/crop uses, for example biocides.
For correct application of the principles of integrated pest management, guidelines must be available. At the time of reporting, crop-specific guidelines were in the process of being established by the Member States. The respect of the general principles of integrated pest management has to be included as a baseline requirement under the 2014-2020 rural development programmes, where only the costs relating to commitments going beyond this baseline requirement can be financed.

The success of the application of integrated pest management will depend on the adequacy of the guidelines and such things as the financial resources available for farm advisory services, the quality of training measures for the users of plant protection products and the ease of checking of the requirements.

There are no specific EU requirements with regard to the coverage of checks. In none of the four Member States did the national legal provisions indicate a minimum percentage of the population to be checked. However, a limited number of aspects regarding the use of plant protection products are part of cross-compliance:

- SMR-9 checks mainly aim at verifying that only authorised products are used and that the usage is in line with the conditions specified on the product label. SMR-9 has been checked since 2011 in three of the Member States and in Romania since 2014;

- the sustainable use of pesticides, particularly in the form of compliance with the principles of integrated pest management, was originally going to be included in cross-compliance from 2014 onwards. However, according to Regulation (EU) No 1306/2013, the timeframe of this inclusion is now uncertain as it is dependent on the progress made by Member States in implementing the pesticides directive.

Member States were required by the directive to determine penalties applicable to infringements of national provisions adopted pursuant to this directive. The Court found that the penalties as set by the national legal provisions do not cover all types of infringements. For example, in Hungary, Romania and Slovakia, the national legal provisions in place by mid-2015 had not yet defined penalties to be applied in case of non-respect of integrated pest management. Also, fines had not been defined in all cases for the use of plant protection products which was not in line with the conditions specified on the product label.

Mechanism to enforce the pesticides directive needs to be strengthened

With the exception of the inspections to be carried out according to Article 8 of Directive 2009/128/EC, which states that all pesticides application equipment will have to be inspected by 26 November 2016.

For the 2014-2020 programme period the number has changed to SMR-10.

Observations

132 Considering the limited number of aspects covered by cross-compliance, all other aspects (such as prohibition of aerial spraying, adequacy of application equipment, integrated pest management) are to be covered by ‘national checks’. The action plans of all Member States except Slovakia also indicated the need to strengthen the checks in the field of plant protection products.

The cross-compliance mechanism has impact but is not being fully exploited

133 Cross-compliance which links direct payments under the common agricultural policy to the respect of a number of requirements was introduced in 2005 (see paragraph 15). The extent to which environmental objectives, in this case improvement of water quality, will be achieved by such a mechanism depends mainly on how demanding the Member States’ requirements are and on the effectiveness of the enforcement mechanism in place.

134 Member States are responsible for the implementation of cross-compliance. For SMRs this includes introducing the relevant elements of the specific legislation into the scope of cross-compliance. For GAECs this includes enacting the relevant standards in national or regional legislation and defining the practical obligations which farmers are expected to observe. Member States also had to define minimum requirements for fertiliser and plant protection products that are applicable for certain measures under the rural development programmes (such as the agri-environment measure).

Requirements to be respected by farmers could be enhanced for better water quality

135 There are two GAEC standards which are of particular importance for the improvement of water quality: (i) the standard on the establishment of buffer strips along water courses and (ii) the standard on soil erosion. However none of the four Member States have established buffer strips of the size recommended by a study conducted for the Commission (see paragraph 106 and Box 2). Over and above the requirements of the nitrates directive, Romania has also prohibited the use of pesticides on these buffer strips. The requirements imposed by the Member States as a result of the standard on soil erosion could have been more demanding, as can be seen from the examples given in Box 3.

83 The audit covered the following water quality-related SMRs: SMR-3 regarding the application of sewage sludge on agricultural land, SMR-4 regarding the application of the nitrates directive, SMR-9 regarding the placing of plant protection products on the market.

84 Minimum requirements for fertilisers must include, inter alia, the codes of good agricultural practice introduced under the nitrates directive (see paragraph 102) for farms outside nitrate-vulnerable zones and requirements concerning phosphorus pollution.

85 Minimum requirements for plant protection products must include, inter alia, requirements to have a licence to use the products and meet training obligations, requirements on safe storage, the checking of application machinery and rules on pesticide use close to water and other sensitive sites as established by national legislation.
With regard to the minimum requirements for rural development payments for the 2007-2013 programme period (see paragraph 134):

— concerning phosphorus pollution from fertilisers, none of the four Member States defined requirements although this was required by the relevant EU regulation;

— Hungary did not define meaningful minimum fertiliser requirements for farmers outside vulnerable zones and those defined for farmers in vulnerable zones were incomplete;

— concerning rules on pesticide use close to water, the four Member States mainly established rules for special protection areas such as those designated for the abstraction of water intended for human consumption. See also paragraph 135 on buffer strips.

In the context of the approval of the rural development programmes for the 2014-2020 programme period, the Commission assessed the following ex ante conditionalities: (i) whether GAEC standards were defined and (ii) whether minimum requirements for fertiliser and plant protection products applicable to certain measures under the rural development programmes were fulfilled. The Commission did not put into question the adequacy of the requirements in terms of effectiveness to meet the EU water policy objectives despite the weaknesses set out above (see paragraphs 135 and 136)\(^7\).

**Cross-compliance enforcement mechanism, an insufficient deterrent**

Farmers that do not get aid under the common agricultural policy and/or the rural development programmes are not subject to cross-compliance checks. In fact, farms with an area of less than one hectare are not eligible for direct payments under the common agricultural policy. With the exception of Romania\(^8\), the farms having an area of less than 1 hectare represent a negligible share of the agricultural land.

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**Box 3**

**Examples of erosion-related requirements that could be enhanced in all four Member States**

The type of crop\(^6\) planted is one factor that influences the extent of erosion. In Romania and Slovakia no crops are forbidden on erosion-vulnerable land.

In the Czech Republic and Hungary certain crops are forbidden on specified land parcels. However, the surface of land concerned by these rules is lower than the actual surface of land prone to erosion.

For example row crops such as maize, sunflower and sugar beet are noted for being erosion-inducing crops.

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\(^6\) For example row crops such as maize, sunflower and sugar beet are noted for being erosion-inducing crops.
Observations

139 The Court concludes that in terms of sample size the EU requirement to cover 1% of the farmers that have to apply the cross-compliance standards was slightly exceeded by all four Member States in 2011-2013. A rate of 1% implies that, on average, there is a probability that a farmer will be checked once every 100 years.

140 Equally all four Member States visited respected the EU requirement on the split between risk-based and random-based sampling. However, the risk analysis partially loses its meaning as the actual sample checked does not necessarily consist only of those farmers considered highest in the risk ranking. This is due to the fact that the final selection also takes into account the human resources available at the national/regional authority carrying out the checks.

141 With regard to the content of the checks, the Court found that:

— concerning SMR-4 on the application of the nitrates directive, the checks in Hungary, Romania and Slovakia cover the majority of the requirements defined in the nitrate action programmes. In the Czech Republic, some requirements of the nitrate action programme are covered by the cross-compliance checks while others are covered by the ‘national checks’ (see paragraph 119);

— concerning the minimum requirements applicable for certain measures under the rural development programmes, the checks in Hungary were insufficient (see paragraph 136). In the Czech Republic and Romania the checks did not cover the requirement on manure storage capacity. In Romania not all aspects of the minimum requirements for plant protection products’ use were defined and thus checks were limited to verifying that only authorised products were used.

142 One intrinsic limitation of the system of cross-compliance checks is that some requirements are, by their nature, very difficult to check. For example, some can only be checked during a certain period of the year or in the absence of certain meteorological conditions (e.g. strong wind, frost), which may not necessarily coincide with the timing of the on-the-spot visit. For the four Member States visited, there was a heavy concentration of the checks in the second half of the year. No checks (Hungary and Romania) or only a very low proportion of them took place during the winter months or in the main vegetation period. On top of being contrary to certain regulatory requirements, this means that some water-related requirements cannot be verified visually in the field.
The effectiveness of the checks is also affected by the fact that important evidence takes the form of declarations made by the farmers themselves, in particular in the form of the fertilisation register (which includes data on the period of fertilisation and the quantities applied). The more frequent the updates of the register, the more accurate the information will be. The register is either to be kept continuously (Hungary, Romania and Slovakia) or has to be updated at the end of every month (the Czech Republic).

Finally, for many requirements the farmer’s cost of compliance (for example in terms of foregone production and income) is higher than the fine liable to be imposed, i.e. the maximum reduction of the aid amount is at most only 5% and therefore such reductions do not have any real deterrent effect.

