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NO 02

Special Report

EU-funding of urban waste water treatment plants in the Danube river basin: further efforts needed in helping Member States to achieve EU waste water policy objectives

EUROPEAN COURT OF AUDITORS

EUROPEAN COURT OF AUDITORS
12, rue Alcide De Gasperi
1615 Luxembourg
LUXEMBOURG

Tel. +352 4398-1

E-mail: eca-info@eca.europa.eu
Internet: http://eca.europa.eu

Twitter: @EUAuditorsECA
YouTube: EUAuditorsECA

More information on the European Union is available on the Internet (http://europa.eu).

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(pursuant to Article 287(4), second subparagraph, TFEU)

Audit team

02

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 Patrick Weldon, head of private office; Mircea Radulescu, attaché of private office; Alain Vansilliette, head of unit; Marion Colonerus, team leader; Zuzana Gullova, auditor; Attila Horvay-Kovacs, auditor; Jean-François Hynderick, auditor; Dana Moraru, auditor; Radka Papouskova, auditor; Tomasz Plebanowicz, auditor and Olivier Prigent, auditor.

From left to right: Mircea Radulescu, Alain Vansilliette, Olivier Prigent, George Pufan, Zuzana Gullova, Patrick Weldon, Attila Horvay-Kovacs and Tomasz Plebanowicz

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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.

Biochemical oxygen demand (BOD_5): Quantity of oxygen consumed by micro-organisms to eliminate biodegradable organic and mineral matter contained in water. BOD_5 is conventionally used to measure oxygen consumption in terms of mg O_2/l after 5 days. The higher the BOD_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. This parameter is expressed in mg O_2/l.

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.

Effluent: Treated waste water discharged into water bodies.

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 operational programmes receiving co-financing from the European Structural and Investment Funds in the 2014–20 programme period Member States have to assess whether pre-defined *ex ante* conditionalities are fulfilled. In case they are not fulfilled action plans need to be prepared to ensure fulfilment by 31.12.2016.

Instrument for Structural Policies for Pre-Accession (ISPA): Financial instrument (first year of operation: 2000) that assisted the candidate countries in the preparation for accession. It provided assistance for infrastructure projects in the EU priority fields of environment and transport. After accession (2004 for 10 countries and 2007 for two countries) ISPA projects became Cohesion Fund projects.

More stringent treatment/tertiary treatment of waste water: As required by the 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.

Normal areas: Water body or section of water body not at risk of eutrophication.

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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 7 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 exist for 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.

Polluter pays principle: Principle set out in the Treaty on the Functioning of the European Union (Article 191(2)). With regard to waste water this implies that dischargers of waste water should pay for the pollution caused (examples: households pay for the treatment service via the waste water price, waste water treatment plants pay a pollution fee).

Population equivalent (p.e.): Quantitative expression of the pollution load of waste water in terms of the number of 'equivalent' people that would create a waste of the same strength. 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.

Primary treatment: Mechanical phase involving the initial separation from waste water of large sewage particles.

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

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: 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 identified 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.

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07

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.

Total suspended solids (TSS): Quantity of mineral and organic particles suspended in water which can be captured on a porosity filter. This parameter is also expressed in mg/l.

Urban waste water treatment directive (Directive): The Council Directive 91/271/EEC of 21 May 1991 aims at protecting the environment from the adverse effects of urban waste water discharges and discharges from certain industrial sectors. It requires the collection and treatment of waste water in agglomerations with a population equivalent (p.e.) above 2 000, and more stringent treatment in agglomerations with a p.e. above 10 000 in sensitive areas. It also requires that in all agglomerations below 2 000 p.e. where collection systems are in place, appropriate treatment is ensured in case of discharge to fresh water and estuaries.

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.

Waste water: Any water that has been adversely affected in quality. It is usually conveyed in a sewage network and treated at a wastewater 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: In the present report, permits issued to dischargers of waste water in accordance with national legal provisions. The permits for waste water treatment plants include inter alia information on the capacity of the plant and the limit values to be respected for a number of parameters and pollutants.

Waste water price (tariff): Price of waste water charged to those discharging waste water into a sewage network and/or treatment plant, in other words the users of the waste water treatment service. Waste water tariffs can vary for different users (such as households and industrial installations).

Executive summary

I

The waste water and sewage sludge from urban agglomerations can affect the quality of Europe's lakes, rivers, coastal waters, soils and groundwater. As a result the EU has adopted a series of directives and has also co-financed the building of urban waste water treatment plants through the Cohesion Fund and the European Regional Development Fund.

II

The Court's audit focused on four Member States in the Danube river basin (the Czech Republic, Hungary, Romania and Slovakia). The Court analysed the progress with regard to the implementation of the urban waste water treatment directive and, for a sample of 28 EU-co-financed waste water treatment plants, the performance in treating waste water, the way of handling sewage sludge produced and the financial sustainability of the infrastructure.

III

The Court concluded that European Regional Development Fund/Cohesion Fund spending during the 2007-13 programme period has played a key role in bringing forward waste water collection and treatment, however not sufficient to meet the deadlines regarding waste water treatment. The Court recommends that the Commission enhances reporting requirements and that legal provisions in Member States are put in place to ensure prompt connection of households to the public sewage network.

IV

The Court noted that the funds available under the 2007–13 programme period have been absorbed slowly and that the indicators in the operational programmes do not allow reconciliation with the progress achieved in implementing the Directive. The Court recommends that updated information on the financial resources needed to achieve full compliance with the Directive and potential funding sources is made available by the Member States.

V

The EU co-financed urban waste water treatment plants examined were mostly complying with the effluent requirements specified in their discharge permits and with those specified by the Directive (when applicable). However, around one third of the plants are oversized (even when taking into account planned future connections). In addition to paying attention to the appropriate size of the plants, the Court recommends that the Commission and the Member States address the issue of storm water overflows as they can negatively impact water quality and that plant operators seize opportunities for saving operational costs. Furthermore, the Court recommends that the Commission assesses the appropriateness of concentration limits of the Directive taking into account the technological improvement made since 1991 when the urban waste water directive was adopted.

VI

The waste water treatment plants examined handled the sludge appropriately with the exception of one Member State. However, there are not necessarily binding requirements regarding pollutants for all types of use of sludge. The Court recommends that the Commission and Member States set criteria for all types of use and take necessary action to ensure a robust monitoring of pollutants.

VII

The attained degree of financial sustainability of EU co-financed infrastructure was not fully satisfactory. The Court recommends that the Commission should encourage Member States to implement a responsible waste water pricing policy with tariffs being not lower than the 4 % affordability level mentioned by the Commission. Further, measures should be taken to ensure that sufficient funds will be available to allow necessary maintenance and renewal.

Introduction

Background

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. Water pollution is one of the main environmental worries expressed by EU citizens.

02
This report focuses on the Danube river basin which is Europe's largest river basin (801 463 km^2) and touches 19 countries. It is vulnerable to water pollution coming from various sources.

03
One of the sources of water pollution is the emission of partially treated or untreated waste water from agglomerations. The 1991 urban waste water treatment directive[1] requires Member States to ensure by a certain deadline that agglomerations are provided with collection systems for urban waste water and that the collected waste water is subject to appropriate treatment.

04
Sewage sludge produced by urban waste water treatment plants can be harmful to water and soil, mainly due to the content of heavy metals in the sludge. Therefore the disposal of sludge into surface waters is no longer allowed and the urban waste water treatment directive provides for the reuse of sludge. The application of sewage sludge on agricultural soil[2] is regulated by the sewage sludge directive[3] which specifies rules for the sampling and analysis of sludge and soil and sets limits for concentrations and maximum annual quantities of heavy metals which may be introduced into soil.

05
A brief overview of the process of waste water treatment and sludge disposal is provided in ***Annex I.***

06
The water framework directive's[4] main objective is to achieve good surface water and groundwater status by 2015. The key tool for implementing the Directive is the river basin management plan. By 2009, each Member State had to produce river basin management plans including a programme of measures for each river basin district within its territory[5]. This programme had to include inter alia the measures required to implement EU legislation for the protection of water (such as the urban waste water treatment directive).

07
The 2013 General Union Environment Action Programme to 2020[6] requires a reduction of nitrogen and phosphorus emissions, including those from urban and industrial waste water and from fertiliser use. Equally, the 2012 Blueprint[7] to safeguard Europe's water resources identifies as necessary action the improvement of compliance rates on waste water treatment through long-term investment planning.

1 Council Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment (OJ L 135, 30.5.1991, p. 40).

2 Soil pollution can lead to water pollution either through leakage of pollutants into groundwater or through run-off.

3 Council Directive 86/278/EEC of 12 June 1986 on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture (OJ L 181, 4.7.1986, p. 6).

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

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

6 Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet' (OJ L 354, 28.12.2013, p. 171).

7 COM(2012) 673 final of 14 November 2012.

EU co-financing of waste water-related infrastructure

08
Costs for the construction, upgrades and modernisation of waste water treatment plants and sewage networks are eligible for EU co-financing from the European Regional Development Fund and the Cohesion Fund. The European Agricultural Fund for Rural Development can also provide co-financing when rural areas are concerned. For the Member States that joined the EU in 2004 and 2007 funds were available from 2000 till the date of accession under the Instrument for Structural Policies for Pre-Accession (ISPA). ISPA projects became Cohesion Fund projects on the accession of these Member States.

09
The EU funds allocated to waste water infrastructure under the European Regional Development Fund and the Cohesion Fund were approximately 12.9 billion euros for the 2000–06 programme period and 14.6 billion euros for the 2007–13 programme period.

10
Co-financed infrastructure projects (see ***Box 1***) are implemented under shared management, with the Commission bearing the ultimate responsibility for the implementation of the EU budget[8]. During the 2000–06 programme period, in addition to the approval of operational programmes, the Commission approved the applications submitted by Member States for European Regional Development Fund projects whose total cost exceeded 50 million euros, for all Cohesion Fund and ISPA projects. For the 2007–13 programme period, apart from the approval of programmes, only 'major projects' (i.e. those costing more than 50 million euros) had to be approved by the Commission[9]. The decision to co-finance a project establishes the grant amount (rate of assistance) and the conditions for funding which must be satisfied.

8 Article 17(1) Treaty on European Union and Article 317 of the Treaty on the Functioning of the European Union.

9 From 1 January 2007 to 25 June 2010 the amount was 25 million euros in the case of environment-related projects.

Box 1

Example of a co-financed project visited by the Court

Picture 1 — Waste water treatment plant (Hungary–Zalaegerszeg)

Source: ECA.

In Hungary, one project consisted (i) of constructing a new sewage network in certain areas of the agglomeration and extending the existing sewage network in other areas, (ii) of upgrading the urban waste water treatment plant to ensure nutrient removal and (iii) of providing a new sludge treatment facility.

The project was approved by the Commission in December 2004 and entered into operation in December 2011. The total expenditure incurred for this project was 48.3 million euros, of which the EU grant was 36.2 million euros.

11

Two directorates-general of the Commission have a significant role in the area of waste water treatment:

(a) The Directorate-General for Environment is responsible for EU environmental policy in the field of water including waste water treatment. It is required to monitor the implementation of the related legislation (such as the deadlines for the achievement of the objectives of the urban waste water treatment directive) and also to launch infringement procedures when required. It is consulted by the Directorate-General for Regional and Urban Policy when examining the quality of operational programme proposals. It is also consulted in the appraisal phase of 'major projects' and Cohesion Fund projects;

(b) The Directorate-General for Regional and Urban Policy is responsible for the EU budget in the area of regional policy under which waste water-related projects can be co-financed.

Audit scope and approach

12
Through this audit, the Court assessed the effectiveness of European Regional Development Fund/Cohesion Fund spending on waste water treatment in helping Member States to achieve EU waste water policy objectives. The Court intends to cover issues concerning the implementation of the water framework directive in the Danube river basin in other reports.

13
The audit focused on 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[10].

14
The Court addressed the following four questions:

(a) Did the Member States meet the deadlines for compliance with the urban waste water treatment directive?

(b) Did the Member States make adequate use of the funds available under the 2007–13 programme period?

(c) Did EU co-financed urban waste water treatment plants function effectively?

(d) Are the EU co-financed urban waste water treatment plants financially sustainable?

15
The total EU contribution for waste water treatment projects in the four Member States was 2.1 billion euros for the 2000–06[11] programme period and 5.8 billion euros[12] for the 2007–13 period.

16
The audit was based on an assessment of:

(a) the most up-to-date data regarding: the connection rate by agglomeration, the treatment efficiency of the waste water treatment plants and the number of agglomerations not yet compliant with the urban waste water treatment directive;

(b) the performance of 28 urban waste water treatment plants. As plants had to be operating, most projects included in the sample had received EU funding under the 2000–06 programme period. ***Annex II*** contains the list of waste water treatment plants examined, all of which had a capacity above 2 000 population equivalent (p.e.).

10 Part of the Czech Republic, a major part of Slovakia and the whole of Romania and Hungary are in the Danube river basin.

11 For the Member States visited, projects were financed from ISPA between 2000 and the date of accession and from accession onwards by the European Regional Development Fund and the Cohesion Fund.

12 Data as of 31.12.2013 (based on annual implementation reports).

Audit scope and approach

17

Evidence was obtained from documentary reviews and analyses (e.g. national strategies, implementation reports, legal acts, statistics and performance data from plant operators), from interviews with officials from the Commission and Member States and with representatives of the owners and operators of the treatment plants. The Court visited 14 of the 28 treatment plants in the sample between March 2013 and January 2014 and examined in detail documentation relating to the 14 plants not visited. The assessment criteria used for the audit are explained further in the different sections of this report.

Observations

Compliance with the deadlines of the urban waste water treatment directive

18

According to the urban waste water treatment directive:

— all agglomerations above 2 000 p.e. have to have collection systems in place or, where the establishment is not justified, individual or other appropriate systems[13] which achieve the same level of environmental protection (Article 3 of the Directive);

— in all agglomerations above 2 000 p.e. waste water has to undergo secondary treatment so that the effluents from waste water treatment plants can respect concentration limits for biochemical oxygen demand (BOD_5), chemical oxygen demand (COD) and total suspended solids (TSS) (Article 4);

— in sensitive areas[14] in all agglomerations above 10 000 p.e. waste water has to undergo more stringent treatment so that the effluents from waste water treatment plants can respect concentration limits for total nitrogen[15] (N_{tot}) and total phosphorus (P_{tot}) (Article 5);

— in all agglomerations below 2 000 p.e. where collection systems are in place, appropriate treatment is to be ensured in case of discharge to fresh water and estuaries (Article 7).

