

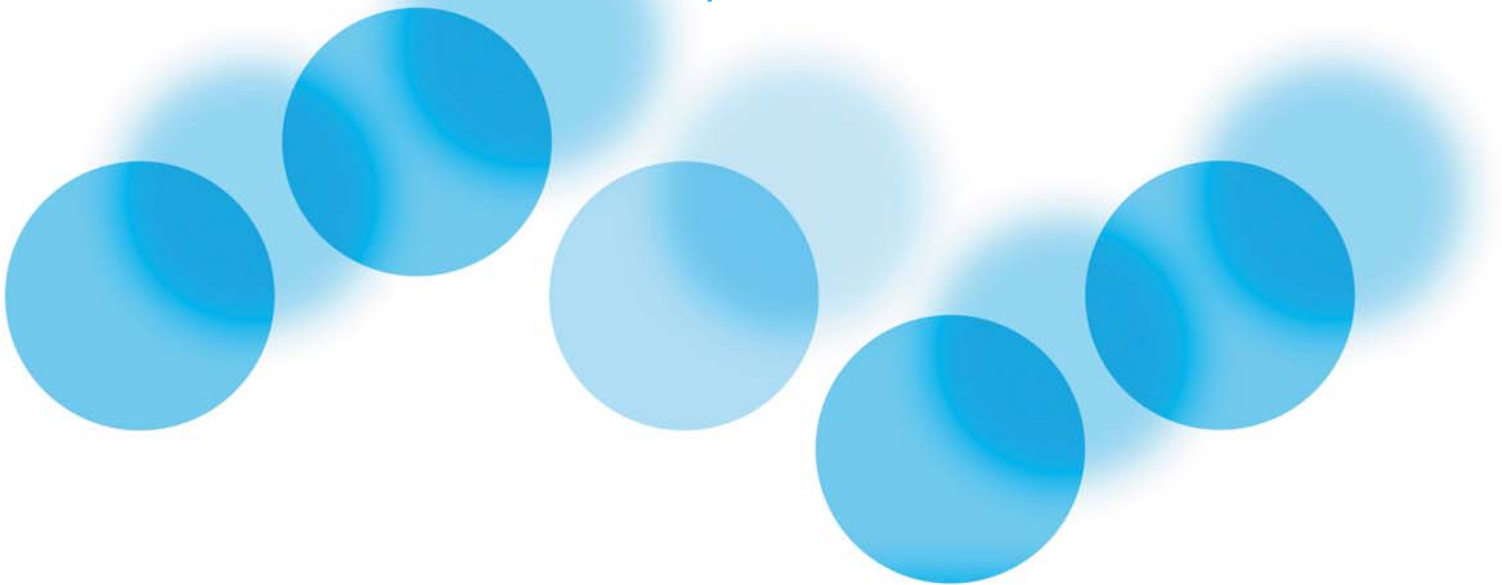


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ASSESSMENT AND DEVELOPMENT OF MUNICIPAL WATER AND WASTEWATER TARIFFS AND EFFLUENT CHARGES IN THE DANUBE RIVER BASIN.

Volume 2: Country-Specific Issues and
Proposed Tariff and Charge Reforms:
Romania – Summary



WORKING FOR THE DANUBE AND ITS PEOPLE

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PREFACE

The Danube Regional Project (DRP) consists of several components and numerous activities, one of which was "Assessment and Development of Municipal Water and Wastewater Tariffs and Effluent Charges in the Danube River Basin" (A grouping of activities 1.6 and 1.7 of Project Component 1). This work often took the shorthand name "Tariffs and Effluent Charges Project" and Phase I of this work was undertaken by a team of country, regional, and international consultants. Phase I of the UNDP/GEF DRP ended in mid-2004 and many of the results of Phase I the Tariffs and Effluent Charges Project are reported in two volumes.

Volume 1 is entitled *An Overview of Tariff and Effluent Charge Reform Issues and Proposals*. Volume 1 builds on all other project outputs. It reviews the methodology and tools developed and applied by the Project team; introduces some of the economic theory and international experience germane to design and performance of tariffs and charges; describes general conditions, tariff regimes, and effluent charges currently applicable to municipal water and wastewater systems in the region; and describes and develops in a structured way a initial series of tariff, effluent charge and related institutional reform proposals.

Volume 2 is entitled *Country-Specific Issues and Proposed Tariff and Charge Reforms*. It consists of country reports for each of the seven countries examined most extensively by our project. Each country report, in turn, consists of three documents: a case study, a national profile, and a brief introduction and summary document. The principle author(s) of the seven country reports were the country consultants of the Project Team.