The potential of rural development measures to address water quality issues is not being fully exploited

The measures supplementary to existing legislation (such as the nitrates directive) that were set out in the river basin management plans were mainly linked to the rural development programmes.

These programmes contain sets of measures to which the target populations (e.g. farmers) can voluntarily commit. Beneficiaries of rural development measures undertake to comply with specific conditions set by their Member State.

Less than 30% of the agricultural land is covered by agri-environment schemes that can lead to an improvement in water quality

The Court found that the pollution pressure on water from agriculture was described in very general terms in the 2007-2013 rural development programmes of the four Member States and was not necessarily consistent with the information in the river basin management plans.

Commission Regulation (EC) No 1974/2006 indicated the measures that could form part of a rural development programme. The most important measures used in the four Member States having a direct positive impact on water quality are the following:

— measure 121 ‘modernisation of agricultural holdings’: the four Member States used this measure to finance manure storage vessels. The annual implementation reports describing the progress of the measures do not provide information on the number of storage facilities and the co-financed investment cost;
— measure 214 ‘agri–environmental payments’ (see paragraph 13): the importance of the measure in terms of financial resources allocated under the 2007-2013 programme period varies by Member State (see Table 8);

— measure 221 ‘first afforestation’ of agricultural land: this measure was not a priority in the four Member States as very little financial resources had been allocated to it.

149 The Czech Republic and Hungary also reported measures 211 ‘natural handicap payments to farmers in mountain areas’ and/or 212 ‘payment to farmers in areas with handicaps, other than mountain areas’ as contributing to water quality. The other two Member States did not report any areas although they also spent funds under these measures. The Court considers that these measures only have an indirect impact as their main aim is to ensure continued use of agricultural land. Maintenance does not improve the situation for the environment, but non-preservation would worsen it. In the Czech Republic, farmers only get grants for maintenance of grasslands. Grasslands are more beneficial to water quality than land under crop cultivation. Nevertheless, in all cases payments are made with the aim of maintaining/preserving the existing landscape.

98 Less funds are allocated by the four Member States to the equivalent measure under the 2014-2020 programme period. This is particularly the case for Slovakia (63 % less) and Hungary (43 % less).

99 According to a paper on ‘Water quality improvements from afforestation in an agricultural catchment in Denmark illustrated by the INCA model’ by A. Bastrup-Birk and P. Gundersen published in Hydrology and Earth System Sciences, Vol. 8, No 4), pp. 764-777, ‘a change of land use from intensive agriculture to forest substantially reduces the leaching fluxes of nitrates to ground and surface water, largely through the cessation of fertiliser and manure N input.’

100 Reporting to the Commission for predefined indicator ‘R6 — area under successful management contributing to water quality’: Czech Republic: 844 717 ha (or 20 % of total agricultural land) and Hungary 59 959 ha (or 1 % of total agricultural land).

101 Slovakia also reported 348 860 ha under measure 226 ‘restoring forestry potential and introducing preventive action’. As the main aim is to restore forests damaged by natural disasters and fires, the impact on water quality is not of a direct nature as it does not increase forest land.

102 Grasslands can reduce soil erosion. The soil quality is also generally better than for cropland and allows better and/or more infiltration of rain thereby reducing run-off (which includes nutrients present in or on the soil).

---

### Financial resources for measure 214 ‘agri-environmental payments’ as of 31.12.2014 (expressed in million euro)

<table>
<thead>
<tr>
<th>Member State</th>
<th>Budget (and as proportion of the total public funds available under the rural development programme)</th>
<th>Execution of the budget (and as proportion of the budget for the measure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>1 101.2 (30 %)</td>
<td>1 085.7 (99 %)</td>
</tr>
<tr>
<td>Hungary</td>
<td>1 137.3 (22 %)</td>
<td>1 169.6 (103 %)</td>
</tr>
<tr>
<td>Romania</td>
<td>1 270.6 (14 %)</td>
<td>1 340.9 (106 %)</td>
</tr>
<tr>
<td>Slovakia</td>
<td>390.2 (15 %)</td>
<td>357.3 (92 %)</td>
</tr>
</tbody>
</table>

Source: 2014 implementation reports for the rural development programmes.
Under measure 214 ‘agri-environmental payments’, the Member States included a variety of different schemes. Different obligations apply to the different schemes and can imply limitation or prohibition of fertiliser use, limitation or prohibition of plant protection products use and/or crop rotation rules. The obligations that the farmer accepts to take on have to go beyond existing relevant legislation including SMRs and GAEC (for example the requirements regarding fertiliser use have to be stricter than the ones in the action programmes under the nitrates directive).

The schemes to which farmers can voluntarily commit are not all equally successful with farmers. Table 9 shows the most successful schemes by Member State where the total area supported (in ha) under those schemes in the 2007-2013 programme period represents more than 10 % of the agricultural land of the Member State at the end of 2014. The table also indicates the obligations to be respected by the farmer with regard to fertiliser use, plant protection product use and crop rotation rules.

Table 9

<table>
<thead>
<tr>
<th>Member State</th>
<th>Scheme (and area supported in ha as % of total agricultural land)</th>
<th>Obligations to be respected (the list is not exhaustive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>Grassland maintenance (16.5 %)</td>
<td>For the two most important sub-schemes: limitation of the nitrogen input for one and elimination of mineral fertiliser for the other.</td>
</tr>
<tr>
<td>Hungary</td>
<td>Integrated arable crop production scheme (11 %)</td>
<td>A nutrient management plan is required. Crop rotation rules apply. Use of defined environmentally friendly plant protection products only.</td>
</tr>
<tr>
<td>Romania</td>
<td>‘High nature value’ grasslands and traditional farming (22.2 %)</td>
<td>Use of pesticides is not allowed. Use of mineral fertilisers is not allowed and limitation of the nitrogen input for organic fertilisers.</td>
</tr>
<tr>
<td>Slovakia</td>
<td>Environmental friendly farming – basic scheme (18.4 %)</td>
<td>Use of determined plant protection products only. Depending on the sub-schemes: no mineral fertiliser allowed or limitation of the nitrogen input.</td>
</tr>
</tbody>
</table>

1 The area taken into account is the total area which is under agri-environmental commitments. The same area can be counted several times if several obligations apply on the same land. There are no figures available by scheme that exclude double counting.


3 The main aim of a nutrient management plan is to establish the amount of fertiliser required at specific points in time considering soil characteristics, crop needs, climate, etc. to achieve optimum use of fertilisers thus avoiding overfertilisation.

Source: 2014 implementation reports for the rural development programmes.
Based on the information available the Court estimates that in the four Member States between 15 and 30% of the agricultural land is under various water-quality favourable agri-environmental commitments under the 2007-2013 programme period. However, in the Czech Republic, Hungary and Romania some of the most important schemes involve grasslands (see Table 9). These schemes mainly relate to the existing grasslands and although maintenance does not improve the situation for the environment, failure to maintain the existing status would worsen it.

In line with the provisions of Article 39 of Regulation (EC) No 1698/2005, farmers have to keep the obligations taken on under an agri-environment scheme for a period of between 5 and 7 years. Whether after the period of 5 to 7 years farmers will continue with similar commitments will depend on a number of factors such as availability of financial support in the form of grants and profitability considerations.

The Court’s analysis of the various obligations to be complied with shows the following shortcomings:

— the fertiliser limitations imposed for the most important schemes in Romania and Slovakia (see Table 9 (basic scheme in Slovakia)) in terms of nitrogen amount per hectare are either very close to (Romania) or above (Slovakia) the average nitrogen amount used in the country and thus the additional benefits for water quality from such schemes are expected to be small;

— the most important schemes that help fight against erosion are those relating to existing grasslands (see paragraph 152).

Schemes under the agri-environment measure have a number of provisions beneficial to water quality but they will only be effective if correctly applied. According to Commission Regulation (EU) No 65/2011 Member States are required to perform administrative checks on all aid applications received as well as on-the-spot checks covering, depending on the aid scheme, at least 5% of all beneficiaries or of the expenditure.

In its 2014 annual activity report, the Commission (DG Agriculture and Rural Development) expresses reservations concerning the legality and regularity of the underlying transactions.
The Court considers that the EU control system for agri-environment aid is not sufficiently effective. The main reasons are that (i) farmers have a low incentive to comply as the efforts made are not rewarded by immediate positive effects on the farm, (ii) there is a low control rate for on-the-spot checks and (iii) the system of sanctions and aid reductions does not have a strong deterrent effect.

