EU Structural measures spending on the Water Supply and Waste Water Infrastructures


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I. Political/ Social Interest

✓ Concern for drinking water quality in most EU Member States
✓ Concern for ecological status of waters (rivers & seas), quality of waste water discharges
✓ Water availability = driver for economic development. Competition among users
✓ Raising awareness of the importance of efficient water management
✓ Concern about affordable access to water for different uses.
I. Financial Importance for the EU and for each country

- [https://cohesiondata.ec.europa.eu/themes/6](https://cohesiondata.ec.europa.eu/themes/6)

The amount of Cohesion Policy funds (ERDF & CF) allocated to the provision of drinking water and the treatment of waste water infrastructures count by 17% of the total budget for Environment & Resource Efficiency.

![Bar chart showing the amount of Cohesion Policy funds for waste water treatment and provision of drinking water from 2007-2013 and 2014-2020 in million €.](chart_image.png)
I. MORE EFFICIENT/SUSTAINABLE MANAGEMENT OF WATER IS POSSIBLE

The European Water Platform WTssP http://wssttp.eu/
II. Scope of ECA water related Audits

- SR 9/2010: 28 water supply systems in four MS, including dams, desalination main transport pipes, purification plants, urban water supply networks.

- SR 2/2015: 28 UWWTP in four MS

- SR 3/2016: 10 UWWTP in two MS
III. Risks related to cost-effectiveness & sustainability

The use of new fresh water sources not fully justified /too expensive

• priority allocated to incorrect users,
• limited consideration of all available water sources,
• incorrect water demand management, leakages
• Leading to expensive projects /oversized projects/ unsustainable use of water resources

Inappropriate implementation of the infrastructure

• complexity of projects,
• many actors involved,
• short term vision

Leading to cost overruns and delays, inadequate technical solutions, incomplete systems, too big or too small water networks.

Inappropriate tariff setting & too high operating cost= lack of cost recovery

Leading to subsidy level not consistent with the socio-economic situation, too low price/ too high operating costs, unsustainable water systems
IV. Methods of setting up audit objectives and criteria

• Analysis of applicable legal base (DWD, UWWTD, WFD, Nitrates Directive)

• Analysis of financial data in order to localize the expenditure (requests to Member States and Commission)

• Analysis of management procedures at Commission and Member State level to approve and monitor projects

• Discussion with experts in water supply & waste water treatment systems, in nutrients monitoring

• Analysis of research studies and reports in the field (EIB, OECD, IWA, EEA, WB, HELCOM, Baltic Nest Institute)

• Pilot missions to test relevance and feasibility of audit questions before official starting of the audit.
V. Audit questions set up in order to address all identified risks

Audit of water supply systems SR 9/2010

<table>
<thead>
<tr>
<th>Level 2 audit questions</th>
<th>Risks addressed</th>
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<tbody>
<tr>
<td>1. Were the solutions adopted the most appropriate to address the needs of the areas concerned?</td>
<td>Effectiveness/sustainability</td>
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<tr>
<td>2. Have the projects achieved the objective of improving the water supply for domestic use?</td>
<td>effectiveness</td>
</tr>
<tr>
<td>3. Have the objectives been achieved at the best cost for the EU budget?</td>
<td>efficiency</td>
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<td>4. Were tariffs set at a level which takes into account cost recovery / affordability and sustainability of water services</td>
<td>sustainability</td>
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VII. Audit techniques

- Analysis of water planning docs as regards audit criteria: available sources, quality at the source, distance to the supplied towns, population and consumption trends;

- Data collection from water supply & waste water treatment companies before on-the-spot visits for direct measurement of project’s achievement: number of users domestic/industrial, volume extracted, volume sold, leakages, quality of water discharged, quality & use of sludge, infiltration, overfloods, operating costs & water tariffs;

- Calculations & provision of technical benchmarks from experts: leakages, average cost of pipes, purification techniques, desalination techniques;

- Review of financial analysis: Cost Benefit Analysis underlying the EU grant application;

- Analysis of tariff setting rules and accounting data
VII. Examples of audit findings

Possible reduced size by better managing water demand and of using closer/cheaper water resources SR 9/2010

Dam and water mains to supply a big city. EU grant 55 million €. Justified on the need of additional water supply of 34hm³/year. EC required to implement a plan of improvement of transport and distribution network and meters in all individual flats. At the date of completion, 2007, city demand went down by + 38 hm³.
A group of municipalities were facing the pollution by nutrients from the agriculture of their water sources for human consumption. Instead of using nearby sources for the provision of drinking water, they invest in wells and water mains from a distance of 50Km, because of historic farmers rights. At the date of audit water authorities refused to granted an extraction permit. EU grant 12,10 million €.
VII. Examples of audit findings
delays & cost overruns SR 3/2016

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By the end of 2015, according to data provided by the Polish authorities, Poland will have overrun its waste water collection budget by 95% and its waste water treatment plant budget by 79%, with both of these budgets being mainly EU co-financed. However, despite significant investment, the country is far from achieving compliance. Polish national authorities foresee that 1 029 out of 1 559 agglomerations, representing 63% of the waste water pollution load of the country, will not be fully compliant by the end of 2015. Incorrect implementation of the Accession Treaty and the inaccurate and changing definition of agglomerations45 are among the reasons for the significant delays.
VII. Examples of audit findings
oversized UWWTP SR 2/2015

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

Figure 2

Capacity utilisation expressed in p.e.

Romania
Slovakia
Hungary
Czech Republic

Source: ECA analysis.

Facial resources whether EU or National.
VII. Examples of audit findings
oversized UWWTP SR 2/2015

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.
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%).

Cost of energy is 30% of operating cost. Producing it from sludge reduced energy costs.
VII. Examples of audit findings

Member States try to maximize EU grant by keeping tariffs at low level SR 9/2010

Tariffs of water in areas supplied by the projects audited within SR 9/2010 < 1% of disposable households income.

No correlation between share of household’s income paid for water and rate of EU co-financing. EU grants not promoted cost-recovery principle.
VII. Examples of audit findings
Still in 2012 water tariffs well below acceptable affordability levels, not covering the operation/maintenance and depreciation cost SR 2/2015

2012 average waste water tariffs

<table>
<thead>
<tr>
<th>Country</th>
<th>Waste water tariff in euro/m²</th>
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<tbody>
<tr>
<td>Hungary</td>
<td>0.9</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>0.8</td>
</tr>
<tr>
<td>Slovakia</td>
<td>0.6</td>
</tr>
<tr>
<td>Romania</td>
<td>0.4</td>
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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. Assess-

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

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.
Thank you for your attention

Let’s discuss your findings and views