The authors of the Volume 2 components prepared these documents in 2003 and early 2004. The documents are as up to date as the authors could make them, usually including some discussion of anticipated changes or legislation under development. Still, the reader should be advised that an extended review process may have meant that new data are now available and some of the institutional detail pertaining to a specific country or case study community may now be out of date.

All documents in electronic version – Volume 1 and Volume 2 - may be read or printed from the DRP web site (www.undp-drp.org), from the page [Activities / Policies / Tariffs and Charges / Final Reports Phase 1](#).

We want to thank the authors of these country-specific documents for their professional care and personal devotion to the Tariffs and Effluent Charges Project. It has been a pleasure to work with, and learn from, them throughout the course of the Project.

One purpose of the Tariffs and Effluent Charges Project was to promote a structured discussion that would encourage further consideration, testing, and adoption of various tariff and effluent charge reform proposals. As leaders and coordinators of the Project, the interested reader is welcome to contact either of us with questions or suggestions regarding the discussion and proposals included in either volume of the Project reports. We will forward questions or issues better addressed by the authors of these country-specific documents directly to them.

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Executive Summary

The *Country Profile Report – ROMANIA; National Profile for Drinking Water and Wastewater* was drafted within the framework of the project "Assessment and Development of Water and Wastewater Tariffs and Effluent Charges Designs for Nutrient Reduction in the Danube River Basin (DRB)". The main purpose was to give an overview of the organization and functioning of the management units in the Romanian water sector (Danube basin), regulatory framework, service users etc. in order to improve both water resource management generally and protection of water bodies from eutrophication and hazardous substances. In this respect, the paper explored the use of water and waste-water service tariffs and effluent charges, fines and incentives as a tool for nutrient reduction. The paper ends with policy issues that will need solutions and policies for suggested reforms.

The first section of the paper illustrates the main features of the Romanian water resources, administrative structures, demand for raw water etc. In Romania, the natural raw water resources, while technically utilizable, cannot be used without making certain significant investments in complex development water works of the hydrographic basins and in treatment installations because:

- one of the most important water resource, the Danube river, can be used in a small extent, due to its eccentric position, at the Southern limit of the territory;
- the inland rivers are unequally distributed all over the territory, significant areas remaining with insufficient resources, presenting at the same time important flow variations in time and space;
- the pollution of certain inland rivers, exceeds the admissible limits, which makes difficult and sometimes even prohibitive their use.

From the data presented resulted that municipalities are one important water polluter. The situation is significant where localities are situated up stream and down stream of a river that is the only water source.

The second section illustrates the legal situation regarding water laws and regulations. There are described laws of the water sector, in Romania, the institutional framework; major RUs in the water sector, Water Permitting mechanism etc. In Romania, raw waters are considered a natural resource that is managed by a public body. The water users are municipalities (through MUs), industry that it is not linked to a municipal network and has its own water source, agriculture for irrigation and other users. Municipal W&WW operators have to observe water laws that are general for all users. The legal framework is very important for municipalities especially in this period when the whole environmental "acquis" was transposed in Romania. As a consequence for municipalities, the targets of water infrastructure development programmes are, to a large extent, externally determined by the EU laws. Some estimates say that only for the water sector, Romanian municipalities will have to invest around 9 billion €, in order to implement all EU laws.

The third section deals with issues related to the water used by localities: production and consumption of drinking water, metering and leakage of drinking water, wastewater from localities etc. So, from the 22.4 million inhabitants, living in Romania, only 14.7 million persons (65% of total) have drinkable water supplied by public service; of this amount 11.3 million persons are in the urban area (76.9 %) and 3.4 mil. in the rural area (23.1 %). In the last 25 years, there was an increase in the number of households connected to the network from 29% to 65% of the population.

The fourth section analyses the situation regarding the mechanism of pricing water and wastewater; there are illustrated the pricing mechanism for raw water abstraction, tariffs for drinking water, tariffs for wastewater. In Romania, economic instruments for water management and protection include fixed service charges (drinking water treatment and distribution, and sewage network and waste-water treatment), various water charges, taxes, penalties and allowances (bonus). The major aim is to have a rational and economical management of waters to ensure that users respect the quality limits for water

discharges, to prevent the depletion of the water resources and to avoid quality damage, and resource conservation. There are used the next pricing instruments:

- *Prices for raw water* - are the same throughout Romania but differ in accordance with the source of water (e.g., inner rivers, the Danube, or groundwater) and the category of users (industries, households, power plants, farms, fisheries, etc.);
- *Tariffs* - are levied on water pollution to reduce suspended and oxygen-depleting substances in river flows using limits set by the law. If the limits are exceeded, fines or penalties are levied;
- *Fines* are levied for violation of the laws, standards, regulations;
- *Penalties* are levied for discharging larger amounts of pollutants or abstracting higher amount of water than the quantities established by WMAU.
- *Bonuses* are granted by National Authority Romanian Waters to water users that take measures to protect waters and discharge less pollutants than the level granted by WMAU; the bonus could be up to 10% of the raw water bill in one year.