The ‘polluter pays’ principle only applied to a limited extent to diffuse pollution from agriculture

According to the environmental liability directive, the prevention andremedying of environmental damage should be implemented through the furtherance of the ‘polluter pays’ principle: an operator whose activity has caused environmental damage is to be held financially liable. The directive also recognises that liability is not a suitable instrument for dealing with pollution of a widespread, diffuse character, where it is impossible to link the negative environmental effects with acts or failures of certain individuals.

One way of covering environmental costs linked to pollution (‘environmental damage costs’) is the application of an appropriate system of penalties in the case of non-respect of restrictions imposed on farmers. The Court identified a number of weaknesses in that respect (see paragraphs 120, 130, 144 and 157). Cross-compliance can provide a useful but only partial response to the ‘polluter pays’ principle as penalties are not calculated on the basis of the cost of the damage caused and thus, may represent only a portion of this cost. In many cases they are not proportionate to the seriousness of the farmer’s breach of cross-compliance obligations.
Another way of applying the ‘polluter pays’ principle and recovering costs is by using economic instruments (such as environmental taxes on fertilisers or plant protection products). Both Slovakia and the Czech Republic planned to analyse the use of economic instruments for such purposes, whereas neither Hungary nor Romania made mention of the possible use of economic instruments in their river basin management plans.

The Commission does not request Member States to ensure recovery of the costs of diffuse pollution

The water framework directive (Article 9) requires an adequate contribution of the different water uses\textsuperscript{111} to the recovery of the costs\textsuperscript{112} of water services. Compliance with Article 9 of the directive is one of the criteria for assessing the fulfilment of a specific \textit{ex ante} conditionality in place for the 2014-2020 programme period.

In a 2015 communication\textsuperscript{113} the Commission stated that measures included in the river basin management plans to ensure the recovery of environmental and resource costs are limited. The Commission has not yet issued any guidance on the possible methods for cost recovery and best practices in that field.

\textsuperscript{111} It includes all activities having a significant impact on the status of water.

\textsuperscript{112} The costs of water services include environmental and resource costs. Environmental costs are the costs of damage that water uses impose on the environment and ecosystems and those who use the environment (e.g. a reduction in the ecological quality of aquatic ecosystems or the salinisation and degradation of productive soils). Resource costs are costs of foregone opportunities which other uses suffer due to the depletion of the resource beyond its natural rate of recharge or recovery (e.g. linked to the over-abstraction of groundwater).

\textsuperscript{113} COM(2015) 120 final of 9 March 2015 ‘The water framework directive and the floods directive: actions towards the “good status” of EU water and to reduce flood risks’.
The four Member States have some way to go if they are to achieve good surface water quality, the main objective of the water framework directive. They will have to step up their efforts to accelerate progress on water quality.

Use of the river basin management plans as a tool for achieving better water quality

The introduction of the river basin management plan as a tool for integrated water management was one of the strengths of the 2000 water framework directive but, in practice, the plans suffer from shortcomings in the identification of pollution pressures and in the definition of remedial measures.

The comparison of the 2009 river basin management plans with their 2015 draft updates for the four Member States showed that there has been little improvement in the ecological and chemical status of water bodies. The Court notes, however, that progress regarding individual elements making up the status may be masked due to the application of the ‘one-out all-out’ rule\(^{114}\). This low level of improvement was to be expected considering the high number of water bodies that were exempted from the 2015 deadline for reaching good status (see paragraphs 26 to 27 and 45 to 46).

Member States showed limited ambition with regard to the identification of measures to remedy the situation and as a result the river basin management plans provided limited added value in that respect (see paragraphs 33 to 41) as:

- they are focused on the ‘basic measures’ i.e. on the implementation of existing legislation (EU directives) and
- ‘other basic’ and ‘supplementary measures’ either do not cover all pollution issues or do not include an assessment of the opportunity offered by some instruments, or their scope is not clear.

The final status of a water body is determined by the worst element found in the assessment process.
Conclusions and recommendations

171 Furthermore, the expected impacts of the various measures are at best only partially indicated in the river basin management plans. Information on the amount of funds required for implementing the measures as well as their likely availability is incomplete. Coordination between those preparing the river basin management plans and those approving and allocating funds has not always been provided for (see paragraphs 42 to 44).

172 The Commission in cooperation with the Member States developed guidelines for the application of the water framework directive. Moreover, the Commission presented Member State specific recommendations regarding the 2009 river basin management plans in several of its communications. Infringement procedures as to the shortcomings noted in the 2009 plans were not started by the Commission for the four Member States. Actions specified in the 2014-2020 operational programmes as a result of the non-fulfilment of the relevant ex ante conditionality did not cover all of these shortcomings. Instead the Commission relies on Member States’ goodwill and commitment to step up efforts on the basis of the requests noted in minutes of bilateral meetings. The draft 2015 river basin management plans still present a high number of exemptions from the deadline for achieving good status and many of the shortcomings found by the Court and the Commission in the identification of suitable measures are still valid (see paragraphs 47 to 50).

Recommendation 1

The Commission should:

(a) provide guidelines for a more differentiated reporting on progress with regard to water quality currently masked due to the application of the ‘one-out all-out’ rule;
(b) foster comparability of data, for example, by reducing the discrepancies in the number of physico-chemical substances that are assessed for the ecological status;
(c) continue its follow-up of Member States’ progress in reaching good water quality, the objective of the water framework directive.

Member States should:

(d) ensure good-quality water monitoring to have accurate information on the situation and origin of pollution by water body to allow better targeting and increase cost-effectiveness of the remedial measures. For agriculture for example this might mean finding an effective combination of compulsory and voluntary measures;
(e) provide in their river basin management plans (i) clear justifications for the use of exemptions from the deadlines of the water framework directive, (ii) information on how the implementation of measures will be funded and (iii) information on the expected impact of the measures;
(f) ensure coordination between those bodies defining measures in the river basin management plans and those approving projects for funding.
Conclusions and recommendations

Implementation of measures to reduce pollution caused by urban and industrial waste waters

173 Member States made progress in removing organic and nutrient pollution from waste waters emitted by urban waste water treatment plants. However, the instruments available to reduce pollution in waste waters, such as the enforcement mechanism and the water pollution charge, were not used to best effect.

Agglomerations

174 With regard to the implementation of the urban waste water treatment directive (see paragraphs 53 to 65), the ‘basic measure’ regarding pollution from agglomerations, progress was made in collecting waste water (i.e. increase in number of households connected to a sewage system and a treatment plant) and in appropriately treating waste water. However, all four Member States were behind schedule with regard to their interim or final deadlines for implementation of the directive (see also conclusions and recommendations made in Special Report No 2/2015).

175 The 2009 river basin management plans lacked information on ‘other basic’ and ‘supplementary measures’ required for water bodies which fail to achieve good status:

— for waste water not yet connected to a treatment plant there was no indication as to how the load will be tackled (load from agglomerations equal to or above 2 000 p.e. going into individual systems and load from agglomerations below 2 000 p.e.) (see paragraphs 58 to 60);

— there is no indication on which urban waste water treatment plants need stricter emission limits (with the exception of the Romanian plan) (see paragraphs 66 to 68);

— the issue of micropollutants was not addressed. There are no EU and no national legal provisions in the four Member States for emission limits (see paragraphs 69 to 70).

176 With regard to the enforcement mechanism the Court concludes that the system of self-checks to be carried out by operators of waste water treatment plants on their effluents was overall satisfactory. The system of public inspection shows weaknesses however, as the frequency of the inspections was not prescribed and in some Member States was low (Slovakia) or could not be assessed (Hungary). In addition, in Romania checks have a limited deterrent effect as preference is given to issuing warnings rather than fines when emission limits are exceeded (see paragraphs 71 to 78).
Conclusions and recommendations

177
In application of the ‘polluter pays’ principle a water pollution charge is due by dischargers of waste water but with certain exceptions in the Czech Republic, Romania and Slovakia. The charge is not due for all parameters reflecting organic and nutrient pollution and the charge amounts by pollutant (by discharge in mg/l) vary significantly between the four Member States. In the Czech Republic and Slovakia the charge can act as an incentive to comply with the emission limits set in the permits for some parameters (as no charge is due when they are complied with) while in Hungary and sometimes in Romania the charge can act as an incentive to go beyond emission limits for those parameters where a charge is due. Whether it does act as an incentive depends on the amounts due: none of the river basin management plans assessed the deterrent effect (see paragraphs 79 to 82).