19

Dates by which the abovementioned requirements had to be met were different for the four Member States visited (see ***Annex III***). 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 European Court of Justice.

20

The Court examined whether:

— interim and/or final deadlines were met for agglomerations above 2 000 p.e.;

— information was available on whether appropriate treatment was ensured for agglomerations below 2 000 p.e. which have collection systems in place;

— the Commission took any action in cases of non-compliance with the deadlines contained in the urban waste water treatment directive.

13 For example a cesspool can be considered as an individual system.

14 Areas defined as such on the basis of the criteria of the urban waste water treatment directive (see ***Glossary***).

15 Total nitrogen means: the sum of total Kjeldahl-nitrogen (organic N + NH_3), nitrate (NO_3)-nitrogen and nitrite (NO_2)-nitrogen.

Member States generally met the deadlines specified in the urban waste water treatment directive for the collection but not for the treatment of waste water

Three of the four Member States met their deadlines for waste water collection

21

On the basis of the Commission's analysis of data provided by the Member States[16] the Court concludes that with regard to the waste water collection (Article 3 of the Directive), of the four Member States visited, only Romania was slightly behind schedule at the end of 2012 with regard to its interim deadlines (see ***Table 1***).

22

The Court notes however that on the basis of the Member States' data, it cannot be assessed whether the individual systems which collect part of the load provide a similar level of environmental protection as collection systems. For some agglomerations the load that goes to individual systems is quite high and in some cases can represent up to 100 % of the load of an agglomeration. In mid-2014 the Commission requested the Czech Republic, Hungary and Slovakia to provide more detailed information on how the national authorities ensure that a similar level of environmental protection is provided when individual systems are in place.

16 Data provided in 2014 presenting the situation at reference date 31.12.2012 for the Czech Republic, Romania and Slovakia and 31.12.2011 for Hungary.

Table 1

Compliance with the deadlines of the Directive regarding waste water collection (as of 31.12.2012)

Member State	Requirement	Achievement: percentage of agglomerations[1] with collecting systems, including the load[2] collected by individual systems
Czech Republic	100 % of agglomerations by 2010	100 %; 7 % of the waste water load is collected by individual systems.
Hungary	154 agglomerations (31 % of total) by 2010	100 %; 14 % of the waste water load is collected by individual systems.
Romania	61 % of the load by 2010	Only six agglomerations fulfil the requirements fully. However, the interim deadlines refer to the waste water load: at the end of 2012 the actual collection rate was 60.2 %; 1 % of the load is collected by individual systems.
Slovakia	291 agglomerations (82 % of total) by 2010	100 %; 13 % of the waste water load is collected by individual systems and 0.4 % is not collected by any means.

[1] An agglomeration is considered compliant by the Commission if the load collected in collection systems reaches 98 % or more of the total load generated by the agglomeration and the load which is not collected does not exceed 2 000 p.e.

[2] The load is the organic biodegradable load of an agglomeration expressed in p.e.

Source: Commission's analysis of data provided by the Member States.

23

Furthermore, the fact that collection systems are in place does not mean that all households that could be connected are actually connected. For example, households may prefer to stay with individual systems for cost reasons. Legal provisions imposing obligations, and in some cases fines for non-connection, are in place in all four Member States visited to ensure the connection of households to the sewage network (see ***Table 2***). However, in three of the four Member States there are no deadlines for connection or the terms used are vague. This may hamper an effective enforcement of the obligation to connect to an existing sewage network. The way in which the obligations were enforced by national authorities was not checked in the context of this audit.

None of the four Member States visited met the deadlines with regard to waste water treatment

24

On the basis of the Commission's analysis of data provided by the Member States the Court concludes that with regard to the treated waste water all four Member States missed to varying degrees their deadlines for complying[17] with the required concentration limits for certain parameters at the end of 2012 (see ***Table 3*** for interim deadlines for Hungary, Romania and Slovakia and ***Annex III*** for all deadlines). Considering the delays in meeting interim deadlines and the need to identify other funding sources (see paragraphs 39 and 40), it will be extremely difficult for Slovakia and Romania to meet their final deadlines of 2015 and 2018 respectively.

17 The legal compliance check follows a hierarchical approach. This means that non-compliance with obligations as regards collection (Article 3 of the Directive) entails non-compliance with the obligations to provide treatment (Article 4 and, when applicable, Article 5), even if the quality standards of the effluents meet the requirements of the Directive. Similarly, an agglomeration which does not meet the quality standards for secondary treatment cannot be deemed to comply with Article 5 (more stringent treatment).

Table 2

National legal provisions to ensure connection to an existing sewage network

Member State	Legal provisions
Czech Republic	Municipalities can make connection compulsory and can impose fines for non-compliance. For new constructions or renovations, treatment or disposal of waste water must be provided. No deadlines have been specified.
Hungary	Obligation to connect within 90 days of the existence of a collection system. Fines payable (collected as tax) in case of non-connection.
Romania	Obligation to connect for buildings where socioeconomic activities are carried out. Operators of waste water treatment plants can be fined for undue delay in connecting new users.
Slovakia	Obligation to connect for owners of property generating waste water unless the owner has a permit to treat waste water by other means (but no deadlines specified). Fines payable in case of non-connection.

Source: ECA analysis of national legislation.

Table 3

Compliance with the deadlines of the Directive regarding waste water treatment (as of 31.12.2012)

Member State	Compliance regarding secondary treatment (respect of concentration limits for BOD_5, COD and TSS)		Compliance regarding more stringent treatment in sensitive areas (respect of concentration limits for N_{tot} and P_{tot})	
	Requirement	Achievement	Requirement	Achievement
Czech Republic	594 agglomerations (by 2010)	512 (86 %)	132 agglomerations (by 2010)	83 (63 %)
Hungary	154 agglomerations (by 2010)	130 (84 %)	6 agglomerations (by 2008)	5 (83 %)
			See paragraphs 25 and 26	
Romania	Load (in p.e.) 10 829 595 (by 2010) 12 953 045 (by 2013)	Load (in p.e.) 8 184 225 (76 % (compared to 2010)) (63 % (compared to 2013))	Load (in p.e.) 7 688 721 (by 2010) 9 196 314 (by 2013)	1 530 828 (20 %) (17 %)
Slovakia	258 agglomerations (by 2012)	236 (92 %)	81 agglomerations (by 2010)	41 (51 %)

Source: Commission's analysis of data provided by the Member States.

25

According to the Directive (Article 5.4.), requirements for individual waste water treatment plants (N_{tot} and P_{tot} removal) need not apply in sensitive areas where it can be shown that the minimum percentage of reduction of the overall load entering all plants (above 2 000 p.e.) in that area is at least 75 % for both N_{tot} and P_{tot}.

26

According to the Accession Treaty only a small part of Hungary (six agglomerations) was considered as a sensitive area where more stringent treatment needed to be in place by 2008. However in March 2009, as a result of an agreement between Romania and Hungary, Hungary informed the Commission that it will apply the provisions of Article 5.4. by the end of 2018 for the overall load entering all plants (corresponding to 498 agglomerations). 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_{tot} and 74.4 % for P_{tot} by the end of 2012 (at the end of 2010 the figures were 71.5 % and 79.5 % respectively).

Changes in the number of agglomerations and load figures reported by Member States have an impact on the applicability of the Directive

27

Agglomerations are defined as an area where the population and/or economic activities are sufficiently concentrated for urban waste water to be collected and to be conducted to a plant or a discharge point. It is up to the Member States to define the agglomerations, in particular which settlements to include within one agglomeration.

28

The Directive imposes stricter obligations on Member States for agglomerations above 2 000 p.e. The Court's analysis showed that the number of agglomerations above 2 000 p.e. and the corresponding load changed significantly over time in the Czech Republic, Hungary and Romania. The most significant change took place in Romania (29 % decrease in the number of agglomerations and 17 % decrease in the load) (see ***Table 4***). If an agglomeration is no longer above 2 000 p.e. this implies that effluent requirements (i.e. concentration limits) are no longer to be complied with (see paragraph 18) and thus the deadlines of the Directive no longer apply to such an agglomeration.

29

Considering the large number of agglomerations in the 28 Member States, the Commission is not in a position to follow each individual case to ensure that reported changes in the numbers of agglomerations in Member States are valid and result in a correct application of the Directive.

Table 4

Changes reported to the Commission regarding number of agglomerations and load

Member State	Change in number (above 2 000 p.e.)	Change in load (in p.e.)	Comments
Czech Republic	2008: 618 2012: 598 = 3 % decrease	2008: 8 429 183 2012: 7 590 604 = 10 % decrease	Mainly agglomerations for which the size went below 2 000 p.e.
Hungary	2005: 404 2007: 497 2012: 498 = 23 % increase since 2005 and stable since 2007	2005: 9 643 155 2007: 13 231 718 2012: 11 665 187 = 12 % decrease since 2007	There are inconsistencies between the data reported to the Commission and the data in the Hungarian Decree 173/2014 (VII.18.) which mentions 566 agglomerations and a load of 10 767 713 p.e.
Romania	2007: 2 620 2012: 1 852 = 29 % decrease	2007: 25 838 316 2012: 21 409 175 = 17 % decrease	Agglomerations for which the size went below 2 000 p.e. and changes in the composition of the agglomerations
Slovakia	No change since 2005: 356	2005: 5 054 900 2008: 5 259 370 2012: 5 072 755 = 4 % decrease since 2008	

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

The Commission only has partial information on the situation in agglomerations below 2 000 p.e.

30

In order to establish the river basin management plans under the water framework directive Member States have to assess whether the pollution generated by agglomerations (including those below 2 000 p.e.) has such an impact on water bodies that it needs to be acted upon (see paragraph 6). Moreover, measures to ensure the implementation of the urban waste water treatment directive have to be included in the river basin management plans. Otherwise, for agglomerations below 2 000 p.e., the Commission does not require any specific reporting from the Member States under the urban waste water treatment directive (i.e. agglomerations concerned and their compliance with Article 7).

31

The Court found that the Commission has only partial information on the situation in agglomerations below 2 000 p.e. For the Czech Republic, Hungary and Slovakia, the river basin management plans do not indicate how many of these agglomerations are of importance for water quality. Equally, neither the Czech Republic nor Hungary provided any information on the number of agglomerations where collection systems were in place but there were no treatment plants. In 2013, in the context of the assessment of the river basin management plans, the Commission requested specific data for the Czech Republic and Slovakia. This illustrates that the Commission is in a position to request information on these agglomerations. Nevertheless, the information received and available for the Czech Republic and Hungary does not allow the Commission to verify compliance with Article 7 of the urban waste water treatment directive.

The Commission is following up situations of non-compliance in three of the four Member States visited

32

Every 2 years Member States have to report progress on the implementation of the urban waste water treatment directive to the Commission. By June 2014 the situation at the end of 2012 had to be reported on (or 2011 if later data not available). The Commission then publishes an overall implementation report: the last two reports were prepared within 18 months of the submission deadline for the Member States[18].

33

In July 2014 the Commission launched a request for information to the Czech Republic and to Slovakia and in October 2014 to Hungary on the basis of data provided by the Member States in 2012. These requests were launched with regard to non-compliances by the end of 2010 (the Czech Republic and Slovakia) or 2009 (Hungary)[19] whereas at the same time further deadlines had elapsed and more up-to-date information had been received (see paragraph 32). The Court therefore considers that the efficacy of this process as it is currently operated is questionable. The Commission's assessment of the information provided in answer to these requests was ongoing in March 2015.

18 Last published report: '7th Report on the implementation of the Urban Waste Water Treatment Directive', COM(2013) 574 final of 7 August 2013.

19 Romania had not yet reached any of its interim deadlines at the reference date of 31.12.2009 and thus compliance was not yet to be assessed. Nevertheless, according to the situation as of 31.12.2012 (see ***Table 3***), Romania did not meet its first deadline in 2010.

Use of EU funds available under the 2007–13 programme period

34
Investments in the field of waste water are generally co-financed by the EU in the context of the 2007–13 operational programmes, in particular the horizontal programmes dealing with the environment. Each of the four Member States has such a horizontal operational programme. Taken together, they provided a total budget of 4.9 billion euros of EU funds for investments in the field of waste water.

35
The Court examined:

— the rate of absorption of the funds available for investments in the field of waste water under the 2007–13 operational programmes at the end of 2013;

— whether the specified targets for output and result indicators had been achieved by the end of 2013.

Not all the funding available under the 2007–13 operational programmes taken up

36
In all four Member States, the funds (EU and national) provided in the context of operational programmes (in particular by the horizontal programmes dealing with the environment) are the main source of financing for waste water-related projects.

37
Funds are considered committed by the Member States under an operational programme once a grant decision for a particular project has been taken. The Court found that by the end of 2013 significant amounts of the available EU and national funding for investments in waste water treatment had not been committed in the Czech Republic, Hungary and Slovakia (see ***Table 5***).

38
Moreover, the Court's analysis shows that payments made to beneficiaries (reimbursement of costs incurred) were at a low level which indicates that construction work on many projects had not been finished by the end of 2013. However, EU funds that have been committed by the Commission but have not been used for payments by the Member States within 2 (and in some cases 3) years of their commitment will no longer be available for use[20].

20 Article 93 of Council Regulation (EC) No 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999 (OJ L 210, 31.7.2006, p. 25).

Table 5

Absorption of the funds regarding investments in waste water under the 2007–13 operational programmes dealing with the environment (as of 31.12.2013)

Member State	Funds committed (projects approved) and expressed as % of the budget	Funds paid		Risk that funds will be lost
		as % of the budget	as % of the funds committed	
Czech Republic	1 160 million euro 60 % and 1 850 million euro[4] 95 %	52 % (1 012 million euro)	87 %	YES
Hungary[1]	382 billion HUF (or 1 290 million euro) 83 %	23 % (105 billion HUF or 354 million euro)	28 %	YES
Romania[2]	4 439 million euro 141 %	30 % (954 million euro)	21 %	YES
Slovakia[3]	719 million euro 86 %	40 % (332 million euro)	46 %	YES

1 Data for Hungary relates to May 2013. The amounts in HUF were converted into euros using the following exchange rate: 1 euro at 296.11 HUF (May 2013).

2 Data for Romania relates to water supply and waste water. Separate information not available.

3 Data for Slovakia relates to EU funds only while for the other three Member States it relates to the total public funds (i.e. EU and national funds).

4 A number of projects had already been accepted for co-financing but the grant agreement had not been signed. When taking these into account, 95 % of the funds were committed.

Source: ECA analysis of the annual implementation reports for the operational programmes concerned.

