

## Effectiveness of water resource management in rural areas

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### Focus and scope: (1-3 paragraphs)

The audited water companies inefficiently managed water resources in rural municipalities. Supervision over the collective water supply was ineffective. Water systems in the audited provinces were obsolete and in bad condition. Nevertheless, as much as ¾ of the audited companies did not commission obligatory periodic inspections. Obligatory continuous monitoring was missing. Consequences included numerous water system breakdowns and huge water losses: the audited companies wasted even ½ of water produced. Water quality issues were reported in 80% of audited entities. In extreme cases water was non-potable for a few hundreds of days and potable under certain conditions even as long as eight years.

### Methodology, tools used: (2-3 paragraphs)

The main audit question was to determine if the water management in rural municipalities was efficient.

The audit scope covered 5 voivodships (out of 16 in Poland) where activities of 20 water supply companies were subject to audit. In particular, the audit aimed to answer: if the water supply companies had properly prepared human and organisational resources and financial resources sufficient to perform their tasks; whether the water management was performed correctly; if the supervision over the collective water supply and waste water management was sufficient.

Pursuant to the Act on the Supreme Audit Office Act, the audit data was collected from every rural commune, including those not covered by the audit, located in the voivodeships included in the audit. The audit data was collected also from the Province Sanitary Inspectors located in the Kujawsko-Pomorskie, Pomorskie, Lubuskie, Masovian and Opolskie voivodeships; from the Chief Inspector of Environmental Protection and from the Polish Waters State Water Management Company. Upon request of the Supreme Audit Office, the District Construction Supervision Inspectorates performed out ad hoc inspections of 41 water treatment plants and 59 sections of the water supply networks regarding technical condition and suitability for use.

As a result of discovered irregularities the NIK notified proper authorities about suspected construction laws offenses, related to: the failure to maintain proper technical condition of water networks or devices protecting water from contamination and also regarding failures to perform periodic inspections of the technical condition of buildings and missing construction facility books.

### Audited institutions (please list them in 1 paragraph)

The audit was carried out in 20 sample water supply companies located in five voivodeships. Companies were selected after taking into account the water consumption in rural households per capita and the size of population using the water supply networks, in voivodeships: Lubuskie, Opolskie, (lowest value); in Kujawsko-Pomorskie, Pomorskie (average), Mazowieckie (above average). The audit was conducted on the Supreme Audit Office's own initiative by five regional branches of the NIK: in Bydgoszcz, Gdańsk, Opole, Warsaw and Zielona Góra (the audit coordinator).

### Audit period

The audit covered period from 1 January 2019 to 30 September 2021 with the use of evidence produced earlier and later which was relevant for the audit.

### Abstract of the National Report, (2-5 pages)

The water supply companies in rural communes inefficiently managed water resources and a significant part of their activities was incorrect. Supervision over the collective water supply was inefficient. Limited financial resources or insufficient organizational and staff preparation have often resulted in the lack of effective actions aimed at eliminating significant number of failures to prevent water losses, to improve the water quality, or to reliably perform obligations related to carrying out periodic inspections of construction facilities.

Lack of current water use licences was revealed in seven out of 20 audited water supply companies. Non-compliance with restrictions regarding the water consumption was revealed in 25% of audited units. Irregularities related to the development of regulations for water supply and sewage disposal were disclosed in 20% of audited companies, what proves improper tasks' performance.

Auditors revealed also insufficient approach to obligations related to the operation of protection zones water intakes. Irregularities were disclosed in almost half (8 out of 20) of the audited water companies, mainly consisting in improper protection or marking of the area for direct protection of water intakes, or the use of land for purposes unrelated to the operation of the water intake. Also regularities related to the lack of periodic inspections of construction facilities were found in almost all of the inspected buildings. Only two units, out of 20, fulfilled their obligations under the Construction Law.  $\frac{3}{4}$  of audited companies did not commission obligatory periodic inspections of water supply networks. The failure to fulfil above obligations in connection with old age of the networks and their poor technical condition, could translate in particular into significant number of failures resulting in, among others: water losses and water quality parameters violations. NIK states, that the activities of water companies cannot be limited only to liquidation of failures or taking actions to restore the quality parameters of the supplied water, but should also be aimed at taking preventive actions. However, apart from the lack of timely periodic inspections or constant network monitoring, even employees of 40% of companies did not know the actual age of water networks, and 35% did not know the material structure of the used water supply networks.