179
The 2009 river basin management plans lacked ‘other basic’ and ‘supplementary measures’ for water bodies which fail to achieve good status: there were no measures targeting specific pollutants or specific dischargers (such as an indication of specific substances and limits to be included in the discharge permits). However, Hungary and Slovakia included the review of the permit issuing procedure or of specific permits as measures in their river basin management plans. But the Court did not find the review to be effective due to various weaknesses and omissions (see paragraphs 87 to 92).

180
The Court concludes that (see paragraphs 89 to 91):

— for setting emission limits the competent authorities are to a certain extent dependent on the information provided by the dischargers themselves. This is particularly the case where national legal provisions either set limits for guidance only or did not set limits at all;

— the waste water discharge permits of urban waste water treatment plants receiving industrial waste water only in some cases include limits for pollutants other than organic material and nutrients.

Industrial installations

178
Certain categories of industrial installations fall under the scope of the industrial emissions directive (‘basic measure’). The best available techniques’ conclusions that are adopted by the Commission by type of industry indicate emission limits. By the end of 2015 there were only seven such conclusions adopted (see paragraph 85).
Conclusions and recommendations

181 With regard to the enforcement mechanism, few public inspections are carried out in the case of indirect discharge, via a public sewage network, by installations not falling under the industrial emissions directive. Instead, in a majority of cases (85% of the sample of 28 treatment plants audited) the operators of the urban waste water treatment plants carried out on-the-spot checks at the sites of the industrial installations. However, the fines imposed in the Czech Republic and Slovakia are likely to have a limited deterrent effect. For inspections on direct dischargers, the situation is similar to the one described in paragraph 176 (inspections on urban waste water treatment plants) (see paragraphs 93 to 97).

182 The water pollution charge can only rarely serve as an incentive to either comply with or go beyond the emission limits set in the permits as the charge is only due for a limited number of pollutants (organic matter, nutrients and a few heavy metals) (see paragraph 98).

**Recommendation 2**

The Commission should:

(a) assess how to best set binding criteria for effective Member State inspections on waste water treatment plants not falling under the industrial emissions directive.

Member States should:

(b) indicate for which water bodies, due to their unsatisfactory quality, measures are required for specific dischargers. For urban waste water treatment plants this will include setting emission limits in the permits that are stricter than those set by law for organic and nutrient pollution parameters and setting limits for priority and other chemical substances or micropollutants;

(c) assess and ensure the effectiveness of the enforcement mechanisms, in particular the coverage to be achieved and the deterrent effect of the penalties applied;

(d) assess the potential of using the water pollution charge as an economic instrument and as a way to apply the ‘polluter pays’ principle at least for the main substances which negatively affect water quality.
Conclusions and recommendations

Implementation of measures to tackle diffuse pollution from agriculture

183 In general, Member States made better use of the nitrates directive but were reluctant to make full use of the instruments available such as the enforcement mechanisms, the GAEC standards under cross-compliance, the rural development measures and the ‘polluter pays’ principle.

184 With regard to the implementation of the nitrates directive, the main ‘basic measure’ regarding pollution from agriculture, the Czech Republic, Hungary and Romania gradually strengthened the requirements to be respected by farmers in nitrate-vulnerable zones. This was mainly the result of Commission action. Slovakia did not sufficiently follow the Commission’s suggestions and therefore in 2012 the Commission launched an infringement procedure against Slovakia (see paragraphs 101 to 110).

185 However, despite the improvements in three Member States there is scope for tightening up the requirements (see paragraphs 111 to 115).

186 The trend regarding eutrophication cannot be assessed due to incomparable sets of data. The Court notes that the reporting period under the nitrates directive does not coincide with the one under the water framework directive (see paragraphs 113 to 114).

187 With regard to ‘other basic’ and ‘supplementary measures’ (see paragraphs 123 to 129 and 135 to 137), the Court concludes that:

— measures dealing with pesticide use were either vague or referred to the pesticides action plans. However, these plans partially lack quantified objectives, deadlines for implementation and information on the funds required for implementation of the measures. No infringement procedures had been launched by the Commission as of mid-2015 for insufficiencies regarding these plans;

— there is scope for making the GAEC standards and ‘minimum requirements’ in rural development more demanding. The Commission does not systematically assess the adequacy of the requirements in terms of effectiveness to meet the EU water policy objectives, and only checks for their existence and relevance;
Conclusions and recommendations

— Member States did not set limits as to the quantity of phosphorus fertiliser to be applied on land (kg/ha);

— Member States mainly rely on voluntary agri-environment measures.

188
The potential of rural development to address water quality concerns is not being fully exploited (see paragraphs 145 to 154):

— the agricultural land under water quality favouring agri-environmental commitments varied between 15 and 30 % in the 2007-2013 programme period. However much of this concerns commitments given by farmers for the maintenance of existing grasslands. Maintenance is positive but does not lead to improvements in water quality. In addition, as those obligations only have to be kept for a period of 5 to 7 years, the long-term impact on water quality is not necessarily ensured;

— limitations regarding the amount of nitrogen fertiliser applied per hectare of land are close to or above the average applied in Romania and Slovakia and thus additional benefits for water quality are likely to be small.

189
A farmer can be subject to a whole set of enforcement mechanisms: EU-regulated cross-compliance checks and checks for rural development payments as well as ‘national checks’ under the nitrates directive and in the field of plant protection products (see paragraphs 116 to 122, 130 to 132, 138 to 144 and 155 to 157). All these checks are affected by intrinsic limitations such as important evidence in the form of declarations made by farmers themselves. In addition,

— the deterrent effect is limited for cross-compliance and checks under rural development. This is mainly due to their set-up: low coverage (1 % and 5 % respectively) and sanctions (aid reductions) are lower than the cost of compliance. The ‘national checks’ under the nitrates directive have similar weaknesses;

— all Member States visited except Slovakia indicated in their pesticide action plans the need to strengthen the enforcement of pesticide-related obligations. At the time of the audit, the four Member States did not specify the coverage to be achieved by their checks or fines for all types of infringement.
Conclusions and recommendations

Furthermore, the principle of integrated pest management will only become a mandatory requirement under cross-compliance when progress has been made in such areas as guidelines, professional qualifications and definition of verifiable requirements (see paragraph 131).

The application of the ‘polluter pays’ principle in the field of diffuse pollution from agriculture faces methodological problems. Imposing obligations on farmers without the provision of financial compensation (as is the case with the nitrate action programmes) is commonly considered as one way of implementing the ‘polluter pays’ principle. The application of penalties in the case of non-compliance can compensate for the costs caused by pollution. However, the Court identified a number of shortcomings regarding the use of fines. Another way of applying the principle is the use of environmental taxes (such as taxes on fertilisers or pesticides) and the Czech Republic and Slovakia intend to study the use of such taxes. The Commission did not request the four Member States to take specific action for ensuring cost recovery, or issue guidance on possible cost recovery methods (see paragraphs 158 to 165).

Recommendation 3

The Commission should:

(a) continue its efforts in ensuring that Member States make the best use of the requirements under the nitrate action programmes and that they implement the pesticide action plans within a reasonable timeframe;

(b) systematically assess not only the existence, but also the adequacy of the GAEC standards and minimum requirements adopted by the Member States;

(c) consider the introduction of an obligation to set limitations on the quantity of phosphorus to be applied on land, as is the case for nitrogen;

(d) reduce the possibility of Member States’ double reporting on the eutrophication status by aligning the reporting under the nitrates directive and the water framework directive and promote the use of the 2009 guidance on eutrophication assessment so that the same assessment parameters are used under both directives;

(e) provide guidance on the possible methods for cost recovery in the field of diffuse pollution.
Conclusions and recommendations

Member States should:

(f) set requirements in the nitrate action plans, in the pesticide action plans, under GAEC and for agri-environmental payments that are ambitious enough to achieve a reduction of fertiliser and pesticides input and adequate protection from erosion;

(g) assess the potential of using economic instruments (such as environmental taxes) as an incentive to reduce pollution and as a way to apply the ‘polluter pays’ principle.

The Commission and the Member States should, on the basis of an inventory of the enforcement mechanisms (both EU and national), identify ways for simplifying the set-up and implementation of the checks and for ensuring their effectiveness.

This Report was adopted by Chamber II, headed by Mr Henri GRETHEN, Member of the Court of Auditors, in Luxembourg at its meeting of 9 December 2015.