39

The final eligibility date for declaring expenditure to the Commission to receive the corresponding EU grant is 31.12.2015. Considering the slow implementation pace, the Court concludes that several projects will not be finalised by that deadline and, from 2016 onwards, will require further funds (national and/or EU) to be completed.

40
The slow implementation pace implies a risk that the EU funds available will not be fully absorbed by the end of 2015. The Court notes that projects that can be split into separate work phases can receive funds under the 2014–20 programme period for those phases that will be implemented in that time period. Overall, regarding the funds allocated under the 2014–20 programme period for investments in the field of waste water, the Court concludes that there is a risk for Hungary and an almost certainty for Romania and Slovakia that the funds planned for the 2014–20 programme period (both EU and national) will not suffice to ensure the implementation of the Directive for agglomerations above 2 000 p.e. Member States will thus have to identify other financing sources.

41
The Court's analysis also showed that in all four Member States the criteria applied for selecting projects to be financed under the 2007–13 operational programmes for environment were adequate. However, if and when an agglomeration presented a project or not was at its discretion. Thus one of the reasons why some agglomerations of bigger size (needing more stringent treatment) are not yet compliant with the urban waste water treatment directive is that no project applications have been submitted and therefore no financing has been requested.

Targets for output and result indicators were mostly not achieved by the end of 2013

42
The 2007–13 operational programmes submitted by the Member States and approved by the Commission include output, result and impact indicators so as to enable the evaluation of the efficiency and effectiveness of the funds spent under the programmes.

43
The Court notes that the targets for the indicators set in the operational programmes for environment are not of a nature to allow a demonstration of the rate of achievement of the targets under the urban waste water treatment directive.

44

The deadline for meeting the targets set in the operational programmes is 2015. The situation at the end of 2013 is an interim situation but shows that many of the targets were still far from being achieved (see ***Table 6***). The situation will improve in the remaining 2 years as many projects are still in the implementation phase. Nevertheless, in view of the significant differences between targets set and 2013 implementation levels, the Court considers that some of the targets were clearly over optimistic (for example indicator No 2 for the Czech Republic and indicator No 1 for Romania).

Table 6

Achievements of targets as of 31.12.2013 under the 2007–13 operational programmes for environment

Member State	Indicators	Targets for 2015	Achievements
Czech Republic	1. Length of new and rehabilitated sewage networks (km)	120	2 294 (> 100 %)
	2. Number of new, rehabilitated and intensified plants	350	94 (27 %)
	3. Number of people newly connected to the sewage network	741 000	459 266 (62 %)
Hungary	1. Number of households with possibility to connect to the sewage network	400 000	141 689 (35 %)
	2. Amount of capacity created for waste water treatment plants (in p.e.)	3 550 000	195 124 (5 %)
	3. Number of residents concerned by waste water treatment projects (in million)	1.3	0.2 (15 %)
Romania	1. Number of new and rehabilitated plants	170	25 (15 %)
	2. Waste water properly treated (% of the total waste water volume)	60	35 (58 %)
Slovakia	1. Number of new and rehabilitated plants	64	30 (47 %)
	2. Number of p.e. connected to the new sewage network	331 295	13 883 (4 %)

Source: ECA analysis of the annual implementation reports for the operational programmes concerned.

Effectiveness of EU co-financed urban waste water treatment plants

45

The Court's assessment covers 28 urban waste water treatment plants and is based on two aspects:

(a) the level of performance achieved with regard to the treatment of waste water;

(b) the handling of the sewage sludge produced as a result of the waste water treatment process.

Performance of urban waste water treatment plants

46

Urban waste water treatment plants which receive waste water from households and industrial installations have to respect concentration limits, as indicated in their waste water discharge permit, for the discharged effluents. The permit is established on the basis of national legal provisions and compliance is to be ensured by regular checks carried out by the plant operators themselves. The permissible concentration limits and the frequency of monitoring are specified in the Directive (see paragraph 18). Industrial installations also have to respect concentration limits for the waste water discharged into public sewage networks.

Pictures 2 and 3 — Discharge of effluents (Hungary-Budapest; the Czech Republic-Blansko)
Source: ECA.

47
The Court examined whether:

— the monitoring and the quality of the effluents from urban waste water treatment plants respected the requirements of the Directive and/or of the national waste water discharge permits;

— the sewage networks and/or the urban waste water treatment plants had adequately coped with heavy rainfall;

— plant operators had assurance on the respect of concentration limits by industrial installations discharging waste water into a public sewage network;

— the capacity of the urban waste water treatment plants examined was sufficient for actual needs;

— the operating costs of urban waste water treatment plants were justified in view of the type of treatment provided and the plants' size.

EU effluent requirements respected by the plants for which they were applicable

48
The Court's examination of the respecting of the monitoring and effluent requirements was based on the laboratory analyses carried out by the plant operators (self-checks) in 2012. It shows that in terms of sampling frequency all but one plant respected the requirements of the urban waste water treatment directive.

Pictures 4 and 5 — Water samples and results (the Czech Republic-Blansko; Hungary-Budapest)
Source: ECA.

49
The Court noted that three Member States imposed concentration limits that were, in some cases, stricter than those imposed by the Directive (see ***Table 7***). At the time of the report, the Commission had no plans to propose an update of the limits included in the Directive.

50
The requirements specified in the Directive regarding the effluents discharged applied to 16 of the 28 plants examined (57 %). In all 16 cases the requirements were met (see ***Table 8***). Moreover, 25 of the 28 plants (89 %) respected the limits indicated in their national permits.

Table 7

National legal provisions regarding concentration limits going beyond the requirements of the Directive

Member State	Stricter concentration limits
Czech Republic	BOD_5, COD, TSS: have stricter limits and limits also exist for plants with a capacity below 2 000 p.e. Limits for P_{tot} exist also for plants with a capacity between 2 000 and 10 000 p.e.
Hungary	BOD_5, COD, TSS: limits also exist for plants with a capacity below 2 000 p.e.
Romania	None going beyond Directive requirements.
Slovakia	BOD_5, COD, TSS: limits also exist for plants with a capacity below 2 000 p.e.

Source: ECA analysis of national legislation.

Table 8

Effluents meeting requirements set in the Directive and in permits

Member State	Number of plants examined	Urban waste water treatment directive		Respect of the permit
		Respected	Not applicable	
Czech Republic	4	4		4
Hungary	7	3	4	7
Romania	12	4	8	9
Slovakia	5	5		5
TOTAL	28	16	12	25

Source: ECA analysis.

51

In the case of four plants in Hungary and eight plants in Romania not all requirements of the Directive (in particular those for N_{tot} and P_{tot}) were applicable at the time of the report:

— Hungary opted for country-wide reduction percentages for N_{tot} and P_{tot} rather than applying limits at individual treatment plant level (see paragraph 26). Three of the four plants concerned had the technical capacity to remove nutrients (N_{tot} and P_{tot}) and thus to improve the quality of the effluents but were not required to do so by the national permit;

— Romania's deadline for meeting the requirements of the Directive for agglomerations above 10 000 p.e. is the end of 2015. For seven of these eight plants further works will be necessary to enable nutrient removal.

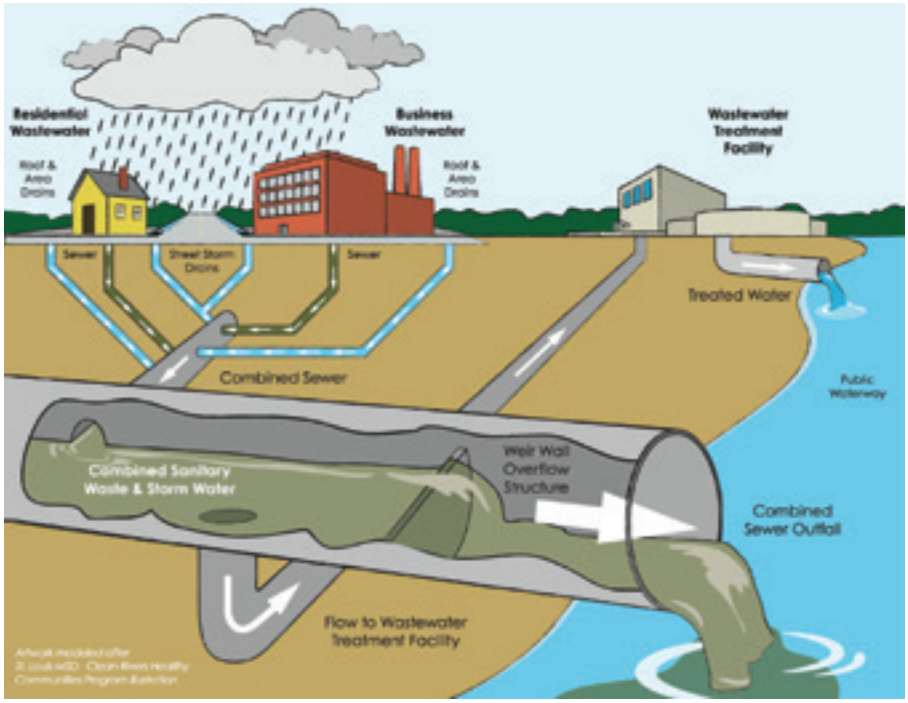
The situation with regard to overflows cannot be assessed due to lack of quantified information

52

If during heavy rainfall the capacity of a sewage network and a treatment plant is not sufficient, so-called overflows may occur whereby not only the rainwater but also untreated waste water is directly discharged into a water body, which has a negative impact on water quality. This is particularly the case where a sewage network has combined collection, thus collecting rainwater run-off as well as household and industrial waste water (see ***Figure 1***). For 20 of the 28 plants examined (71 %) the sewage network was mainly or fully combined. The Court acknowledges that, in some cases, for technical reasons linked to the sewage network structure, municipalities cannot lay down a separated network (separation of waste water and rainwater).

Figure 1

Illustration of overflow during heavy rain



© Green Learning Station, Civic Garden Center of Greater Cincinnati, 'Diagram of Combined Sewer System'.

53

According to the Directive, Member States were to decide on measures to limit water pollution from overflows such as: specify dilution rates[21] or an acceptable number of overflows per year or the capacity for dry weather flow[22]. Generally, the treatment plants examined have storm water tanks on their premises where incoming water exceeding the capacity of the plant can be stored and released to the plant for treatment once the storm period is over. With regard to the situation of storm period overflows at the level of the 28 plants the Court found that:

— the volume of overflow had been measured by the plant operators and stayed at an acceptable level (between 1 to 5 % of yearly inflow of waste water) in eight cases (29 %);

— there were no overflows according to the plant operators in 14 cases (50 %);

— there was no information available as no measurement had taken place in six cases (21 %).

21 The relation between waste water quantity and rain water quantity.

22 The flow that a plant should be able to treat in a period of dry weather, thus when there is no rain.

54

However, these figures have to be treated with caution as there are overflow possibilities also at the level of the sewage network and thus the water reaching the waste water treatment plant may already be reduced. Quantified information on the overflows occurring at the level of the sewage network was not available in any of the four Member States visited.

55

The Court also noted that in the Czech Republic, Hungary and Romania there were 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 have to be monitored.

56

In 2014 the Commission decided to launch a study on the compliance of provisions in Member State legislation with EU requirements for overflows as set out in the 1991 urban waste water treatment directive.

85 % of plant operators carried out on-the-spot checks on the respect of concentration limits by industrial installations

57

Industrial installations can discharge their waste water into a public sewage network for treatment by an urban waste water treatment plant. According to the urban waste water treatment directive Member States had to make such discharge subject to prior regulation and/or specific authorisation.

58

In order to ensure that treatment processes are not impeded by certain pollutants and that the discharges from urban waste water treatment plants do not contain pollutants that are harmful to the environment, industrial installations have to respect concentration limits for a number of pollutants. In terms of legal provisions the situation varies by Member State: in Hungary and Romania there are limits set for a number of parameters and in the Czech Republic and Slovakia the limits set for other than particularly hazardous substances are only for guidance. It is then the operator of the sewage network/treatment plant who defines concentration limits in his operating rules.

59
The relationship between the operator of a sewage network and a given industrial installation is governed by a contract which can also set concentration limits which are stricter than the legally required ones.

60
In the Czech Republic, Hungary and Romania (see ***Table 9***) industrial installations discharging waste water into a public sewage network are obliged by law to carry out self-checks on their effluents. The results are generally submitted to the operator. In Romania there is no legal requirement regarding the reporting of the results[23] but plant operators can include such a requirement in the contracts.

61
The Court notes that there are two ways for the operator of a waste water treatment plant to assess the reliability of the checks carried out by the industrial installations (see ***Table 9***):

— The water samples of the industrial installations are to be analysed by accredited laboratories: the national legal provisions did not include such a requirement. The operator can however include such a requirement in the contract with the industrial installations;

— The operator carries out on-the-spot checks: in the Czech Republic, Romania and Slovakia the legal provisions include such a requirement.

23 With the exception of laboratories and entities in the medical and veterinary fields.

Table 9

National legal provisions with regard to the checks of industrial waste water discharged into a sewage network

Member State	Requirement for industrial installations to carry out self-checks	Requirement that checks are undertaken by accredited laboratories	Requirement for plant operators to carry out on-the-spot checks at the industrial installation
Czech Republic	Yes	No	Yes (frequency not determined)
Hungary	Yes	No (except for some types of installations)	No
Romania	Yes	No	Yes (frequency not determined)
Slovakia	No	No	Yes (including minimum frequency)

Source: ECA analysis of national legislation.

62
The Court's evaluation was based, for a sample of industrial dischargers by plant, on laboratory analyses carried out by the operators themselves and on the analyses the operators received from the industrial dischargers. Information concerning any fines imposed was also examined.

63
26 of the 28 urban waste water treatment plants examined by the Court treated industrial waste water. For 22 of the 26 treatment plants (85 %) the operators carried out on-the-spot checks. For three of the remaining four plants, the operators had the results of the industrial dischargers' self-checks as analysed by accredited laboratories.

64
If an industrial installation exceeds its concentration limits a fine is imposed by the operators of the treatment plant: in Hungary and Romania the fine (amount varying by polluting substance) is set in the national legal provisions while in the Czech Republic and Slovakia, the contract between the operator and the industrial installation sets the amount to be paid for exceeding concentration limits. While for Hungary and Romania the fine relates to the quantity of pollution[24] discharged between two measurements (in a year), in the Czech Republic and Slovakia the amount calculated generally referred to the quantity of pollution discharged on the day the measurement took place[25]. The Court considers that in such cases the amount due is likely to be small and the deterrent effect will be limited.

