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STRATEGY ON SUSTAINABLE DEVELOPMENT OF THE WATER SUPPLY AND SEWERAGE PUBLIC SERVICES

" ROMANIA 2025 "

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1. Introduction

In the last 10 years the sector of water supply and sewerage public services has faced major technical and organizational transformations.

The Romanian Government Program for the period 2001- 2004 as well as the Romanian Medium-Term Economical Strategy highlights the importance of the water supply and sewerage public services and their role in the process of improving the quality of life.

Therefore, the Romanian Water Association considers opportune the elaboration of a medium-term (2004 - 2007) and long-term (until 2025) strategy for the water supply and sewerage public services sector, which, having as starting point the analysis of the existing situation, will outline possible plans of modernization and development for these services and thus contribute in making major decisions regarding future actions at following stages.

The analysis should take into account that the *water supply and sewerage public services* have an essential role for increasing the quality of life for all citizens and for the fight against the social exclusion and isolation. Given their weight in the economy and their importance for the production of other goods and services, the efficiency and quality of these services is a factor for competitiveness and greater cohesion, in particular in terms of attracting investment in less-favored regions. The efficient and non-discriminatory provision of *water supply and sewerage services* is also a condition for a better economic integration in the European Union. Furthermore, these services are a pillar of European citizenship, forming some of the rights enjoyed by European citizens and providing an opportunity for dialogue with public authorities within the context of good governance.

Water supply and sewerage public services are at the core of the political debate, particularly in the perspective of the role that public authorities play in a market economy, in ensuring, on the one hand, the smooth functioning of the market and, on the other hand, safeguarding the general interest, in particular the satisfaction of citizens' essential needs and the preservation of public goods when the market fails.

The present strategy place the water supply and sewerage public services in the context of services of general economic interests, as they are defined in the Green Paper of the EU and tries to comply with the European concept, based on the following fundamental objectives:

- the decentralization of the public services and the increase of the local authorities responsibility, regarding the quality of the services provided to the population;

- the extension of the centralized systems for basic services (water supply, sewerage, sanitation) and the increase of the population's access to these services;
- reorganizing the social protection mechanisms for the disadvantaged segments of the population and reconsidering the price/quality ratio;
- promoting the market economy principles and reducing monopoly;
- attracting private capital in financing local infrastructure investments;
- institutionalizing the local credit and increasing its contribution in financing the husbandry services;
- promoting measures of sustainable development;
- promoting social partnership and continuously training the human resources.

2. The European evolution of the concept on water supply and sewerage public services

The White Paper on Europe governance, launched during the European Parliament summit on February 15th, 2000, has introduced a new concept of democratic partnership among various levels of Europe governance and addresses the public services of general economic interest, including *the water supply and sewerage services,* considering them of highly importance for the social cohesion, to increase the quality of life in Europe and to ensure a sustainable development.

The main issues that the European Union presently raises regarding the future of the water supply and sewerage public services are:

- Ø the strengthening of the social cohesion;
- Ø globalization and opening markets for free competition;
- Ø extension of the public-private partnership;
- Ø sustainable development.

The water supply and sewerage public services must have the following characteristics:

- Ø universal service;
- Ø equal treatment;
- Ø continuity;
- Ø safety and security of the persons and the service;
- Ø adaptability and long-term management;
- Ø transparency;
- Ø affordability.

The present strategy defines the main development objectives of water and sewerage public services according to the provisions of the European directives for:

- drinking water Nr. 98/83/EEC
- urban wastewater Nr. 91/271/EEC
- surface water for drinking water Nr.75/440/EEC
- dangerous pollutants in groundwater Nr. 80/68/CEE
- dangerous pollutants in surface water Nr.76/464/CEE.

The Water Framework Directive 2000/60/EC of the European Parliament and the Council of the European Union establishes the framework for the European water policy and considers the river basin as natural and essential unit for water forming, use and protection.