For the Court of Auditors

Vítor Manuel da SILVA CALDEIRA
President
Annexes

Annex I

Danube river basin district overview

Pollution of surface water bodies
(2009 river basin management plans)

1. Percentage of surface water bodies subject to different sources of pollution

<table>
<thead>
<tr>
<th>Sources of pollution</th>
<th>Czech Republic</th>
<th>Hungary</th>
<th>Romania</th>
<th>Slovakia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point sources</td>
<td>46 %</td>
<td>19 %</td>
<td>8 %</td>
<td>No data</td>
</tr>
<tr>
<td>Diffuse sources</td>
<td>61 %</td>
<td>25 %</td>
<td>32 %</td>
<td>No data</td>
</tr>
</tbody>
</table>

Source: Information provided by the Member States via WISE.

2. Percentage of surface water bodies subject to different types of pollution

<table>
<thead>
<tr>
<th>Type of pollution</th>
<th>Czech Republic</th>
<th>Hungary</th>
<th>Romania</th>
<th>Slovakia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic enrichment</td>
<td>31 %</td>
<td>27 %</td>
<td>13 %</td>
<td>No data</td>
</tr>
<tr>
<td>Nutrient enrichment</td>
<td>61 %</td>
<td>45 %</td>
<td>32 %</td>
<td>No data</td>
</tr>
<tr>
<td>Contamination by priority substances or other specific pollutants</td>
<td>31 %</td>
<td>2 %</td>
<td>4 %</td>
<td>No data</td>
</tr>
</tbody>
</table>

Source: Information provided by the Member States via WISE.
## Emission limit values set by the urban waste water treatment directive

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Concentration</th>
<th>Minimum percentage of reduction¹</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Secondary treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biological oxygen demand (BOD₅)</td>
<td>25 mg/l</td>
<td>70-90</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>125 mg/l</td>
<td>75</td>
</tr>
<tr>
<td>Total suspended solids (TSS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>35 mg/l</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>60 mg/l</td>
<td>70</td>
</tr>
<tr>
<td>(for agglomerations between 2 000 and 10 000 p.e.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>More stringent treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total phosphorus (Pₜₜ)</td>
<td>2 mg/l</td>
<td>80</td>
</tr>
<tr>
<td>(for agglomerations between 10 000 and 100 000 p.e.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 mg/l</td>
<td></td>
</tr>
<tr>
<td>(for agglomerations with more than 100 000 p.e.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total nitrogen¹ (Nₜₜ)</td>
<td>15 mg/l</td>
<td>70-80</td>
</tr>
<tr>
<td>(for agglomerations between 10 000 and 100 000 p.e.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 mg/l</td>
<td></td>
</tr>
<tr>
<td>(for agglomerations with more than 100 000 p.e.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Total nitrogen means: the sum of total Kjeldahl-nitrogen (organic N + NH₃), nitrate (NO₃⁻)-nitrogen and nitrite (NO₂⁻)-nitrogen.
2. Reduction in relation to the load of the influent.
## Water pollution charge: amount by pollutant (in euro\(^1/\text{t}\))

<table>
<thead>
<tr>
<th>Pollutants</th>
<th>Czech Republic</th>
<th>Hungary</th>
<th>Romania</th>
<th>Slovakia</th>
</tr>
</thead>
<tbody>
<tr>
<td>COD</td>
<td>576.9</td>
<td>285.2</td>
<td>10.4</td>
<td>199.2</td>
</tr>
<tr>
<td>BOD(_5)</td>
<td>—</td>
<td>—</td>
<td>10.4</td>
<td>—</td>
</tr>
<tr>
<td>TSS</td>
<td>72.1</td>
<td>—</td>
<td>2.5</td>
<td>99.6</td>
</tr>
<tr>
<td>P(_{bic})</td>
<td>2 523.9</td>
<td>4 753.8</td>
<td>41.5</td>
<td>3 319.4</td>
</tr>
<tr>
<td>N(_{tot})</td>
<td>—</td>
<td>—</td>
<td>41.5</td>
<td>497.9</td>
</tr>
<tr>
<td>N(_{NH4}) (ammoniacal nitrogen)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>41.5</td>
</tr>
<tr>
<td>Hg (mercury)</td>
<td>721 110.5</td>
<td>697 217.5</td>
<td>10 384.1</td>
<td>497 908.8</td>
</tr>
<tr>
<td>Dissolved inorganic salts</td>
<td>18.0</td>
<td>—</td>
<td>—</td>
<td>16.6</td>
</tr>
<tr>
<td>Cd (cadmium)</td>
<td>144 222.1</td>
<td>139 443.5</td>
<td>10 384.1</td>
<td>99 581.8</td>
</tr>
<tr>
<td>AOX (adsorbable organic halogens)</td>
<td>10 816.7</td>
<td>—</td>
<td>—</td>
<td>6 638.8</td>
</tr>
<tr>
<td>Cr (chromium)</td>
<td>—</td>
<td>27 888.7</td>
<td>2 596.0</td>
<td>—</td>
</tr>
<tr>
<td>Ni (nickel)</td>
<td>—</td>
<td>27 888.7</td>
<td>2 596.0</td>
<td>—</td>
</tr>
<tr>
<td>Pb (lead)</td>
<td>—</td>
<td>27 888.7</td>
<td>2 596.0</td>
<td>—</td>
</tr>
<tr>
<td>Cu (copper)</td>
<td>—</td>
<td>13 944.3</td>
<td>2 596.0</td>
<td>—</td>
</tr>
<tr>
<td>Zn (zinc)</td>
<td>—</td>
<td>—</td>
<td>124.57</td>
<td>—</td>
</tr>
<tr>
<td>Phenols</td>
<td>—</td>
<td>—</td>
<td>41.51</td>
<td>—</td>
</tr>
<tr>
<td>As (arsenic)</td>
<td>—</td>
<td>—</td>
<td>8 074.5</td>
<td>—</td>
</tr>
<tr>
<td>Co (cobalt)</td>
<td>—</td>
<td>—</td>
<td>124.6</td>
<td>—</td>
</tr>
<tr>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

1. The amounts in CZK, HUF and RON were converted into euro using the exchange rates as of 31.12.2014.
2. In Romania the charge is paid for the following groups of pollutants: (i) general chemical indicators (22), (ii) specific chemical indicators (11), (iii) toxic and very toxic chemical indicators (9) and (iv) bacteriological indicators (2). Not all are named in the table.

Source: ECA analysis of national legislation.
Emission limit values specified in national legal provisions

The following table provides an overview of the emission limit values included in national legal provisions for a selected number of substances.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Czech Republic (indicated as range as limits depend on the type of activity)</th>
<th>Hungary (minimum and maximum values)</th>
<th>Romania</th>
<th>Slovakia (indicated as range as limits depend on the type of activity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic and compounds</td>
<td>0.5 – 1</td>
<td>0.1 – 1</td>
<td>0.1</td>
<td>0.1 – 1</td>
</tr>
<tr>
<td>Copper and compounds</td>
<td>0.5 – 1</td>
<td>0.1 – 4</td>
<td>0.1</td>
<td>0.5 – 1</td>
</tr>
<tr>
<td>Zinc and compounds</td>
<td>2 – 3</td>
<td>0.5 – 10</td>
<td>0.5</td>
<td>1.5 – 3</td>
</tr>
<tr>
<td>Chromium and compounds</td>
<td>0.1 – 1</td>
<td>0.2 – 2</td>
<td>1</td>
<td>0.5 – 2</td>
</tr>
<tr>
<td>Adsorbable organic halogens</td>
<td>0.5 – 5</td>
<td>0.1 – 7</td>
<td>1</td>
<td>0.1 – 2</td>
</tr>
<tr>
<td>Cadmium and its compounds</td>
<td>0.2</td>
<td>0.005 – 0.3</td>
<td>0.2</td>
<td>0.05 – 0.2</td>
</tr>
<tr>
<td>Lead and its compounds</td>
<td>0.5 – 1</td>
<td>0.05 – 0.4</td>
<td>0.2</td>
<td>0.2 – 1.5</td>
</tr>
<tr>
<td>Mercury and its compounds</td>
<td>0.01 – 0.05</td>
<td>0.001 – 0.08</td>
<td>0.05</td>
<td>0.03 – 0.1</td>
</tr>
<tr>
<td>Nickel and its compounds</td>
<td>0.5 – 0.8</td>
<td>0.1 – 2</td>
<td>0.5</td>
<td>0.5 – 0.8</td>
</tr>
<tr>
<td>Benzo(g,h,i)perylene¹</td>
<td>Limit for PAH: 0.01</td>
<td>0.015 – 0.03</td>
<td>—</td>
<td>Limit for PAH: 0.01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Czech Republic (suggested limits)</th>
<th>Hungary (non-temporary water flows)</th>
<th>Romania</th>
<th>Slovakia (suggested limits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic and compounds</td>
<td>0.2</td>
<td>0.2</td>
<td>—</td>
<td>0.2</td>
</tr>
<tr>
<td>Copper and compounds</td>
<td>1</td>
<td>2</td>
<td>0.2</td>
<td>1</td>
</tr>
<tr>
<td>Zinc and compounds</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Chromium and compounds</td>
<td>0.3</td>
<td>1</td>
<td>1.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Cadmium and its compounds</td>
<td>0.1</td>
<td>0.1</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>Lead and its compounds</td>
<td>0.1</td>
<td>0.2</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Mercury and its compounds</td>
<td>0.05</td>
<td>0.05</td>
<td>Not allowed</td>
<td>0.05</td>
</tr>
<tr>
<td>Nickel and its compounds</td>
<td>0.1</td>
<td>1</td>
<td>1</td>
<td>0.2</td>
</tr>
</tbody>
</table>

¹ Benzo(g,h,i)perylene is a polycyclic aromatic hydrocarbon (PAH).