Around one third of the waste water treatment plants examined are oversized

65
The Court assessed the capacity utilisation expressed in p.e. (i.e. the capacity to treat a certain pollution load)[26] and found that nine of the 28 plants examined (32 %) operate at less than 50 % of their capacity (see ***Figure 2***). A further nine plants (32 %) operate at between 51 and 60 % of their capacity. This is particularly an issue in Romania where eight out of 12 plants are operating at less than 50 % of capacity. Investing in plants with significant excess capacity is not an efficient use of scarce financial resources whether EU or national.

66
The Court's evaluation of another indicator corroborates this assesment: with regard to the hydraulic capacity (i.e. the inflow expressed in l/sec and/or m^3/hour) 16 of the 28 plants examined (57 %) operate at less than 60 % of their capacity. This evaluation was based on a comparison between the water inflow (m^3) and the average capacity of the plant (in dry weather)[27].

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

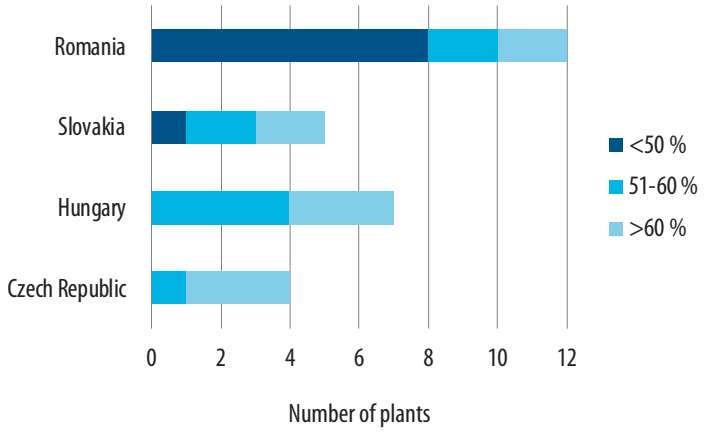
25 Contracts generally specify a standard time period (ranging from five days to 30 days depending on the contracts) for the case where the precise time period during which concentration limits were exceeded cannot be specified.

26 Comparison between the pollution load (expressed in p.e.) actually treated in a year and the pollution load that a plant is able to treat (see ***Annex II***, column 'Designed capacity in p.e.').

27 As the inflow can include waste water but also clear water (i.e. rainwater and groundwater which do not need any treatment) the share of the clear water was taken into account in the evaluation of the capacity utilisation.

Figure 2

Capacity utilisation expressed in p.e.



Source: ECA analysis.

67

Furthermore the Court found that for 22 of the 28 plants examined (79 %) the share of clear water (i.e. rainwater and groundwater) in the total inflow is above 30 % (from 32 % to 85 %). This increases the hydraulic capacity utilisation: clear water is part of the inflow but does not need any treatment. In that respect:

— the Court acknowledges that there can be a certain quantity of rainwater drained towards the waste water treatment plants since combined sewage networks cannot necessarily be replaced by separated networks (see paragraph 52);

— however, groundwater infiltration rates can be reduced through network rehabilitation by restoring the water tightness of networks and manholes. If these civil works were taken into account when designing the plant the required hydraulic capacity of the plant could be reduced, in some instances significantly (see ***Box 2***).

Picture 6 — Part of infrastructure rarely in use (Romania-Galati)
Source: ECA.

Box 2

Example of an important share of groundwater running through a treatment plant

For one plant in Romania, the hydraulic capacity utilisation is in a range of 60 to 85 %. However, around half of the water reaching the plant is groundwater which does not need any treatment. If the sewage network was more watertight, less groundwater would enter the sewage network and the hydraulic capacity utilisation would drop to around 40 %. By comparison, for some plants in the sample, groundwater infiltration only represented 10 % to 20 % of the total inflow.

68
While most of the plants have plans for a future increase in the number of people connected, these new connections are few in number and will thus not significantly change the percentage of capacity utilised. Furthermore, while industrial activity may increase again in the long term it is expected that new industrial installations will be equipped with their own waste water treatment systems.

Scope for reducing certain operating costs

69
Operating costs[28] can be an indicator of the operational efficiency of the co-financed assets and play a role in setting the water tariff. Therefore the Court made a comparison of the 2012 costs on the basis of accounting information received for the 28 plants examined.

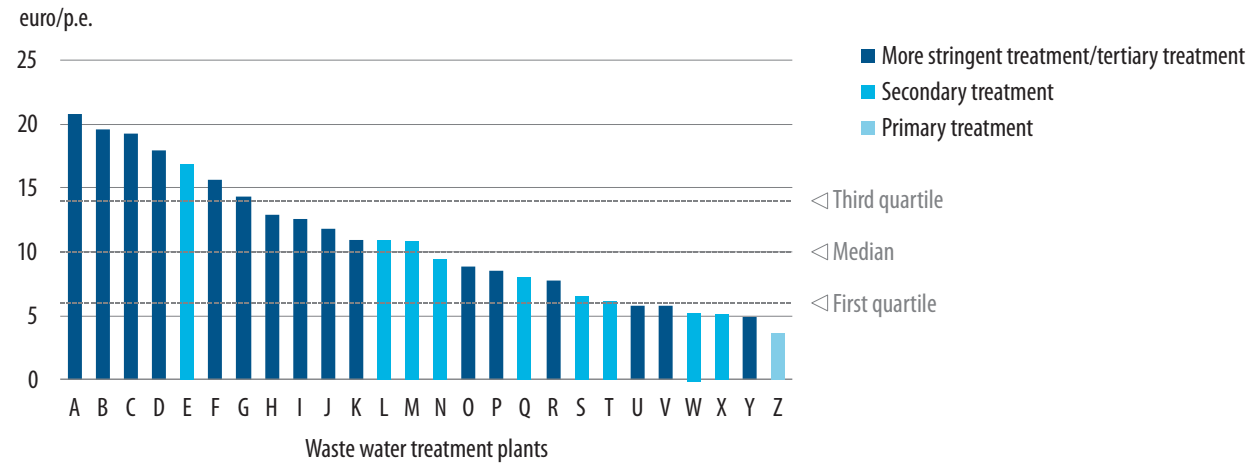
28 Sum of the following costs: labour cost, cost for materials (including cost for chemicals), energy cost, sludge transport and disposal cost and other costs. In the category 'other costs' only the outsourced maintenance costs and costs for outsourced laboratory analysis were considered. Depreciation cost was not included for example.

70

Operating costs are influenced by the treatment type provided (more stringent treatment implies a higher cost) and by the size of the plant. However, the comparison shows that there are important differences amongst the plants (see ***Figure 3***).

Figure 3

Operational costs (in euro/p.e.) by plant



Notes: Two plants were excluded as they presented elements distorting the comparison.
Plants which had more stringent treatment in place but did not respect the concentration limits of the Directive were included in the category 'secondary treatment'.

Source: ECA analysis.

71

The Court notes that there is room for reducing the operating costs of several of the plants examined as illustrated by the following examples:

— Regarding the sludge transport and disposal cost, there are significant price variations among the 28 plants examined. In nine cases the cost was above 100 euros per tonne of dried solid and in six cases the cost was between 50 euros and 100 euros per tonne. The price for this cost element plays an important role as its share in the total cost of operating the plant can be significant (average around 10 % but in extreme cases going up to 30 % or 50 %);

— The share of energy represents on average around 30 % of the total cost for the 28 plants examined. In half of the cases the treatment plants were using sewage sludge for producing energy, generally via anaerobic digestion. In most of these cases the share of energy in the total cost was below the average of 30 %;

— In that respect the European Environment Agency concluded in a 2014 report[29] that the use of indicators to measure the performance of water utilities across Europe would significantly improve the understanding of the resource efficiency challenges involved. A comparison of such indicators could usefully form the basis for a benchmarking exercise.

Use of the sludge produced by urban waste water treatment plants

72

The treatment of waste water results in the production of sewage sludge. Sewage sludge is considered as waste under the waste directive[30]. According to this directive, reuse, recycling and recovery of waste is to be preferred to the disposal of waste through landfilling, incineration or permanent storage[31]. The EU encourages the use of sewage sludge in agriculture as a fertiliser.

Picture 7 — Sewage sludge produced (the Czech Republic-Blansko)
Source: ECA.

29 Technical report No 5/2014 'Performance of water utilities beyond compliance'.

30 Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3).

31 Waste hierarchy introduced by Article 4 of Directive 2008/98/EC.

73
The Court examined whether:

— sludge was reused rather than disposed of;

— concentration limits for certain sewage sludge parameters, in particular heavy metals, had been complied with by the operators of the urban waste water treatment plants;

— previous recommendations of the Court on this subject had been implemented by the Commission.

Sewage sludge reused rather than disposed of in three of the four Member States

74
The Court's evaluation of the 28 treatment plants covered the 2012 sludge production[32] and was based on a review of the contractual arrangements between the plant operators and waste management companies and relevant accounting data. The audit did not include visits to the waste management companies that took the produced sludge to ensure its proper handling by these companies.

75
The Court found that in the Czech Republic, Hungary and Slovakia the plants generally had contracts with one or more waste management companies which either dealt with the sludge themselves or moved it on to other users. According to the contracts, waste management companies mostly used the sludge for compost production, recultivation or biogas production.

76
In Romania, all or part of the sludge of 11 of the 12 plants examined is landfilled and/or is kept on site. Keeping sludge on site is not sustainable on a long-term basis.

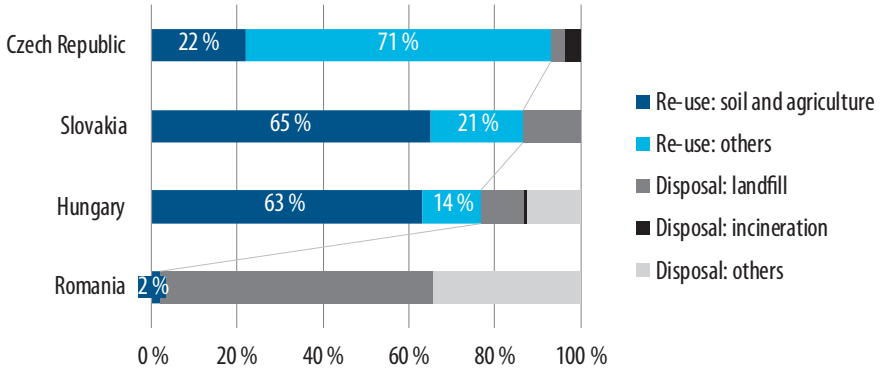
77
According to Romania's National Waste Management Strategy (2003–13) 50 % of the sludge should be used in agriculture or incinerated by 2020. A new Sewage Sludge Management Strategy was presented by the Romanian authorities in February 2012 but had not yet been approved at the time of the audit.

78
Member States provided data as of the end of 2012 to the Commission on the use of sewage sludge. This data confirms that reuse is the preferred option for three of the four Member States visited (see ***Figure 4***).

32 The sludge produced by the waste water treatment plants examined in the four Member States represents the following share of the total sludge production: 0.78 % in the Czech Republic, 45 % in Hungary, 52 % in Romania and 10 % in Slovakia.

Figure 4

Use of sewage sludge as of 31.12.2012 expressed in percentage of total sludge produced



Notes: In the Czech Republic, in 2012, around 32 % of the sludge was used for compost production (category: reuse: others). In Slovakia, in 2012, 63 % of the sludge was used for compost production (category: reuse soil and agriculture). For Romania, the category 'disposal: others' includes temporary storage on site.

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

Applicable concentration limits were respected in the majority of cases

79

According to the sewage sludge directive dealing with the use of sludge on agricultural soil, operators of the waste water treatment plants have to monitor[33] the content of the sludge to ensure that concentration limits are respected, particularly for heavy metals.

80

Moreover, national legal provisions can go beyond the sewage sludge directive by including more parameters and stricter limits and can set concentration limits for use other than on agricultural soil. The Court's analysis of national legislation shows that:

— when sludge is used in agriculture, the limits set by national legislation in all four Member States were for many parameters stricter than those imposed by the sewage sludge directive. All four Member States also set limits for additional parameters such as arsenic for example;

— when sludge is used as input material for compost production, limits for the input material exist in the Czech Republic and Slovakia in the form of a technical norm;

33 Article 9 and Annex II of Directive 86/278/EEC specify the parameters, concentration limits and annual number of samples that have to undergo laboratory analyses.

— for landfilling, a Council decision[34] of 2002 set the leaching limit values for waste acceptable at landfills. It is noted that according to Czech legal provisions, biodegradable waste other than municipal waste and liquid and liquid releasing waste (thus including sludge) cannot be landfilled[35]. Landfilling is allowed in Hungary, Romania and Slovakia.

81
As sewage sludge can be used as an input material for compost production, the Court also analysed the legal provisions in place for the use of compost and notes that the situation varies by Member State, as currently there are no concentration limits set at EU level (see ***Table 10***).

34 Council Decision 2003/33/EC of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC (OJ L 11 of 16.1.2003, p. 27).

35 Vyhláška 294/2005 Sb (Decree 294/2005 Sb).

Table 10

Legal provisions on concentration limits for compost

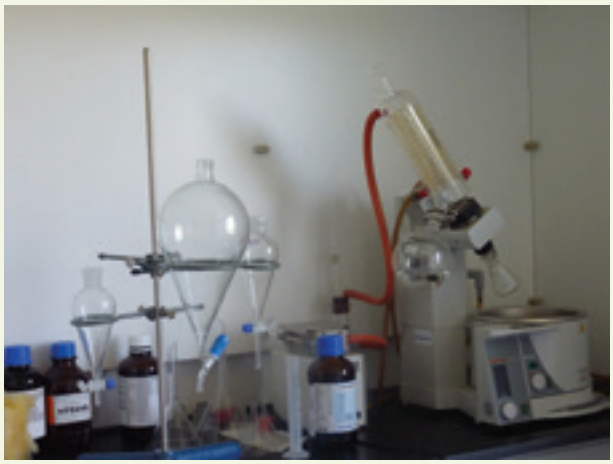
Czech Republic	Hungary	Romania	Slovakia
Yes - compost on agricultural soil - compost used for recultivation - compost marketed as fertiliser	Yes - compost marketed as fertiliser No rules for recultivation or use on non-agricultural soil	None	Yes - compost marketed as fertiliser No rules for recultivation or use on non-agricultural soil

Source: ECA analysis of national legislation.