The fifth section analyses the W&WW infrastructure: infrastructure for drinking water, infrastructure for wastewater, opportunities for investment in W&WW infrastructure in urban and rural areas. In 2001, in Romania, drinking water networks have had a length of 39104 Km and a capacity for producing drinking water of 10.5 million m³/day. Across regions drinking water network are even distributed without big discrepancies. In 2001, in Romania were identified 1141 facilities for the treating the wastewater, out of which 313 for treatment of wastewater from localities. From 313 only 162 were properly operated (see Table 15).

From the total number of 602 wastewater treatment plants ineffectively operating, 61.5% are from the industry sector, 25.1.0% from localities and 13.5% from agriculture. There are 47 towns, including important urban centers as București, Craiova, Drobeta-Turnu-Severin, Brăila, Galați, Tulcea, that do not have wastewater treatment plants and eliminate used waters in the nearby rivers. In the period 1997-2001 it has been registered an increase of the sewage network with 1,088 Km.

The sixth section deals with issues related to the financing W&WW services in Romania as: financing the current activities of drinking water and wastewater services, financing the investment in W&WW infrastructure, W&WW investment co-financed with foreign aid. In Romania, financing local services could be made in several ways, involving only local authorities and/or MU:

- Granting subsidies through the local budget for 100% of expenditures (the case of road maintenance and green areas, parks etc.);
- Granting subsidies that cover a part of the cost of the service (heat and public transport); subsidies could be granted directly to the service provider or to some social groups with low revenues (mainly for public transportation and heating in winter period).
- Tariffs and charges that cover the running costs (mainly the W&WW services);

For W&WW services there is neither grant nor subsidy available from central government to cover current costs (the same situation is for waste management). MUs should cover their expenditures only from tariffs and charges.

According to the law, tariffs should also provide a share for a development fund and a small benefit for MU. Owing to the fact that in most of cases Local Councils want to keep tariffs down, many MU are in red, registering losses. When the situation is aggravated by inflation or increase of the price for other utilities and the power utilities threaten to switch off the power, Local Councils agree for an increase of the tariffs and charges. In cases when a formula was agreed, then the increase of the tariffs is made automatic. W&WW operators receive and have received grants only from EU through ISPA instrument. ISPA is addressing issues in the field of transport and environment (water and waste management). Up to present, 33 ISPA Financing Memorandums have been signed by Romanian authorities, with a total amount of 1,6 billion euro, representing 70% of the EU contribution for the

period 2000-2006. There are more than 20 W&WW projects financed under ISPA. The amount of the W&WW projects financed by ISPA is more than 680 million €. The strategy for ISPA was to begin with larger cities with a population bigger than 250000 inhabitants and later on to continue with small cities. As the ISPA financing covers only 75% of the investment and 25% have to be local contribution, all municipalities have to find ways to cover their share. For this loans from EBRD and EIB have been used in many cases.

The seventh section is dealing with Management Units (MUs) (types of management units and their operation, trends in formation and consolidation of MUs). For instance in 2001, public services of communal husbandry was offered by a number of 556 MUs, subordinated to the local public administration authorities or operating with private capital; there were registered 74 Autonomous Regie and 482 commercial companies (Limited Liability Companies, stock companies etc.). Considering the participation with capital, commercial companies could be divided into the next categories:

- 216 commercial companies with 100% capital owned by the local authorities;
- 30 commercial companies in which local public authorities have contributed with more than 50% capital;
- 236 commercial companies where local public authorities have contributed with less than 50% capital.

The transposition of EU legislation will have an important effect on creation of new MUs. Agglomeration of localities that have a population equivalent bigger than 2000 inhabitants have to build W&WW networks, according to the latest estimate of the 11 branches of NARW. There are 2609 agglomeration with more than 2000 inhabitants:

- 2,346 agglomerations with a population between 2,000 – 10,000 inhabitants;
- 111 agglomerations with a population between 10,000 – 15,000 inhabitants;
- 131 agglomerations with a population between 15,001 – 150,000 inhabitants.;
- 21 agglomerations with a population with more than 150000 inhabitants.