² The Hungarian law sets limit values by type of activity (technological limits) and territorial limits (depending on the type of water body receiving the waste water). The authority issuing the permit may deviate from these limits but has to respect the minimum and maximum values by substance that were set in the legal framework.
Guidance on how to calculate environmental and resource costs exists. Recent attempts to complement this guidance within the CIS have failed due to diverging views among Member States and the Commission. The CIS work programme for 2016-2018 is currently under discussion and may include further work on this issue.

Introduction

The agri-environment measure can be applied to address various environmental and climate-related issues. Water quality is just one of such issues. One of the characteristics of this measure is a strong interconnection between various operations and actions in delivering environmental benefits. This implies that an operation primarily targeting biodiversity may also benefit other natural resources such as soil and water but does so in a more indirect way.

This duality of the measure often reflects the concept of the measure’s targeting on primary (and secondary) objectives, which is related to the main environmental needs and issues identified in the SWOT analysis. Therefore, such direct and indirect effects must be taken into account when discussing the contribution of the total budget allocated to the agri-environment measure to the water policy objectives.

Executive summary

V
In 2015, the Commission and Member States developed a common implementation strategy (CIS) guidance document ‘Communicating progress towards good status in the second river basin management plan (RBMP)’ to enable reporting on partial improvements in water quality.

VI
The Commission is of the opinion that the 2009 plans provide significant added value. For example, for the first time an overview of all relevant pressures and impacts in the basin (including at international level in the Danube international plan) is presented, including the identification of types and sources of pollution.

However, the Commission agrees on the lack of ambition in terms of measures as the focus in the first plan has been mainly on basic measures.

VII
Important EU legislation regarding protection of EU waters from agricultural pollution, such as the nitrates directive (ND) or the pesticides regulation, has been a part of cross-compliance from the outset in 2005. As regards phosphorus and pesticides, in some Member States these are covered by the statutory management requirements (SMRs) in relation to EU legislation currently implemented. In some Member States, the action plans on the nitrates directive include the requirements on phosphorus and this directive is a part of cross-compliance.

X
Extensive support to implementation has been developed since 2001 under the CIS, a process led by the Commission and the Member States. In the context of the CIS, the Commission and the Member States have worked quite intensively on cost recovery over the past years.

Audit scope and approach

20 Due to the high number of water bodies that fail to achieve good status due to hydromorphological impacts, measures related to pollution abatement only are not sufficient to achieve good status.

Observations

23 The Commission agrees that the one-out all-out approach may mask partial improvements in water quality.

The one-out all-out approach is the expression of the water framework directive’s integrated approach to water management, which considers all pressures and impacts on water resources. The objective is to ensure that water quality is classified as good only when it is truly good and not when a certain number of quality elements/parameters are good. For example, if a water body has a serious problem of pollution by one specific pollutant, removing all other pollutants will be progress towards good status (maybe even significant progress) but the water will not be clean unless the problem for that specific pollutant is solved.

In 2015, the Commission and Member States developed a CIS guidance document ‘Communicating progress towards good status in the second RBMP’ to enable reporting on partial improvements in water quality².

27 The Commission considers that the assessments of status between the 2009 and the 2015 river basin management plans are not necessarily directly comparable.


The assessment frameworks for water status used in the 2009 river basin management plans had in many cases important limitations. For example, methods were not developed for all biological quality elements at the time the first plans were published (e.g. in Hungary, Romania and Slovakia). Deficiencies in monitoring were also found (e.g. Czech Republic). More details of the gaps are found in the Commission’s water framework directive implementation reports. Therefore, the results of this analysis have to be treated with caution.

29 The Commission considers that variations in the number of substances assessed for ecological status in principle do not necessarily constitute bad implementation. Substances have to be used for the classification only if they are relevant, i.e. if they cause risk to failure of good status in the particular basin. The number of substances causing risk depends very much on the existing pressures. Thus, differences in the number of substances may be well justified.

However, the Commission considers that the number of substances used by some Member States was too low, due to lack of proper identification of relevant substances and insufficient monitoring. If the directive were implemented correctly, the relevant substances would have been considered and the classification would be correct. This issue was identified by the Commission in the implementation report and has been discussed with the Member States concerned. The Commission expects that improved risk assessments and monitoring will inform the second river basin management plans.

36 Third indent
The Commission is gathering evidence from across the EU on the type of measures used at the level of Member States to limit overflows (in line with the requirement in Annex IA to the urban waste water treatment directive), their effectiveness and their practical application: a study on these issues is ongoing. The outcome of the study will serve as a basis for the Commission to reflect on the possibilities to address overflow pollution in a systematic manner at EU level.
The Commission would also like to point out that in several audited Member States national funding sources are also used for investments in waste water treatment infrastructure, and that EU funding is not in itself expected or sized to reach compliance.

The Commission has identified gaps in establishing appropriate cost recovery provisions. Filling these gaps would allow regular revenues from users/polluters that could be used to support measures and therefore increase the source of non-EU funding.

As a result of the 2013-2014 bilateral meetings, a list of action points for improvement was drawn up for each Member State in view of the adoption of the second river basin management plan in 2015. The recommendations set out for each Member State in the implementation report published in March 2015 reflect these agreed action points.

In the cases where the relevant ex ante conditionality for the European Regional Development Fund and/or the Cohesion Fund (ERDF/CF) was unfulfilled at the time of adoption of the operational programme, Member States have developed action plans for its fulfilment before the end of 2016. The action plan is an integral part of the operational programme, therefore its contractual enforceability is secured. The Commission monitors the completion of action plans and may suspend the funds when the ex ante conditionality remains unfulfilled after 2016. However, the actions are only related to the criteria of fulfilment of the ex ante conditionality as defined by the regulation and cannot be used as a tool to enforce the compliance with all EU legislation.
The follow-up of actions as a result of the bilateral meetings is a separate process and not all of those actions can be taken into account in the operational programmes.

Common Commission reply to paragraphs 56 and 57

For the purposes of the urban waste water treatment directive, the Commission does not collect data on total population, but only on the ‘population equivalent’ (p.e.) in agglomerations of or above 2000 p.e. The Commission notes that the percentages in Figure 3 are based on total population. The Commission considers that these do not reflect the legal compliance of agglomerations of or above 2 000 p.e. in a given Member State.

58
The Commission notes that the categories analysed by the Court in paragraph 58 do not necessarily relate to compliance obligations under the urban waste water treatment directive.

58 Second indent
From a compliance point of view, the use of individual systems such as septic tanks is in line with the urban waste water treatment directive obligations, provided they achieve the same level of environmental protection.

58 Third indent
Agglomerations below 2000 p.e. are only covered by limited obligations under the urban waste water treatment directive — for example, there is no obligation to collect their waste waters.

63
The Commission notes that it uses a specific methodology for the assessment of legal compliance of Member States that is based on agglomerations rather than on the total percentage of compliant load. In order to try and reflect better the improvements and give a more realistic picture of the situation in Member States, the Commission is introducing the concept of ‘distance to compliance’ in the eighth urban waste water treatment directive implementation report.

64
According to the Accession Treaty only a small part of Hungary was considered as a sensitive area. In addition, following Romania’s accession, Hungary committed to achieve for its entire territory the target of 75 % nutrient removal (N and P respectively), by 31 December 2018 according to the possibility offered under Article 9 of the urban waste water treatment directive.