82
The Court's examination of the compliance with concentration limits by the 28 treatment plants was based on the laboratory analyses carried out by the plant operators in 2012. It shows that limits, when they existed (see paragraph 80), were respected by all plants in the Czech Republic, Hungary and Slovakia. In Romania the limits were respected by one out of three plants (33 %) where sludge was used on agricultural soil. For the two other plants the analyses did not cover all parameters. Also, six out of seven plants (86 %) sending sludge to landfills did not respect the limit for dry content. Moreover, for three out of the seven plants (43 %) the analyses did not cover all parameters.

83
The absence of limits for sludge and compost for certain types of use (recultivation, non-agricultural soil) can pose a threat to soil quality and subsequently to water quality through run-off and drainage. Moreover, the absence of EU-wide criteria for compost to be marketed as fertiliser implies that an equivalent protection of the environment cannot be ensured throughout the EU. Also, as stated in a study carried out on behalf of the Commission, 'the low quality of compost in some countries has been identified as the main obstacle to further market development'[36].

36 Assessment of feasibility of setting bio-waste recycling targets in the EU, including subsidiarity aspects, final report dated 31.3.2011, produced under the Framework contract ENV.G.4/FRA/2008/0112 by vito vision on technology in association with Bio Intelligence Service and ARCADIS.



Picture 8 — Laboratory equipment to carry out tests at a treatment plant (Hungary-Szeged)
Source: ECA.

Sewage sludge directive update awaits Commission's revision of the fertilisers regulation

84
The Court in its Special Report 3/2009[37] recommended that the Commission should consider whether the time is appropriate for a revision of the sewage sludge directive. The Commission carried out a comprehensive evaluation[38] of several waste stream directives, including the sewage sludge directive, to determine whether the regulatory framework is fit for purpose. The 2014 evaluation concluded that the sewage sludge directive raises 'doubts about its relevance in its present form. In almost 30 years, the standards and requirements set up in the directive have never been revised or updated'. It further concludes that any future decision on the review of the directive should be postponed until the adoption of a revised fertilisers regulation[39].

85
In 2010, an *ex post* evaluation[40] of the functioning of the current fertilisers regulation concluded that the scope of the regulation should be extended to cover not only inorganic fertilisers but also organic fertilisers and soil improvers. It also proposed the introduction of maximum limits for contaminants present in fertilisers. In 2015, the Commission is reflecting on whether to propose a revised fertilisers regulation.

86
In 2012 the Commission's Joint Research Centre presented the results of a pan-European screening exercise on the occurrence and levels of selected compounds in sewage sludge. According to the report there is no scientific evidence for introducing new limit values for classical organic pollutants or for emerging pollutants with the exception of perfluoralkyl substances[41].

37 Special Report 3/2009 on the effectiveness of structural measures spending on waste water treatment for the 1994–99 and 2000–06 programme periods (http://eca.europa.eu).

38 SWD(2014) 209 final of 2 July 2014 'Ex-post evaluation of five Waste Stream Directives'.

39 Regulation (EC) No 2003/2003 of the European Parliament and the Council of 13 October 2003 relating to fertilisers (OJ L 304, 21.11.2003, p. 1).

40 Final report 'Evaluation of Regulation (EC) 2003/2003 relating to fertilisers' produced for the Commission by the Centre for Strategy and Evaluation Services dated November 2010.

41 Toxic synthetic chemicals.

87

Other papers and studies[42] refer to the potential risks related to microplastics. Microplastics can be removed to a certain degree in waste water treatment plants and the removed parts then end up in sludge. When sludge is used on land, microplastics can end up in the aquatic environment via run-off from the land.

88

With regard to compost, the Court recommended in Special Report 20/2012[43] that the Commission should develop, with Member States, EU quality standards to encourage the development of a compost market. The Commission's Joint Research Centre published in early 2014 a technical proposal for end-of-waste criteria[44] for biodegradable waste subjected to biological treatment. However, the study proposed to exclude sewage sludge as a compost and digestate material. It remains to be seen whether and how the proposal regarding the revision of the fertilisers regulation will introduce the proposed criteria and whether it will introduce a mechanism for gradual inclusion of categories not covered by the technical proposal such as sewage sludge.

Financial sustainability of the EU co-financed urban waste water treatment plants

89

A key element for ensuring the financial sustainability of water services is the recovery of costs. Financial sustainability is ensured when the revenues from the service provision are sufficient to cover operating and maintenance costs and to recover capital costs and thus allow investments to be renewed. The water framework directive (Article 9) requested Member States to ensure by 2010 an adequate contribution of the different water uses to the recovery of the costs of water services. It is through waste water pricing (tariff) that the users of waste water services will contribute to the cost recovery. Furthermore, the polluter pays principle[45] implies that polluters (in this case those discharging waste water such as households and industrial installations) are responsible for the pollution they have caused and therefore should bear the costs of reducing this pollution (in this case via waste water treatment).

90

As water is not a commercial product like any other, tariffs are calculated on the basis of price-setting mechanisms which are generally provided for in national legislation.

42 See for example: 1. Pilot study carried out by the Alfred-Wegener-Institut, press release of 30.10.2014 (www.awi.de) and 2. Paper on potential risk of microplastics in the fresh water environment published on 29.9.2013 on www.stowa.nl (Stichting Toegepast Onderzoek Waterbeheer).

43 Special Report 20/2012 'Is structural measures funding for municipal waste management infrastructure projects effective in helping Member States achieve EU waste policy objectives?' (http://eca.europa.eu).

44 Criteria that certain specified waste has to fulfil in order to cease to be waste.

45 Article 191(2) of the Treaty on Functioning of the European Union (consolidated version).

91
When determining the waste water tariff Member States may take into consideration the social, environmental and economic effects[46] in an effort to ensure that water services remain affordable. Commission guidance[47] refers to 4 % of household income as a commonly accepted affordability ratio, i.e. the total water bill (drinking water and waste water) can represent 4 % of household income.

92
For both the 2000–06 and 2007–13 programme periods, Commission guidance[48] required water tariffs to cover at least operating and maintenance costs, as well as a significant part of the depreciation charge on assets. Depreciation can be considered as a proxy of the cost needed to renew the infrastructure in the future.

93
For the 2014–20 programme period, respect of the cost recovery principle was made mandatory through the necessity to fulfil an *ex ante* conditionality. This means that the approval of operational programmes for the 2014–20 programme period is subject to the 'existence of an adequate contribution of the different water uses to the recovery of the costs of water services […]'. The definition of what is an 'adequate' contribution is, however, at the Member States' discretion.

94
The Court examined whether:

— the waste water tariff covered the depreciation, operating and maintenance costs of the assets;

— there was room for increasing the waste water tariff where operating and maintenance costs were not sufficiently covered;

— infrastructure owners had accumulated sufficient financial reserves to enable the replacement/renewal of the infrastructure at the end of its economic lifetime.

Waste water tariffs charged to users allowed full recovery of costs in only 11 % of cases

95
The Court analysed the water tariff setting for 2012 in respect of the 28 waste water treatment plants examined. It compared the cost components included in the tariff with the financial data of the plant operators and infrastructure owners. The Court found that costs were fully recovered in only three cases (11 %). In the other 89 % of cases cost recovery was only partial.

46 Article 9 of the water framework directive.

47 The new programming period 2007–13: Guidance on the methodology for carrying out cost-benefit analyses, working document No 4, 8/2006.

48 The new programming period 2000–06: Technical paper 1 — Application of the polluter pays principle — Differentiating the rates of Community assistance for Structural Funds, Cohesion Fund and ISPA infrastructure operations' (6.12.99). For the 2007–13 programming period see previous footnote.

96
The Court notes that in three Member States there are specific legal provisions which limit the degree of cost recovery:

— in the Czech Republic[49] and Slovakia[50] the depreciation cost relating to the part of the assets financed by grant (EU and national) is fully or partially excluded;

— in Hungary a decrease in water tariffs was imposed in 2013[51] and in Slovakia there are restrictions with regard to tariff increases[52].

97
In view of this situation, the Court also considers that there may be a risk that plant operators will not carry out necessary maintenance in order to maintain short-term profitability. This could however contribute to diminishing the operational sustainability of the waste water treatment plants. Assessing whether the cost for maintenance in 2012 corresponded to the actual maintenance needs was not within the scope of this audit.

98
A further element which can have an impact on the tariff setting is the way of determining the EU grant for an infrastructure project. An EU grant is only justified if the revenue generated by the project is not sufficient to cover investment and operational costs. This funding gap (i.e. the difference between discounted investment costs and discounted net revenue), which needs to be estimated on the basis of a cost–benefit analysis, can then be financed by public funds (including EU grants). This approach has disincentive effects on the application of the cost recovery principle as it implies that the higher the revenues from the waste water activities (i.e. the higher the tariffs), the lower the grant the investor may expect to receive.

99
For the 2014–20 programme period, unlike for previous periods, applicants for EU grants do not necessarily[53] have to carry out a cost–benefit analysis for their project to assess the funding gap. Instead, a flat rate net revenue percentage can be applied which is set by regulation at 25 %[54]. The funding gap will thus be 75 % whatever the income generated by the project. In other words if the tariff is such that the income generated covers more than 25 % of the costs, this will not reduce the grant accordingly.

49 For EU co-financed projects waste water prices should be increased until full depreciation is ensured but taking into account the affordability level (set at 2 % of household income).

50 Depreciation of the part of the assets acquired by a grant before 2011 is not included in the tariff calculation. However, as a result of a Decree of 2011 the depreciation of all assets acquired from 2011 onwards can be taken into account at a maximum rate of 2 % (thus corresponding to a lifetime of 50 years). In fact, the Commission only approved 'major projects' under the 2007–13 programme period once the 2011 Decree was approved as it considered that sustainability was not ensured under the previous legal provisions.

51 In Hungary, setting the waste water tariffs was until 2011 at the discretion of the municipalities. Amended legal provisions specified that the 2012 tariffs could only be increased by maximum 4.2 % in relation to the 2011 tariffs. The 2013 tariffs (first half of the year) were to be the same as the 2012 tariffs and the tariffs for the second half of 2013 and for 2014 could not be more than 90 % of the 2012 tariffs.

52 The 2014 tariff will remain valid for 2015 and 2016 unless a price adjustment is requested and justified by a significant change in economic parameters.

53 For 'major projects' to be approved by the Commission (see paragraph 10) the obligation will remain. Under the 2014–20 programme period, these are projects for which the total eligible cost exceeds 50 million euros.

54 Article 61(3) and Annex V of Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional

Waste water tariffs were below the affordability level mentioned by the Commission in 92 % of cases where costs were only partially recovered

100

The 2012 average waste water tariffs in the four Member States visited are indicated in ***Figure 5.***

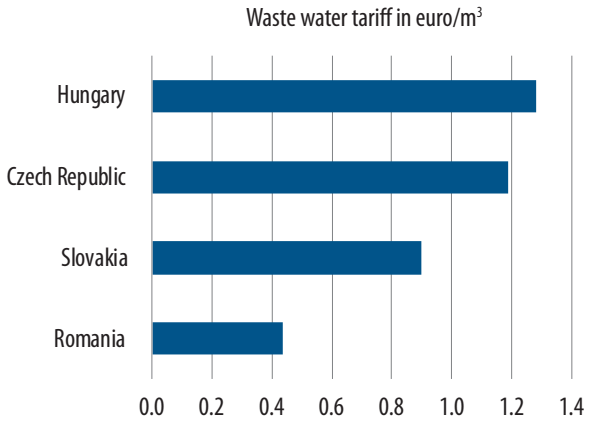
101

In 23 out of the 25 cases (92 %) where full cost recovery was not achieved the total charges paid by the users for drinking water and waste water services lie below the 4 % of household income affordability level mentioned by the Commission. Of these, in seven cases (30 %) the waste water tariff was lower than the average national waste water tariff.

Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006 (OJ L 347, 20.12.2013, p. 320).

Figure 5

2012 average waste water tariffs



Note: Tariffs were converted into euros using the following exchange rates: 1 euro at 291.86 HUF, at 25 CZK and at 4.45 RON.

Source: Data from the national statistical offices of the Czech Republic and Hungary, the Slovakian Water Research Institute and the Romanian authorities.

Financial reserves insufficient to ensure renewal of the infrastructure

102

Generally, the renewal of an infrastructure needs to be ensured by the owner of the infrastructure[55]. In 12 of the 28 waste water treatment plants examined (43 %) reserves[56] were built by the owners to finance such a renewal. The situation differed (see ***Table 11***) according to the organisational structure chosen for managing waste water services. When the owner is a municipality and there is no legal requirement to ensure separate accounting for the management of water-related infrastructure, income and expenditure from that activity will be mixed with income and expenditure from other activities of the municipality.

103

For the plants examined, even where reserves had been built up or where funds were accounted for separately, they will not be sufficient to ensure future renewal of the infrastructure due to the nature of the tariff policy in place (see paragraphs 95 and 96).

104

With regard to the financial situation of the operating companies, the legal provisions regarding the water tariff setting (no such provisions in Hungary) do allow for the inclusion of a profit[57], a precondition for the accumulation of reserves. For 26 of the operating companies (93 %), all or the majority of the capital is publicly owned, generally by the same municipalities that own the infrastructure.

105

In practically all cases, the operating companies, which often also manage drinking water plants and more than one waste water treatment plant, were able to build some financial reserves. These funds could contribute to financing the renewal of the infrastructure provided that the reserves are not withdrawn by the owners of the operating companies for needs other than water management. In fact, nine of the 28 operating companies (32 %) paid out dividends in the period 2010 to 2012.

55 If the owner and the operator of the infrastructure are different entities, it is the operator who will receive the income for the treated waste water. From this income the operator has to cover his operational and maintenance costs and the rent owing to the owner of the infrastructure. The rent provided for in the rental agreement should cover depreciation and other costs incurred by the owner.

56 Accounted for in the balance sheet under reserves and/or retained earnings.

57 In the Czech Republic there is a provision that profit should be reasonable. In 2013, the law provided for a formula for the calculation of reasonable profit. In Slovakia, the profit is limited to a certain amount per m^3.

Table 11

Situation with regard to financial reserves built by the owners of the infrastructure

	The owner is a municipality (or a group of municipalities)	The owner is a company created by a municipality (or a group of municipalities)	
		The company does not operate the plant	The company also operates the plant
	19 cases (68 %)	4 cases (14 %)	5 cases (18 %)
Reserves built	16 % Yes 84 % Not specified or none	Yes	Yes (see paragraph 105)
Reserves sufficient	No	No	No

Conclusions and recommendations

106

The European Regional Development Fund/Cohesion Fund spending for urban waste water treatment plants during the 2000–06 and 2007–13 programme periods has played a decisive role in the Member States' progress in meeting the requirements of the urban waste water treatment directive. But delays were noted for all four Member States covered by this report and the absorption of EU funds was slow. Almost all co-financed urban waste water treatment plants treated the waste water adequately but the Court considers that around a third of them are oversized. In most Member States visited, national effluent requirements were often stricter than those of the Directive and this suggests that a review of the Directive may be necessary. The Court also found weaknesses regarding the management of overflows and the handling of sludge. Finally, waste water tariffs are too low in many cases to ensure the financial sustainability of the co-financed infrastructure.