Combining small localities for the creation of W&WW networks will be a complicated problem. Out of the 2609 agglomerations, 453 agglomeration have sewage systems and 340 agglomeration have wastewater treatment plants. Out of these only 11 wastewater treatment plants and two sewage systems are in compliance with EU legislation

The eighth section includes the main policy issues identified. Romania's water system is broadly developed and we could say that quantitatively, the water resources are sufficient to cover the national water demand. In particular, hydro structures have spare capacity and are generally sufficient to manage floods and droughts. One important problem arise from the fact that there are geographical differences of the rivers' debit and significant seasonal variations: there are seasons with high precipitation level and other season when the rain is missing for long periods. Owing to this peculiarity in Romania many reservoirs have to be developed in order to retain water.

The paper identifies three issues (1) water consumption and waste-water generation; (2) Level of municipal water tariffs and (3) economic sustainability of the water utility. To solve these issues the authors proposed several solutions.

The paper ends with Annexes and Bibliography.

Case study: Drinking water and sewerage systems of Pitesti, Romania

(Executive Summary)

City Pitesti, located at 120 km West of Bucharest, is the capital of the Arges district and is located at the confluence of Arges and Doamnei rivers. Drinking water treatment and distribution, wastewater collection and treatment for Pitesti fall under the responsibility of APA-CANAL-PITESTI. At present, neither the drinking-water treatment installation nor the wastewater treatment installations operate to international standards. In addition, the water distribution network and the sewerage systems need substantial rehabilitation. The existing installations and pipe works are old and much equipment is in need of modernization and/or replacement. Given the importance of providing adequate water and wastewater services, both to the population and industries, APA-CANAL-PITESTI has undertaken initiatives towards rehabilitation of the installations.

APA-CANAL-PITESTI is a Romanian juridical person, registered in the Commercial Register and has a status as commercial company on shares, with a unique share holder – Pitesti Local Council, which approves the Rules of Organizing and Operations. The company signed in 2001 with the Local Council Pitesti one Concession Contract which has as object of activity the concession of the public service of local interest referring to the activity of drinking water production, transport and distribution, as well as the wastewater and storm water collection, transport and treatment. The contract was signed for a period of 20 years. According to the contract stipulations, all the actives in the Local Council property used for drinking water supply, transport and treating wastewater collection, transport and treatment are given for administration to the contractor.

The company performs services for around 207,000 inhabitants and the important economical agents in the Pitesti city area, the surrounding villages (Albota, Maracineni, Bascov, Stefanesti, Bradu) and the area Platforma Cotmeana. The drinking water produced in 2002 was 30035 thousands m³ (invoiced 76%) and around 27428 thousands m³ (invoiced 70%) in 2003. The metering activity covers 92.9% from the water delivered but for dwellings only 63.4%.

The average level in 2003 of the water & sewerage tariffs of APA-CANAL are 6,462 ROL/m³ and 5,236 ROL/m³ and are the same for population and economic units & industries. The tariff for drinking water is the tariff for cold water. The tariffs in 2003 charged by APA-CANAL-PITESTI were in the lower range, compared to other Romanian cities. In the chapter 6.1 the operation and maintenance costs are given for material costs, energy costs, salary costs and other costs and in chapter 6.2 is detailed the total costs of the investments amounted to 53 million €, for rehabilitation of the drinking water and sewerage networks as well as of the drinking water and the wastewater treatment plants. Financial sources are: the IEB loan, the ISPA Grant that was approved in October 2003 and the contribution by APA-CANAL-PITESTI.

Tariffs of drinking water and sewerage treatment will have to be adapted to cover all investment costs, financing costs and operations and maintenance costs caused by the new investments in the drinking-water production & treatment and sewerage collection & treatment.

For the Pitesti case study a financial model ASTEC was used and three scenarios were implemented. For each scenario, five situations for APA-CANAL-PITESTI was given and the results obtained (cash-flows, profit and losses and the balance sheet) are in terms of: drinking water and wastewater tariffs, drinking water consumption and wastewater discharges, revenues of drinking water services and wastewater services, balances of drinking water service accounts and wastewater service accounts and balance of drinking water and wastewater service accounts.

As can be seen from the results obtained with the ASTEC model, the financial effects for APA-CANAL-PITESTI is under the process of metering and revamping investment (from loans and grants) that will decrease the consumption of drinking water and discharge of wastewater as well, will decrease leakage and will diminish the operation and maintenance costs.