65
For the Czech Republic, Slovakia and Hungary, the Commission has already launched pilot letters investigating cases of alleged non-compliance with the urban waste water treatment directive (for the Czech Republic) and with intermediate deadlines (for Slovakia and Hungary). The Commission is in addition currently preparing a similar pilot letter investigating Romania’s compliance with intermediate deadlines.

Concerning the issue of financial sustainability, the Commission draws attention to its relevant replies to the Court’s Special Report No 2/2015 of 28 January 2015 on the Danube river basin.

3 Evaluation of information reported in the frame of the urban waste water treatment directive questionnaires: General methodology and working steps. Produced by UBA in March 2012, revised in October 2014.
As regards Hungary, the Commission notes that rules concerning manure storage were already in place when the Commission took note of the transitional periods granted to farmers for constructing the required storage under the new action programme and the new nitrate vulnerable zones entered into force in 2012 and 2013, respectively.

While P limitations can help to achieve the objectives of the nitrates directive, it is to be noted that Member States are not required to provide P application standards under the nitrates directive itself. However, under the WFD Member States are required to put in place measures to control diffuse sources of pollution and where phosphate from agriculture need to be addressed to allow good status to be reached. This can be done either through the nitrates action programme or another mechanism.

The Commission underlines that the adequacy of the Czech action programme is being assessed within the context of the ongoing pilot. Furthermore, the Czech action programme was amended in 2014 and the discussion in the context of the pilot has been involving the amendment and not only the version of the action programme dated 2012.

The Commission notes that the figures refer to both eutrophic and hypertrophic waters and not only eutrophic. When assessing eutrophication it is also essential to bear in mind the river basin approach. For example, high levels of nitrates may not have an important impact on rivers but will cause eutrophication in the downstream coastal areas, as in the case of the Danube in the Black Sea.

The Commission believes that end-of-pipe solutions may not be the most cost-effective way of addressing the problem of micropollutants. Measures to reduce pollution at source need to be considered. The implementation focus should be on properly assessing the extent of the problem (through good pressure and impact analysis and good monitoring networks) and then assessing the best (combination of) measures to achieve the objectives.

The Commission fully accepts the importance of ensuring compliance and of having appropriate systems to check it. This observation extends to all the pollution pressures referred to by the Court in its report. The Commission also acknowledges the link between checks on compliance and the penalties used to deter detected non-compliance. The Commission aims to present during 2016 a general initiative on environmental compliance assurance across the EU.

As regards the indirect discharge of waste water by industrial installations, this would be subject to prior regulation and/or specific authorisation by the competent authority. Pre-treatment must be applied in order to reach the objectives that are described in Annex IC to the urban waste water treatment directive.

See Commission reply to paragraph 84.
The Commission concurs with the observation that no quantitative EU requirements for the coverage of checks are set forth, with the exception of Article 8 of Directive 2009/128/EC, which states that all pesticides application equipment will have to be inspected by 26 November 2016.

The minimum requirements are based on national rules going beyond EU rules. Therefore, the content of those national rules depends on the decision taken by each Member State. These minimum requirements are part of the baseline for certain rural development measures. Until 1 January 2015, they were also included in the scope of cross-compliance but for the sake of simplification and having a level playing field between farmers they were withdrawn from the scope of cross-compliance during the last CAP reform. However, they are still part of the baseline requirements under rural development and, as such, are to be checked.

The Hungarian RDP for 2007-2013 includes a definition and specifications for the minimum requirements for fertilisers (nutrients) and plant protection products use.

The presence and relevance of concrete requirements and GAEC standards relevant to given commitments is further assessed in the course of analysing the content of measures and types of operations for which these two elements constitute part of the relevant baseline.
The content of minimum requirements for fertilisers and pesticides should reflect, as minimum, the provision of Annex I, point 8(9), to Regulation (EU) No 808/2014.

138
See Commission replies to paragraph 117 and 119.

Common reply to 139 and 140
While the legislation indeed sets a minimum control rate of 1%, the probability for certain farmers to be subject to a cross-compliance check may be higher than 1% since several other factors intervene:

— The specific method of sampling applied;
— The sectorial legislation determines a different control rate (e.g. 3% for animal ID);
— In case of a significant degree of non-compliance with an act or standard, the number of on-the-spot checks shall be increased;
— Instances of non-compliance identified by other sources (e.g. sectorial controls) are to be cross-reported and followed up by the competent authority;
— Farmers for whom an infringement was identified have to be given a special weighting in the risk assessment.

141 Second indent
See Commission reply to paragraph 134.

142
While it is true that the annual cross-compliance campaign cannot be adapted to all types of requirements, findings from other sources are also to be followed up under cross-compliance (e.g. cross-reporting). Furthermore, the legislation requires that each beneficiary selected for an on-the-spot check shall be checked at a time when most of the requirements and standards for which he or she was selected may be checked. Moreover, the on-the-spot checks shall, as a general rule, be carried out as part of one visit and they shall consist of a verification of the requirements and standards which may be checked at the time of the visit depending on the cycle of nature.

143
Control of registers is designed for several standards and requires one of the compulsory control elements to be covered during an on-the-spot cross-compliance check. However, they are to be complemented by other checkpoints such as storage conditions, invoices and field visits stemming from sectorial legislation.

144
The cross-compliance administrative penalty is applied as a percentage-based reduction to all CAP payments of the beneficiary. Such a penalty has to be applied after evaluating the severity, extent and permanence of the infringements and should go up to 100% even in the following year, therefore, ensuring the deterrent effect.

Indeed, footnote 86 indicates that 5% is not the maximum reduction rate.

4 Article 71(1) of Regulation (EU) No 809/2014.
5 Article 71(3) of Regulation (EU) No 809/2014.
6 Article 75 Regulation (EU) No 809/2014.
The use of pesticides and mineral fertilisers is not allowed in Romania, only organic fertilisers under certain conditions. No EU support is paid for reducing fertiliser use in this case, but the condition is intended to prevent further intensification of farming systems in the areas under commitment, which could have a potential negative effect on water quality (see paragraph 16).

The support under the agri-environment measure is to compensate for additional cost and income foregone resulting from the voluntary commitments made by beneficiaries. Where it is necessary, it can also cover transaction costs. This support does not allow for incentive elements and does not imply immediate economic benefits for the beneficiaries (although such benefits are not excluded in the longer run).

However, such compensation, together with the long-term benefits for farming stemming from the implementation of the commitments (e.g. improved soil quality), are considered as encouraging farmers to adhere to the measure.

The CAP is structured on the enforcement of the polluter pays principle through respecting the mandatory requirements of cross-compliance and on the voluntary approach to compensate for provision of public goods and services additional to those delivered by these requirements, through e.g. agri-environment payments.

The Commission considers that beyond the application of cross-compliance it is up to the Member States to choose the instruments to apply the polluter pays principle.

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146 Article 30 payments can also be programmed by the Member States for compensation for mandatory WFD measures. These measures have not yet been programmed in the four countries.

147 Member States have an obligation to include in their 2014-2020 programmes a SWOT analysis which includes an analysis of their environmental situation. Such analysis includes information on the state of environmental assets such as waters and their status. The problems identified in the SWOT analysis should be addressed by the application of the relevant rural development measures or other instruments. In addition, the programmes are also subject to the strategic environmental assessment (SEA) which is part of the ex ante evaluation report.

See also Commission reply to paragraph 44.

153 Member States decide whether they intend to continue the agri-environment operations from the previous programming in the new programming, which can be influenced by various factors, e.g. success and effectiveness of the operations, their contribution to the objectives of the policy, relevance to the architecture of the new programming including priorities and objectives, as well as the character of the environmental needs identified in the SWOT analysis of the new programming.

154 Second indent

The basic scheme implemented under the rural development programme of the Slovak Republic 2007-2013 limits the use of fertilisers. In addition, the scheme includes a ban of use of mineral fertilisers on the grasslands, including the limited use of pesticides, which also affects the water quality.
Common Commission reply to paragraphs 163-165 and 191
The Commission contends that, in the context of the water framework directive implementation, it has not issued any guidance so far. The extensive support to implementation has been developed since 2001 under the common implementation strategy (CIS), a process led by the Commission and the Member States. In the context of the CIS the Commission and the Member States have worked quite intensively on cost recovery over the past years. Guidance on how to calculate environmental and resource costs exists. Recent attempts to complement this guidance within the CIS have failed due to diverging views among Member States and the Commission. The CIS work programme for 2016-2018 is currently under discussion and may include further work on this issue.