Compliance with the deadlines of the urban waste water treatment directive

107

All four Member States covered by this report have made important progress in meeting the requirements of the urban waste water treatment directive, but incurred delays in specific areas:

— Deadlines for waste water collection in agglomerations above 2 000 p.e. (where effluent requirements apply) were met in all four Member States covered, with the exception of Romania which is slightly behind schedule with regard to its interim deadlines. Legal provisions to ensure the connection of households to existing sewage networks are in place in all four Member States. The effective enforcement of these obligations poses however difficulties for the national authorities concerned as they are vague;

— None of the Member States visited respected the deadlines for the treatment of waste water in agglomerations above 2 000 p.e. The Court also noted that the number of such agglomerations dropped significantly in some of the Member States covered. As a result, fewer agglomerations needed to meet the requirements of the Directive;

— For agglomerations below 2 000 p.e., on which EU funds are also spent, the Commission has only partial information as there is no specific reporting in place and the information provided by the Member States in the river basin management plans is not complete.

108

The Commission currently follows up the situation of compliance with the urban waste water treatment directive in three of the four Member States covered by this report. The Court's analysis shows that this is a lengthy process: generally Member States have around 18 months (and in some cases 30 months) to report data to the Commission and it takes the Commission another 18 months to finalise its analysis and reporting.

Recommendation 1

The Commission should:

(a) require agglomerations below 2 000 p.e. which have collection systems in place, to report on whether waste water treatment is appropriate given the requirements of Article 7 of the urban waste water treatment directive and, where this is not the case, whether adequate measures have been included in river basin management plans;

(b) verify the Member States' reporting on the number of agglomerations above and below 2 000 p.e. where there have been significant changes, in particular from one category to another. This verification could be included in the Commission's follow-up process with Member States;

(c) encourage Member States to establish clear legal obligations for households to connect to existing sewage networks. Information on the rate of household connectivity should form part of the regular reporting exercise;

(d) shorten the time needed to assess compliance with the urban waste water treatment directive by requiring Member States to report data within 6 months (in accordance with Article 15 of the Directive) of the date for which the Commission wishes to know the situation regarding implementation (reference date). The Commission should also strive to reduce its own reporting time;

(e) screen for similar issues of lengthy reporting periods under other environment-related directives.

Use of EU funds available under the 2007–13 programme period

109

The Member State's approval and implementation of EU co-financed projects in the field of waste water treatment during the 2007–13 programme period experienced considerable delays. This risks the loss of EU funds available and could provoke a need for Member States to make available other funds (national or private) to ensure the finalisation of a number of projects.

110
Member State estimates of the remaining funding needs for completion of the projects required to comply with the Directive, exceed in at least two of the four Member States the appropriations available under the 2014–20 operational programmes dealing with the environment.

Recommendation 2

The Commission should:

(a) request Member States to provide updated information on the financial amounts they will need to raise to ensure that the implementation deadlines set out in the urban waste water treatment directive can be achieved for agglomerations above 2 000 p.e. and agglomerations below 2 000 p.e which have collection systems in place;

(b) request Member States to make sure that those agglomerations which are not compliant with the Directive will carry out the projects necessary to ensure compliance.

Effectiveness of EU co-financed urban waste water treatment plants

Performance of urban waste water treatment plants

111
The effluents of all urban waste water treatment plants respected the concentration limits of the urban waste water treatment directive where it was applicable. In two Member States either the deadline for application had not yet expired or the limit values were not applicable at individual plant level. 89 % of plants respected the limits set in their permits. The Court also noted that these limits are based on national legislation and/or plant permits which in some cases set limits that are stricter than those of the Directive.

112
For overflows, occurring in periods of heavy rain, which impact the water quality of the receiving water body there is however a general lack of information on their quantity and water quality parameters. The Court notes that the Commission has recently launched a study on this subject.

113

In the majority of cases (89 %) plant operators checked on a sample basis the respect of concentration limits regarding waste water discharged by industrial installations. In Slovakia, however, the plant operators did not complement the results of their checks (which could take place as little as once per year) by requesting to receive also the results of self-checks undertaken by the industrial installations themselves.

114

Around a third of the urban waste water treatment plants examined are oversized with some of them treating too high a share of groundwater. This is due to both weaknesses in the design of the plants (such as unrealistic assumptions about the need for waste water treatment by households and industry) and changes in population after the works had started.

115

The significant variations in terms of operating costs of the treatment plants (in particular regarding energy and sewage sludge transport and disposal) imply that there is scope for reducing these costs.

Recommendation 3

The Commission should:

(a) assess the appropriateness of concentration limits in the Directive taking into account the technological improvements made since 1991 when the urban waste water directive was adopted;

(b) assess whether the rules on the number and frequency of checks to be undertaken by national environmental inspection bodies and the fines to be paid by industrial installations for not respecting concentration limits have a sufficient deterrent effect in line with the Commission's 2012 communication[58];

(c) assess the need to require of Member States the mandatory measurement of overflows and the setting of rules for the permitted number and quality of such overflows;

(d) not approve 'major projects' and request Member States not to approve projects under an operational programme unless the design of the size of the waste water treatment plants takes into account the possibilities of reducing groundwater infiltration: the costs for investments in the water tightness of the sewage network may be lower than the costs for investment in a treatment plant of higher capacity;

58 COM(2012) 95 final Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'Improving the delivery of benefits from EU environment measures: building confidence through better knowledge and responsiveness'.

(e) encourage Member States to explore and disseminate information on the possibilities of cost savings such as by using the energy production potential of sewage sludge or by using sewage sludge as valuable raw material for phosphorus recovery. This may also involve requesting waste water treatment plant operators to participate in benchmarking exercises to identify at which plant there is room for increasing cost efficiency and by identifying those cost elements which need to be focused on.

Use of the sludge produced by urban waste water treatment plants

116
The reuse of sewage sludge is the preferred option in three of the four Member States covered. In Romania, however, most of the sludge is landfilled or kept on site which is not sustainable in the long run.

117
When sludge is used on agricultural soil or is landfilled, concentration limits established at EU level exist for certain substances, such as heavy metals. For those types of use, the Member States' monitoring was generally found adequate, with exceptions in Romania. The situation is different for other types of use (such as sludge as input material for compost or use on non-agricultural soil). Here no requirements are specified at EU level to protect the environment. The Court notes that the Commission also considers the sewage sludge directive as outdated in this respect, but intends to update the fertilisers regulation first.

Recommendation 4

The Commission should:

(a) make final payments for 'major projects' approved under an operational programme conditional upon the existence of an appropriate solution for reusing sewage sludge and request Member States to follow the same approach for projects approved at their level; this could be done by inserting a specific clause in the grant agreements for the 2014–20 programme period;

(b) propose, on the basis of a review of the appropriateness of pollutants and concentration limits, an adaptation to the sewage sludge directive or any directive or regulation dealing with waste water or soil quality issues and require Member States to ensure a robust monitoring of pollutants for any kind of reuse of sludge.

Financial sustainability of the EU co-financed urban waste water treatment plants

118

Waste water tariffs charged to households and industry were for 89 % of plants too low to enable the renewal of the infrastructure at the end of its expected economic lifetime. In most cases tariffs are still significantly below the affordability level of 4 % of household income. This situation is partly due to national legal provisions: in two Member States depreciation cost cannot be fully taken into account in the tariff setting and in two Member States there are ceilings on annual tariff increases. When costs are not fully recovered from the users of the waste water services, the uncovered part will have to be paid by others which will mostly be the public at large on the basis of taxes paid. Furthermore, as a result of this situation, plant operators may cut down on current maintenance which will shorten the economic lifetime of the assets and/or worsen the waste water treatment quality.

119

In two thirds of cases examined by the Court there is no information on whether the infrastructure owners built up sufficient financial reserves for maintenance and eventual renewal of water and waste water infrastructure. This is due to the fungibility of resources where owners are municipalities. At the level of the treatment plant operators some reserves are created out of accumulated profits.

Recommendation 5

The Commission should:

(a) encourage Member States to implement a responsible waste water tariff policy and to adapt, where necessary, the legal provisions in the area of water pricing so tariffs cannot be lower than the commonly accepted affordability ratio of 4 %;

(b) encourage Member States to see that public owners, such as municipalities, ensure that sufficient funding will be available for necessary maintenance and renewal of waste water infrastructure.

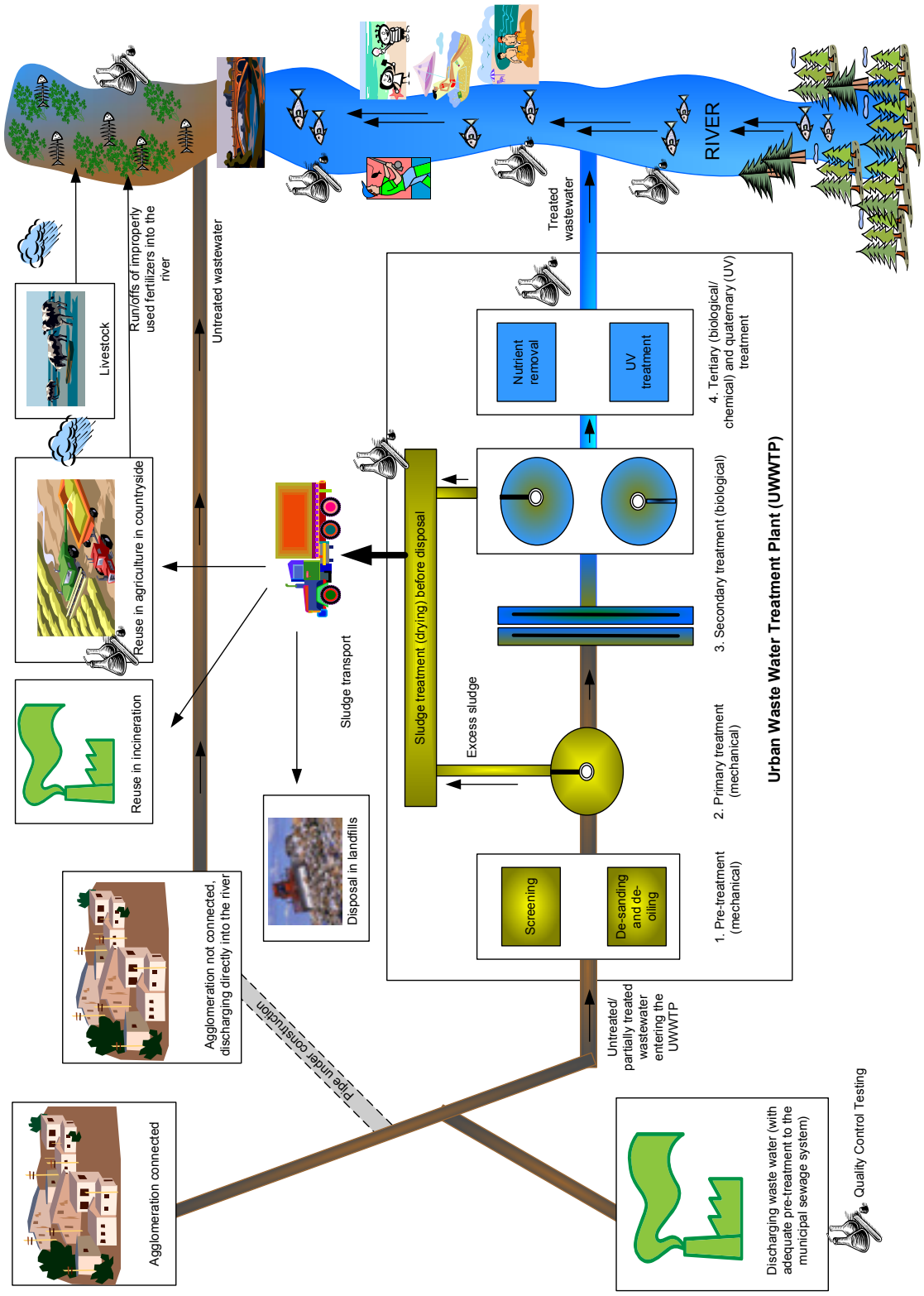
This report was adopted by Chamber II, headed by Mr Henri GRETHEN, Member of the Court of Auditors, in Luxembourg at its meeting of 10 June 2015.

For the Court of Auditors

Vítor Manuel da SILVA CALDEIRA
President

Annex I

Urban waste water treatment environment



Source: ECA.

Annex II

List of waste water treatment plants examined

Member State	Location	Designed capacity in p.e.	Total expenditure[1] (in euro)	Total EU grant (in euro)	Grant rate as % of total expenditure
Czech Republic	Bludov	4 115	38 312 039.31	26 818 427.32	70 %
	Zubri	47 000	43 395 472.68	29 508 921.03	68 %
	Bzenec	22 607	27 294 593.37	17 732 842.00	65 %
	Blansko	29 376	27 294 593.37	17 732 842.00	65 %
Hungary	Szeged	230 000	94 637 207.86	33 325 000.00	35 %
	Zalaeger-Szeg	180 000	48 350 946.27	36 263 208.96	75 %
	Györ	375 000	17 560 130.00	7 250 000.00	41 %
	Dunakeszi	82 500	2 954 395.00[2] (HUF 914 976 000)	1 942 002.00[2] (HUF 601 438 000)	66 %
	Budapest	1 600 000	438 526 042.48	278 661 500.00	64 %
	Debrecen	675 000	87 304 362.28	50 636 530.12	58 %
	Sopron	165 000	18 594 829.58	9 297 414.79	50 %
Romania	Braila	247 700	43 984 313.64	32 988 235.23	75 %
	Bucharest Glina	1 654 110	105 765 515.60	68 747 585.14	65 %
	Buzau	235 000	26 964 178.91	19 953 492.39	74 %
	Constanta North	308 125	69 251 771.60	49 669 303.00	72 %
	Craiova	385 000	71 894 883.75	52 783 500.00	73 %
	Galati	360 000	72 053 837.40	42 000 000.00	58 %
	Iasi	933 300	45 550 042.28	34 162 531.71	75 %
	Oradea	250 000	18 570 208.73	12 999 145.77	70 %
	Pitesti	320 000	46 879 803.82	31 312 500.00	67 %
	Ramnicu Valcea	130 000	28 119 004.10	21 089 253.08	75 %
	Satu Mare	180 000	31 789 308.31	22 570 408.90	71 %
	Timisoara	440 000	41 187 160.13	29 242 884.13	71 %
Slovakia	Trencin	30 000	7 935 751.09	3 967 875.55	50 %
	Povazska Bystrica	45 000	12 299 508.09	6 149 754.04	50 %
	Trnava	211 700	29 711 033.08	10 193 516.00	34 %
	Vranov	34 900	51 823 026.31	34 020 640.00	66 %
	Presov	91 275	65 699 239.14	40 566 608.00	62 %

1 Some projects included several sub-projects (for example upgrading of waste water treatment plants in several locations and construction of sewage networks in several locations) and thus the total expenditure relates to the project as a whole and not just to the waste water treatment plant examined.