In audited companies in total, approx. 1.8 thousand cases occurred of water supply networks failures, and water losses were estimated at over PLN 21 million – which was 1/3 of the volume of produced water. There were unjustified water losses not only a waste of scarce water resources. The losses should have been considered in the economic aspect, especially in the context of the lack of necessary financial resources indicated by the audited entities for the proper implementation of tasks. Also the information activities carried out by audited companies were insufficient and reporting on water resources was unreliable in many cases.

Almost 40% of companies units obliged to provide information on water services referred to in the Quality Regulation of water, did not fulfil their obligation. Only seven, of the 20 audited units timely and reliably met their obligations and provided statistical obligations to the Central Statistical Office. Auditors revealed also lack of reliability in completing reports submitted to the Environment Protection Inspectorates and Water Management Company Polish Waters.

Activities carried out to ensure the required proper quality of supplied water were not fully effective. The audit revealed that in 2019–2021 (1st half) in 80% of the audited companies occurred cases of water insufficient with parameters required by the Regulation on Water Quality. In one company only 50% of certificates issued by the Province Sanitary Inspector, determined that the water was suitable for drinking. In audited companies were disclosed cases of water not being suitable for consumption even for 153 days, exceeding its parameters for a period of up to 227 days, or conditional suitability of water for consumption for eight years (since 2013).

The NIK audit findings confirmed the inappropriate way of tasks implementation in case 25% of the audited companies regarding missing or insufficient monitoring of the water contamination by radioactive substances.

### Main findings

Despite the fact that in Poland during the last decade some promising trends in access to basic and securely managed drinking water and sanitation services have been reported, indicating some progress in achieving Sustainable Development Goals 6.1 and 6.2.1, this progress is uneven and mainly concentrated in urban areas. Unfortunately rural residents are in a much less favourable situation. For example disparities in access to basic drinking water and sanitation services between urban and rural populations may be as much as fourfold.

## Recommendations

To the Minister of Infrastructure – to amend the Act on collective water supply by adding among others the following provisions on water companies' obligations:

-to reduce prices of water delivered to consumers in case the quality or the pressure of water does not comply with binding regulations;

-technical data on the water system used should be included in the tariff approval request.

To the Minister of Agriculture and Rural Development: to intensify efforts to develop the water and sewage infrastructure in rural areas as part of relevant domestic programmes and programmes co-funded by the EU.

To the Chief Environment Protection Inspector: make sure the Environment Protection Inspectorate bodies take effective steps to establish higher fees under the Water Law Act.

To the State Water Management Company Polish Waters: to develop specific and clear-cut instructions on motivating service recipients to use water rationally and reduce sewage pollution, as mentioned in the tariff ordinance.

### Summary:

A decrease in the level of water safety has been observed in recent years. Changes in climate (that have, for example, resulted in drought), insufficient water retention, demographic changes and activities in many areas of economy affect the availability of water resources. In the light of the limited size of these resources, steps taken to use them practically play an increasingly vital role. The importance of proper management of water resources is underlined in the context of sustainable development. Disparity between urban and rural areas in terms of progress in achieving the goals of sustainable development (related to water resources management), or less access to water supplies and sewage infrastructure in villages, reflect the need to assess the adequacy of actions taken by water companies. The Supreme Audit Office carried out an audit of the effectiveness of water resource management in rural areas. Its results show numerous irregularities and neglects resulting in significant water losses and problems in terms of water quality. The article highlights the most important findings of the audit in the context of the protection of water resources.