164
The ex ante conditionalities for the European Agricultural Fund for Rural Development (EAFRD) are on water pricing and only apply to investments in water efficiency investments and therefore the action plans where the ex ante conditionalities were not fulfilled focused on ensuring farmers would pay for the quantity of water consumed. At the time the ex ante was assessed the Commission also communicated to the Member States the need for diffuse pollution costs to be recovered, but because this was not covered by the EAFRD there was no specific requirement in the action plans on this.

169
The Commission considers that variations in the number of substances assessed for ecological status in principle do not necessarily constitute bad implementation. Substances have to be used for the classification only if they cause a risk of failure of good status in the particular basin. The number of substances causing risk depends very much on the existing pressures. Thus, differences in number of substances may be well justified.

However, the Commission considers that the number of substances used by some Member States was too low, due to lack of proper identification of relevant substances and insufficient monitoring. If the Directive were implemented correctly, the relevant substances would have been considered and the classification would be correct. This issue was identified by the Commission in the implementation report and has been discussed with the Member States concerned. The Commission expects that improved risk assessments and monitoring will inform the second river basin management plans.

Conclusions and recommendations

168
The Commission and the Member States are working on indicators to show progress towards good status. The indicators are expected to be agreed on by the end of 2015.

The assessments of status between the 2009 and the 2015 river basin management plans are not necessarily directly comparable. The assessment frameworks for water status used in the 2009 river basin management plans had in many cases important limitations. For example, methods were not developed for all biological quality elements at the time the first plans were published (e.g. in Hungary, Romania and Slovakia). Deficiencies in monitoring were also found (e.g. in Czech Republic). More details of the gaps are found in the Commission’s water framework directive implementation reports.
Lastly, the Commission would also like to point out that in several audited Member States national funding sources are also used for investments in waste water treatment infrastructure, and that EU funding is not in itself expected or sized to reach compliance.

The Commission will continue monitoring the Member States’ efforts and achievements. But given the sheer number of river basin districts, water bodies for which river basin management plans and programmes of measures are to be assessed by the Commission, choices had inevitably to be made in the past and they will remain necessary in the future as well.

The approach taken is one of favouring compliance promotion with the Member States’ authorities and only exceptionally resorting to formal infringement action where this cannot be avoided/where the circumstances justify this action of last resort.

It is not only for the Commission to verify compliance by the Member States’ authorities; national judicial institutions also play a vital role in this respect.

In the cases where the relevant ex ante conditionality for ERDF/CF was unfulfilled at the time of adoption of the operational programme, Member States have developed action plans for its fulfilment before the end of 2016. The action plan is an integral part of the operational programme, therefore its contractual enforceability is secured. The Commission monitors the completion of action plans and may suspend the funds when the ex ante conditionality remains unfulfilled after 2016. However, the actions are only related to the criteria of fulfilment of the ex ante conditionality as defined by the regulation and cannot be used as a tool to enforce compliance with all EU legislation.
180 Second indent
The urban waste water treatment directive does not regulate the details of the permits, e.g., the pollutant’s limits, but only describes which are the main objectives to be reached by pretreating the industrial waste water prior to its discharge into the urban collecting systems.

181
The Commission fully accepts the importance of ensuring compliance and of having appropriate systems to check it. This observation extends to all the pollution pressures referred to by the Court in its report. The Commission also acknowledges the link between checks on compliance and the penalties used to deter detected non-compliance. The Commission aims to present during 2016 a general initiative on environmental compliance assurance across the EU.

Recommendation 1(a)
The Commission accepts the recommendation
Together with the Member States, it is working on indicators to show progress towards good status. The indicators are expected to be agreed by the end of 2015. The observations of the Court of Auditors on reporting will also feed into a broad fitness check of environmental reporting which the Commission is undertaking and will complete in 2017.

Recommendation 1(b)
The Commission accepts this recommendation. It will continue urging Member States to improve the pressure and impact assessment and the monitoring networks so that substances causing risk at river basin level are identified.

The Commission at the same time would like to note that it has very limited means to demonstrate that relevant substances are missing from the river basin management plans.

Recommendation 1(c)
The Commission accepts this recommendation and is currently preparing a comprehensive assessment of the second river basin management plans on which Member States will report by March 2016.

Recommendation 1(d)
The Commission supports these recommendations addressed to Member States.

174
For the Czech Republic, Slovakia and Hungary, the Commission has already launched pilot letters investigating alleged non-compliance cases with the urban waste water treatment directive (for Czech Republic) and with intermediate deadlines (for Slovakia and Hungary). The Commission is in addition currently preparing a similar pilot letter investigating Romania’s compliance with intermediate deadlines.

See also the Commission’s replies to Special Report No 2/2015.
187 Second indent
Since 1 January 2015, the minimum requirements are no longer in the scope of cross-compliance, as they were taken out in the last CAP reform for the sake of simplification. They are still part of the baseline under rural development and as such are to be checked. Member States must implement the EU’s GAEC standards by defining their national GAEC standards. Such national GAEC standards must take into account the national, regional or local needs. Accordingly, GAEC standards may differ between Member States. The Commission assesses the adequacy of GAEC standards with the CAP framework. If a GAEC standard is either missing or is clearly non-compliant with the CAP definition, it is classified as ‘missing’ and the shortcoming is followed up appropriately with the Member States.

188 First indent
Various commitments under the agri-environment measure can help address water quality concerns in a more or less direct and active manner. The design and selection of the commitments should result from the specific needs of the territory concerned by the programme.

There are many other measures in rural development programmes that can be used to reach water objectives — Article 30, non-productive investments etc.

The obligation to carry out the commitments under this measure for the period of between 5 and 7 years is to help achieve the objectives of the commitments. The commitments might be further carried out if this is justified by the need to protect or further improve water quality.

188 Second indent
The commitments of agri-environment must be set at a level going beyond the mandatory requirements. They also need to avoid compensating the level of practices which corresponds to normal practices. While a reduction in amounts of nitrogen going just slightly beyond normal practices might not lead to significant environmental benefits, it cannot be assumed that it does not provide benefits going beyond the level of mandatory requirements and normal practices.

When deciding on what level to choose the Member State should consider what load reduction of nutrients from the agriculture sector is necessary to ensure that nutrient conditions consistent with WFD good status can be reached in all waters.

189 First indent
The Commission notes that administrative penalties may reach 100 % of the total CAP payment of a beneficiary even in two following calendar years.

191
EU water policy is implemented partly with the support of EU funds, but partly without (in fulfilment of the polluter pays principle). Non-funded legal requirements play a very important role in the whole package of measures necessary to address agriculture impact on water.

Recommendation 3(a)
The Commission accepts this recommendation.

Recommendation 3(b)
The Commission does not accept this recommendation.

As regards minimum requirements, the Commission carries out the assessment of the minimum requirements by reference to their existence and relevance to the measures for which they constitute part of the baseline. Given the diversity of situations where these requirements are defined, the Commission relies on Member States’ judgment with regard to their adequacy.
The Commission will stress the necessity for the Member States to set the parameters of minimum requirements at the level which ensures the reflection of their situations and to respect the rules upon which such requirements should be established.

With regard to GAEC standards, the Commission assesses the existence and adequacy of these standards. The Commission considers this approach as consistent with the CAP legal framework.

**Recommendation 3(c)**
The Commission accepts this recommendation.

Member States are subject to obligations regarding inputs of phosphorus where this is necessary to achieve the objectives of the WFD. They must include in their programme of measures measures to control diffuse sources of pollution to allow good status to be reached. If sources of agricultural phosphate are identified as significant, controls on phosphate must be established by the Member State. This is one of the areas that will be checked by the Commission in the assessment of the second RBMPS.

**Recommendation 3(d)**
The Commission accepts this recommendation and notes that it has been working on streamlining the monitoring and reporting under the nitrates directive and the water framework directive.

**Recommendation 3(e)**
The Commission accepts the recommendation and considers it fulfilled as a guidance document on cost recovery has been developed under the CIS process. The recent attempt to complement this guidance within the CIS failed due to diverging views among Member States. Further work on this issue may be included in the CIS work programme for 2016-2018 that is under discussion. It must be noted that Member States are free to choose the method for calculation of environmental and resource costs.

**Recommendation 3(f)**
The Commission supports these recommendations addressed to Member States.
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Under the 2000 water framework directive, Member States adopt river basin management plans which have to include measures to combat this pollution. The Court examined whether the Member States’ implementation of the measures of the 2009 plans led to an improvement in water quality.