2 Amount in HUF converted into euros using the following exchange rate: 1 euro at 309.7 HUF (average for 2014).

Annex III

Deadlines for the implementation of the urban waste water treatment directive

Member State	Interim target dates to comply with	Final deadline of transitional period
Czech Republic	1 May 2004 – for 18 agglomerations > 10 000 p.e. 31 Dec 2006 – 36 agglomerations	**31 Dec 2010**
Hungary	31 Dec 2008 – for agglomerations in sensitive areas with > 10 000 p.e. 31 Dec 2010 – for agglomerations in normal areas with > 15 000 p.e.	**31 Dec 2015** **31 Dec 2008** – for biodegradable industrial waste water from plants belonging to industrial sectors from Annex III of the Directive
	In 2009 Hungary committed to comply with Article 5(4) of the Directive by **2018**.	
Romania	Collecting systems 31 Dec 2010 – 61 % of the load in p.e. 31 Dec 2013 – 69 % of the load in p.e. 31 Dec 2015 – 80 % of the load in p.e. 31 Dec 2013 – all agglomerations > 10 000 p.e.	**31 Dec 2018**
	Secondary treatment or equivalent (or more stringent treatment for sensitive areas) 31 Dec 2010 – 51 % of the load in p.e. 31 Dec 2013 – 61 % of the load in p.e. 31 Dec 2015 – 77 % of the load in p.e. 31 Dec 2015 – all agglomerations > 10 000 p.e.	
Slovakia	31 Dec 2004 – for 83 % of the total biodegradable load 31 Dec 2008 – for 91 % of the total biodegradable load 31 Dec 2010 – all agglomerations > 10 000 p.e. 31 Dec 2012 – for 97 % of the total biodegradable load	**31 Dec 2015**

Reply of the Commission

Executive summary

III
The Commission does not currently intend to increase the reporting effort under the urban waste water treatment directive 91/271/EEC (UWWTD) with regard to agglomerations under 2 000 p.e. since there is no obligation of collection and treatment for these agglomerations under Articles 3, 4 and 5 of the UWWTD. However, under the water framework directive 2000/60/EC (WFD) the Commission requests Member States to provide some information, irrespective of the size of the agglomerations. In addition, the pilot programme 'Structured Implementation and Information Framework' (SIIF) should improve reporting quality (see Commission's reply to paragraph 29).

The Commission recalls that for agglomerations above 2 000 p.e., the legal framework already provides that households are required to be connected to networks or to have individual or appropriate systems in place.

IV
The main objectives of the European Regional Development Fund (ERDF) and the Cohesion Fund in the 2007–13 programming period are to reduce the gap between the levels of socioeconomic development of the EU regions and not necessarily to contribute in meeting the UWWTD deadlines which falls under the responsibility of the Member States concerned and this, independently of the level of allocated funds. In so doing the 2007–13 ERDF/CF contribution may indeed not be sufficient to fulfil all needs in the field of sewerage infrastructure in meeting the UWWTD deadlines.

As regards the need to reconcile reporting with the progress in implementing the UWWTD, the Commission considers that such information is made available and updated by Member States every 2 years in case of changes, under Article 17 of the UWWTD.

V
Regarding the size of the plants, the Commission considers that it is for the MS to decide on the plant size as the UWWTD does not set any specifications on plants dimensioning (see Commission's reply to paragraph 65).

In general, the size of the plants may be determined by several factors, including a safety margin to comply with the UWWTD at all times, coping with seasonal activities/variations such as tourism, industrial activities, or heavy rainwater flow and provision for possible future connection of additional settlements, population growth, etc.

Since 2007, the involvement of Jaspers structure (Joint Assistance to Support Projects in European Regions) aims at assisting Member States to improve the quality of major project applications including their technical characteristics, prior to their submission for grant financing under the Funds.

Concerning the issue of overflows, see Commission's replies to paragraphs 54 to 56.

As regards the assessment of concentration limits, see the Commission's replies to paragraph 49 and recommendation 3(a).

VI
The Commission accepts the Court's recommendation.

VII
The Commission accepts this recommendation and considers it partially implemented as Member States are required to implement an appropriate water tariff policy through Article 9.1 of the WFD and the *ex ante* conditionality 6.1 of Annex XI of CPR 1303/2013.

Moreover the Commission considers that the 4 % affordability level is indicative.

However, the Commission does not accept the second part of this recommendation (i.e. that sufficient funds for the necessary maintenance and renewal should be available) since, in the absence of a specific legal framework, the responsibility to ensure the availability of funds for maintenance and renewal falls within the remit of the owners and/or the operators of the sewerage infrastructure, therefore within the remit of Member States.

Observations

22
The Commission is currently analysing the replies received to the referred formal enquiries made to these countries. In that context, the Commission is analysing whether any follow-up as regards the demonstration of the equivalence of environmental protection by individual systems is necessary.

23
The Commission notes that this observation is addressed to the MS concerned. Connection of households to public sewerage is not regulated by the UWWTD. It is up to MS, via their national legislation, to connect or, alternatively, apply individual or other appropriate systems in order to ensure compliance with Article 3 of the UWWTD.

26
This concertation between Hungary and Romania results from the possibility offered under Article 9 of the UWWTD.

Besides this, Article 5.4 refers to a global reduction of N and P applicable to the waste water entering all the treatment plants in the related area, even those serving agglomerations below 10 000 p.e.

28
The Commission notes that drops in the generated load up to 10–15 % at Member States level may be considered as admissible because agglomerations are 'living' entities which experience continuous changes (e.g. due to emigration, closure of factories, etc.). On the contrary, a constant load (p.e.) throughout the years may indicate that figures are not duly updated. The decrease in the number of agglomerations is a logical consequence of the decrease in load, and also of the changing nature of agglomerations. The follow up of the evolution in the number of p.e. is more significant than the changes in the number of agglomerations.

The situation of load decrease in Romania only appeared with their first implementation results (8th Reporting Exercise) and might be considered, in principle, not 'admissible'. Under the frame of the SIIF Pilot (structured Implementation and Information Framework) launched in 2013 the Commission will ask the authorities about the reasons for such substantial changes (also affecting the number of agglomerations) and act accordingly (see Commission's reply to paragraph 29). Romania will be part of phase III starting in 2015.

29
The Commission has launched the SIIF pilot programme to improve the organisation and management of data/information at national level and inform policymakers, interested parties and the public on how legislation is practically implemented, in line with provisions of the Access to Information and INSPIRE directives (2003/4/EC and 2007/2/EC). It mainly addresses how to reach or maintain compliance by focusing on data and information demands in non-compliant agglomerations and by designing IT systems that link different data sources (environmental, socioeconomic, funding, legal aspects, etc.). The following countries are involved so far: CY, LT and SI and it is foreseen to involve four additional countries (inter alia RO).

For Member States covered by the SIIF and in particular for Romania, the Commission intends to follow up on the evolution of the load generated in the agglomerations in the next few years to better understand if such a change is justified or not.

30
The Commission points out that it is not compulsory for Member States to report under the UWWTD for the agglomerations of less than 2 000 p.e. (reporting requests by the Commission under Article 15 of the UWWTD refer to collection and treatment data for agglomerations above 2 000 p.e.). Member States send additional reports to the Commission under Article 16 of the UWWTD which only concern general information about the 'disposal of urban waste water and sludge'.

For reasons of proportionality and in order not to increase the reporting effort, the Commission does not request reporting for agglomerations under 2 000 p.e., neither under Articles 15, 16 nor 17 of the UWWTD. Furthermore, the Commission does not request information which is not necessary to check compliance with Articles 3, 4 and 5 of the UWWTD.

Under the WFD, the Commission requests Member States to provide information on water bodies subject to significant pressures from urban waste water (regardless of the size of the agglomerations) and the measures that are put in place to achieve good status including quantitative indicators, e.g. on reduction of pollutant loads discharged. The Commission will rely on the provisions of the WFD to check the agglomerations under Article 7 of the UWWTD.

31
The Commission's compliance strategy under the UWWTD focuses on the largest emissions of pollutants in the water bodies. As such, the Commission does not oblige Member States to report on agglomerations under 2 000 p.e. since there is no obligation of collection and treatment for these agglomerations under Articles 3, 4 and 5 of the UWWTD. However under the WFD, the Commission requests Member States to provide information on water bodies subject to significant pressures from urban waste water (irrespective of the size of the agglomerations) and the measures that are put in place to achieve good status. Subsequently, Member States can take additional measures for agglomerations below 2 000 p.e. on a case-by-case basis.

33
The Commission considers that the efficacy of the process is not questionable: via the specific requests to MS launched in 2014 and referred to by the Court, the most recent available data regarding the deadlines 2009–10 have been requested from the MS authorities. In practical terms it means that information on compliance with the deadlines expired in 2009–10 will be updated by the authorities with more recent data (year requested: 2012 or 2013). In addition with the data from the 8th reporting exercise (reference years 2011–12), the Commission will be in a position to assess compliance with the new elapsed deadlines. These updates will enable the Commission, if considered appropriate, to launch infringement cases where necessary. As indicated by the Court, the Commission is currently analysing the information provided by the Member States in that respect.

37
The Commission considers that the commitment rates at programme level for all four Member States concerned at the end of 2013, as indicated in Table 5, is satisfactory.

Reply of the Commission

38
The Commission recognises that the absorption rate at the end of 2013 at all Member States concerned was quite low, hence the existence of a de-commitment risk at programme level (Article 93 of Council Regulation (EC) No 1083/2006). However, it should be stressed that there are objective reasons for this, as for example, the need to strengthen the technical, legal and administrative capacity in the Members States concerned. Moreover, the Commission points out that payments for most of the projects usually occur during the last implementing years (i.e. 2014 and 2015) as the eligibility end date is the end of 2015.

39
The Commission is aware that a number of projects may not be finalised by 31/12/2015 and that they can split into two separate phases (see also the Commission's reply to paragraph 40 hereunder). That is why in order to accelerate the implementation of the programmes concerned and address the de-commitment risk, a Task Force on implementation was established at the end of 2014 focusing, among others, to speed up implementation in the four Member States.

40
Taking into consideration that a number of projects can be split between two programming periods and in order to make it easier for Member States the Commission has proposed a modification of the programmes' closure guidelines, which were adopted on 30 April 2015 (Commission decision C(2015)2771 amending the Decision C(2013) 1573). Their key objective is to introduce more flexibility in some areas, including the 'phasing' of the unfinished projects from 2016 onwards.

As regards Slovakia and Romania and to a lesser extent Hungary the Commission is fully aware that, despite the significant contribution of the 2014–20 programmes' allocation in favour of the wastewater treatment area, it will most likely not be possible to fulfil all needs.

41
The Commission notes that according to Article 14 of the Council Regulation (EC) No 1083/2006 of 11 July 2006, the budget of the European Union allocated to the funds shall be implemented within the framework of shared management between the Member States and the Commission. Within this framework, the final decision for the projects selection falls under the responsibility of the Member States which have to ensure that the selected projects are in line with the relevant 2007–13 programming documents adopted by the Commission and that they also comply with the EU legislation (e.g. the UWWTD). The Commission considers that if no project applications have been submitted/approved for some bigger agglomerations this can be due to the fact that they were not considered 'mature' enough to fulfil the applied selection criteria (e.g. technical maturity/readiness to be implemented).

43
In general, core/common output as well as programme-specific result and output indicators are set for all 2007–13 programmes and their targets typically reflect the supported type of interventions (output indicator) or the expected aim relating to the potential beneficiaries (result indicator).

44
The Commission recognises that some target indicators may not be fulfilled by closure (end 2015). However the situation, as regards the fulfilment of indicator targets, varies from one MS to another and should in any case be subject to a review at closure as most of the wastewater treatment projects were contracted only in 2014.

Reply of the Commission

49
The Commission considers that the fact that Member States set stricter concentration limits than the UWWTD does not necessarily lead to the need to review the statutory limits set out in the Directive. Member States are free to implement the UWWTD beyond its requirements. Besides this, Member States are also obliged to comply with other relevant directives[1] in the area of water protection/quality.

54
The Commission has noted the same issue and has launched a study on overflows (see paragraph 56), which will enable to gather more detailed information on overflows at MS level and therefore obtain more accurate conclusions on related data.

The Commission has already addressed a huge pollution problem due to overflows in London and Whitburn, launching an infringement case in front of the Court of Justice of the EU (C-301/10, 18 October 2012). However, as there are no concrete requirements regarding overflows in the UWWTD, which simply states 'MS shall decide on measures to limit … overflows' (Annex I A), the Commission first needs to gather evidence on the type of measures used at MS level, their effectiveness and their practical application, before being able to address overflow pollution in a systematic manner at EU level.

Common Commission reply to paragraphs 55 and 56
The Commission considers that the study referred in paragraph 56 will allow a deeper assessment of the situation in each MS, which for the moment is not possible. On the basis of the conclusions, the Commission may decide to investigate those MS where it found that mismanagement of overflows may entail pollution problems by untreated waste water.

1 In particular the water framework directive (2000/60/EC) and its daughter directives on groundwater (Directive 2006/118/EC) and priority substances (EQS Directive 2008/105/EC), and, inter alia, the drinking water directive (Directive 98/83/EC), the bathing water directive (Directive 2006/7/EC), the marine strategy framework directive (2008/56/EC), the habitats directive (92/43/EEC) (in particular Article 6), and Regulation (EC) No 854/2004 (in particular Annex II.A.6).

58
The Commission underlines that Member States have an obligation to ensure that discharge of industrial waste water into collecting systems and urban waste water treatment plants comply with Article 11 and Annex I.C of the UWWTD, while detailed provisions linked to concentration limits are governed by national legislation.

64
The Commission highlights that it is up to MS to decide on how to control industrial installations discharges.

65
The UWWTD sets no specifications on the dimensioning of plants. Article 4 merely requires that the load shall be calculated on the basis of the maximum average weekly load entering the plant during the year. It is therefore for the Member States to decide on the dimensioning of the plants.

Without excluding the fact that the projects might have been oversized at the time of the audit, the Commission considers that the final appreciation and decision on the exact design and size of a WWTP should consider the 'state-of-the-art' standards, as well as a number of complex factual and hypothetical parameters.

In general, the size of the plants may be determined by several factors, including a safety margin to comply with the UWWTD at all times, coping with seasonal activities/variations such as tourism, industrial activities, or heavy rainwater flow and provision for possible future connection of additional settlements, population growth, etc.

Since 2007, the involvement of Jaspers structure (Joint Assistance to Support Projects in European Regions) aims at assisting Member States to improve the quality of major project applications including their technical characteristics, prior to their submission for grant financing under the funds.

67
The cost of reducing clear water must be examined, as a large reduction may be very costly. When the share of clear water in the inflow is high it has to be examined how to reduce it in a cost effective manner.

67 Second indent
The Commission agrees that this could be an option in cases where it is supported by appropriate cost/benefit analyses comparing the expected renovation cost with the expected benefits.

71 First indent
The Commission considers that the sludge treatment cost depends on the type of treatment which is chosen from the one hand, and on the final destination of the sludge from the plant on the other.

71 Third indent
The Commission supports benchmarking to improve the environmental performance of water utilities. In its reply to the European Citizens Initiative Right2Water (COM(2014) 177 final) the Commission committed itself to an action to explore the idea of benchmarking water quality and services, and organised a multi-stakeholder meeting in September 2014. This dialogue stressed that the term 'benchmarking' is used in a broad sense. A clear distinction should be made between increasing transparency as a goal in the light of the citizens initiative and benchmarking as a support management tool. In the latter sense, benchmarking is designed for utilities and benchmarking networks allowing for the assessment of performance through comparisons of similar entities containing a complex set of data and indicators. The Commission's role in this exercise is however limited to facilitate the dialogue on the exchange of best practices.

76
As a matter of principle, the Commission agrees that sludge should not be kept on site and will have to be, in a more or less near future, evacuated to a final destination.

83
The Commission is reflecting on a revision of the fertilizer regulation 2003/2003. One of the options under consideration is to establish legally binding heavy metal limit values and to possibly cover sewage sludge which meet these requirements for their fertilising properties, in a revised fertiliser regulation.

84
The Commission at this stage is not planning to propose a revision of the sewage sludge directive, deciding first for a possible revision of the fertiliser regulation before taking any future decision on the review of the sewage sludge directive.

87
The Commission agrees that more and more studies show the impact of microplastics in fresh and marine waters and that waste water could be a source of emission.

88
The Commission is reflecting on whether to propose a revised fertilisers regulation in 2015 (see also paragraphs 83 and 84).

95
The Commission states that the water framework directive (Article 9) requires ensuring an adequate contribution of the different water uses to the recovery of the costs of water services by 2010.

97
The Commission also considers that there is a risk that plant operators are not carrying out the necessary maintenance for profitability reasons. However, in the absence of a specific legal framework the operators' effectiveness falls within the remit of the Member States.

98
The Commission considers that an appropriate charging system is not only important from the point of view of the ERDF contribution but also desirable for the financial sustainability of the operation in the long run. The disincentive effects of the applied cost recovery principle so far will substantially be improved since the potential beneficiaries in the 2014–20 programming period do not necessarily need to carry out a cost–benefit analysis to determine the financing gap of their projects but a flat rate revenue percentage of 25 % can be applied.

99
If Member States choose to apply a flat rate of 25 %, in line with Article 61(3a) of Regulation (EU) No 1303/2013, the Commission is indeed to operate within the constraints this legal framework provides.

Common reply to paragraphs 101 to 105
See Commission's reply paragraph 98.

Conclusions and recommendations

106
The Commission considers that the low absorption rate at the end of 2013 could be for example due to the need to strengthen the technical, legal and administrative capacity in the four Member States concerned, the fact that payments for most of the projects usually occur during the last implementing years (i.e. 2014 and 2015) as the eligibility end date is the end of 2015.

The Commission agrees that an appropriate charging system is not only important from the point of view of the ERDF contribution but also desirable for the financial sustainability of the co-financed sewerage infrastructure. According to Regulation (EU) No 1303/2013 of 17 December 2013, the potential disincentive effects of cost recovery principle are expected to be gradually decreased, since Member States are required to fulfil the water 6.1 *ex ante* conditionality by providing evidence that the water cost recovery provisions laid down in Article 9 of the WFD, are observed when water infrastructure is co-financed by the funds.

The Commission notes the Court's finding that almost a third of the examined plants are oversized. Please refer furthermore to the Commission's reply to paragraph 65.

107 Second indent
Regarding the drop in agglomerations, the Commission considers that the follow up of the evolution in the number of p.e. is more significant than the changes in the number of agglomerations. The Commission will follow up on the Romanian situation under the frame of the SIIF Pilot (see Commission's reply to paragraphs 28 and 29).

107 Third indent
The Commission considers that it collects the information necessary and fit for purpose under the UWWTD and may request, in addition, information under the WFD for specific purposes (see Commission's reply to paragraphs 30 and 31).

108
The Commission states that the long process is due to the number of agglomerations concerned all over the EU. However, the SIIF reporting tool should improve the reporting process at national level.

Under the UWWTD 8th reporting exercise, the Commission has asked for 2011 or 2012 datasets.

Recommendation 1(a)
The Commission does not accept this recommendation.

The Commission does not currently intend to increase the reporting effort under the UWWTD with regards to agglomerations under 2 000 p.e. having collection systems in place. However under the WFD, the Commission requests Member States to provide information on water bodies subject to significant pressures from urban waste water (irrespective of the size of the agglomerations) and the measures that are put in place to achieve good ecological and chemical status.

Recommendation 1(b)
The Commission accepts this recommendation. The Commission does not currently intend to introduce a systematic verification on the number of agglomerations below 2 000 p.e. via the regular reporting exercises under Articles 15 and 17 of the UWWTD. However, the Commission will follow up in cases where significant changes have been brought to its attention or identified through other means, such as the pilot programme 'Structured Implementation and Information Framework'.

Recommendation 1(c)
The Commission accepts this recommendation and considers it already implemented in agglomerations above 2 000 p.e. In those agglomerations, the urban waste water treatment directive provides that collecting systems or individual or appropriate systems are in place.

Recommendation 1(d)
The Commission accepts the recommendation.

The delay between the reference year requested and the issuance of the Commission's report is due to many different processing and legal factors, both at Member State and Commission levels (e.g. Member States' internal processes, quality check of the data provided, number of agglomerations concerned, prioritisation, etc.). The Commission considers that the current Member States reporting systems does not enable earlier reporting deadlines, which would be otherwise desirable as the national systems delay the Commission's own reporting time. The Commission is working on improving its own reporting time and collecting more recent data from Member States by developing a pilot project involving a selected number of Member States, the so-called SIIF reporting tool.

Recommendation 1(e)
The Commission accepts the recommendation.

The Commission will, independently of this audit, launch a broad review of reporting requirements under EU environment legislation in the framework of its 'Better Regulation' agenda[2] .

2 COM(2015) 215 final. Better regulation for better results — An EU agenda of 19/05/2015.

109
The Commission also recognises that there are de-commitment risks at programme level according to Article 93 of Council Regulation (EC) No 1083/2006 for the four Member States examined. Some of the main reasons for the implementation delays are outlined in the Commission's replies to paragraphs 38 and 106.

In order to find ways to accelerate the implementation of the programmes concerned and address the de-commitment risk, a Task Force on implementation was established at the end of 2014 focusing, among others, to speed up implementation by the four MSs concerned.

Also, in order to ensure the smooth finalisation of a number of projects the Commission has proposed a modification of the programmes' closure guidelines aiming to introduce more flexibility in some areas, including the 'phasing' of the unfinished projects from 2016 onwards (refer also to Commission's reply to paragraph 40).

110
The European Regional Development Fund (ERDF) and the Cohesion Fund main objectives in the 2007–13 programming period are to reduce the gap between the levels of socioeconomic development of the EU regions and not necessarily to contribute in meeting the UWWTD deadlines which falls under the responsibility of the Member States concerned and this, independently of the level of allocated funds. In so doing the 2007–13 ERDF/CF contribution may indeed not be sufficient to fulfil all needs in the field of sewerage infrastructure in meeting the UWWTD deadlines.

Recommendation 2(a)
The Commission partially accepts this recommendation.

As regards agglomerations of more than 2 000 p.e., it is already implemented as such a requirement is already in place under Article 17 of the UWWTD. Article 17 reporting is meant to reconcile the need to report with the progress in implementing the UWWTD. Such information is made available and updated by MS every 2 years in case of changes, in accordance with Article 17 of the UWWTD. In addition, through the new reporting template (adopted with Decision No 2014/431/EU of 26/06/14), MS may report on the implementation of programmes, including information on forecasted investments, related use of funds and deadlines concerning each reported project. One of the SIIF pilot programme objectives is to make this information available to the public.

Concerning agglomerations of less than 2 000 p.e., the Commission considers that such requirement would unduly increase the reporting effort, and may ultimately lead to inaccuracies in the data reported by MS. Furthermore, there are no reporting obligations for these agglomerations under the UWWTD.

Recommendation 2(b)
The Commission accepts this recommendation.

The 2014–20 programmes mainly focus on agglomerations of more than 2 000 p.e. This is also the objective of the reporting requirements enshrined in Article 17 of the UWWTD (see also reply above point (a)).

111
The Commission considers that it is for the Member States to decide on plant permits.

114
The UWWTD does not regulate the size of plants, apart from the general obligation under Article 4. In addition, it is important to note that this type of infrastructure has a long lifetime and it is hard to assess their appropriate size only in the short term. In general, the size of the plants may be determined by several factors such as safety margin to comply with the UWWTD in the long run, coping with seasonal activities/variations such as tourism, heavy rains water inflow or provision for possible future connections due to population growth (see also Commission's reply to paragraph 65).

Recommendation 3(a)
The Commission does not accept the recommendation. For the moment the Commission does not intend to launch an assessment of the appropriateness of the concentration limits in the UWWTD, nor to review the directive in the near future.

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

When preparing its communication on environmental inspections in 2012, the Commission has assessed in a broad way rules, controls and checks related to EU environmental legislation. While this work has indicated that little information on the capacities of inspection regimes was available in several of the Member States and the use of sanctions tended to be variable[3]; the Commission is of the opinion that the type, number and frequency of checks and inspections are best addressed by Member State authorities on the basis of risk. As regards fines, conformity checks are currently being done on the basis of the Member States legislation used to give effect to Directive 2008/99/EC[4] which, inter alia, provides for sanctions on natural and legal persons for the most serious breaches of environmental law, including those relevant to Directive 91/271/EEC (UWWTD).

3 http://ec.europa.eu/environment/legal/law/pdf/Final%20report%20inspections.pdf

4 Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law OJ L 328, 6.12.2008, pp. 28–37.

Recommendation 3(c)
The Commission accepts this recommendation and will examine this possibility in light of the results of the relevant study launched recently.

Recommendation 3(d)
The Commission accepts the Court's recommendation.

In compliance with the regulation for the 2014–20 programming period, the Commission will rely on independent expert assessments (including Jaspers) to make sure that waste water treatment plants are properly sized. However, it is at the discretion of Member States whether a cost–benefit analysis is carried out.

Recommendation 3(e)
The Commission accepts this recommendation. However, the Commission would like to note that there are no legal obligations imposed on Member States to apply the existing practices or to participate in benchmarking exercises (see also Commission's reply to paragraph 71).

116
The Commission considers that landfilling or long-term storage of sewage sludge in Romania is not sustainable and should not be accepted in co-funded projects.

117
The Commission is reflecting on a revision of the fertilizer regulation 2003/2003. One of the options under consideration is to establish legally binding heavy metal limit values and to possibly cover sewage sludge which meet these requirements for their fertilising properties, in a revised fertiliser regulation.

Reply of the Commission

Recommendation 4(a)

The Commission does not accept this recommendation. The Commission systematically encourages Member States to include the appropriate sludge treatment in the physical subject of the major projects applications submitted for financing under the funds. However, the Commission cannot impose this practice to Member States within the existing legal framework as Member States have no obligation to link the final payments of programmes to the existence of an appropriate solution for reusing the sewerage sludge.

Recommendation 4(b)

The Commission partially accepts this recommendation. The Commission at this stage is not planning to propose a revision of the sewage sludge directive, deciding first for a possible revision of the fertiliser regulation, before taking any future decision on the review of the sewage sludge directive.

118

The Commission states that the water framework directive (Article 9) requires ensuring an adequate contribution of the different water uses to the recovery of the costs of water services by 2010.

The Commission considers that an appropriate charging system is not only important from the point of view of the ERDF contribution but also desirable for the financial sustainability of the operation in the long run. The disincentive effects of the applied cost recovery principle so far will substantially be improved since the potential beneficiaries in the 2014–20 programming period do not necessarily need to carry out a cost–benefit analysis to determine the financing gap of their projects but a flat rate revenue percentage of 25 % can be applied.

Recommendation 5(a)

The Commission accepts this recommendation. Member States are required to implement an appropriate water tariff policy through Article 9.1 of the WFD, and through the *ex ante* conditionality 6.1 of Annex XI of CPR 1303/2013.

However, the Commission stresses that given the multidimensional nature of water values and the fact that the 4 % affordability ratio is indicative, the setting of the final ratio falls within the remit of Member States.

Recommendation 5(b)

The Commission does not accept this recommendation.

In the absence of a specific legal framework, the responsibility to ensure funds availability for maintenance and renewal falls within the remit of the owners and/or operators of the sewerage infrastructure, therefore within the remit of Member States.

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Waste water and sewage sludge can affect the quality of waters and soils. In response to this, the EU has adopted directives and co-financed the building of collecting systems and waste water treatment plants.
The Court checked the implementation of the urban waste water treatment directive in four Member States of the Danube river basin. It also examined a sample of 28 treatment plants, to see how they treated waste water, handled sewage sludge and assured financial sustainability.
The Court makes recommendations on reporting, on ways to improve effectiveness, efficiency and the sustainability of treatment plants, on the relevance of concentration limits, on the use of sewage sludge and on monitoring pollutants in sludge.

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