The Framework Directive introduces several modern elements, such as:

- water management on river basins;
- classifying water status in five categories of quality;
- defining the reference conditions for surface waters;
- defining the waters “good status”;
- defining categories of strong antropic modified water, which aims to reach a good ecological potential;
- clarifying the concept of river rehabilitation.

In order to be implemented, the Water Framework Directive 2000/60/EC need a River basin management plan, produced by the EU member states together with the countries that are in accession process.

The River basin management plan is an instrument for water sector planning that sets up objectives to be achieved in a period of 6 years and proposes measures to ensure water sources and reach waters “good status” for a sustainable utilization.

In conclusion, the present evolution of the water supply and sewerage public services may be described as follows:

- The sector faces a period of great changes all across Europe;
- The opening of the services market and globalization are two challenges, to which each Member State or candidate country must respond;
- It is increasingly known the social dimension of the water supply and sewerage public services as well as their impact on social cohesion;
- In countries when the market has been opened and that have started the privatization of the water supply and sewerage public services was needed the establishment of certain regulatory authorities;
- The water supply and sewerage public services must be organized at regional level.

3. Present status of the water supply and sewerage public services

3.1 Water resources of Romania

The territory of Romania has all types of fresh water resources (rivers, lakes, and groundwater). Danube and inland rivers ensure the biggest fresh water resource. Although numerous (3450), the natural lakes have an insignificant contribution at the volume of the Romanian water resources.

The inland waters are more accessible, have a better spread in territory and a greater weight from the economic point of view.

The most important element that characterizes the river water resources consists in the multi-annual average reserve, considered whether as discharged volume, or as flow. The territory of Romania is divided in 11 river basins, as shown in the following figure.

Harta Romaniei - Bazine hidrografice

From an absolute point of view, Siret river basin has the biggest water contribution (224 m^3/s, 7083 $mil.m^3$), representing 17% from the total volume of the country water resources. It is followed by Mureş (186 m^3/s, 5870 $mil.m^3$) with 14% and Olt (174 m^3/s, 5490 $mil.m^3$) with 13%, these three river basins providing together almost half of the country's water resources volume. There

are also river basins that having almost identical surfaces, present very distinctive resources, due to major altitude, relief, and climate differences.

In conclusion:

- The Romanian water resources are geographically non-uniform distributed. The richest water resources can be found in small surfaces, but high altitude river basins: Nera – Cerna and upper Tisa, Jiu, Someş, and Olt. The Danube and Black Sea basins are the poorest in water resources;
- The water resources of the Romanian rivers are irregularly distributed all along during the year, having big seasonal variations. At national level, during spring season 39,7% of total annual discharge is produced, while during autumn season, the droughtiest season in Romania, the discharge does not represent more than 14,2% of the total annual discharge, compared to summer – 26,7% and 19,4% in winter.

In normal climatic conditions, the total of the inland surface water resources counts 42,089 km^3/year and those of Danube river 170 km^3/year (at the country entry point).

Groundwater

The phreatic waters that form quantitatively important descendent waters forming permanent resources are situated in the first aquiferous layer. Depending on structural tectonic units - named regions, they are defined according the morfo-structural conditions.

The phreatic waters at depths of 10-30 m provide flows of 1 – 10 l/s km^2 that represents the main water resource in rural areas lacking water supply systems. Because their physical-chemical and microbiological specific indicators exceed the limiting values, these sources do not meet the requirements for water potabillity.

The depth groundwaters are situated under the area of active exchange and are affected by superficial groundwaters and in the same time fewly depending on climatically conditions.

In the Romanian Plain, the richest two groundwater reserves are: Cândeşti, in Carpathian side and Frăţeşti, in the south area. The layers of Frăţeşti cover approx. 24.000 km, from the west side of Jiu River to Bărăgan Plain, reaching a depth of 300 m. The layers of Cândeşti are also highly extended and their depth varies between 50 m and 200 m, with a flow of 1 – 10 l/s.

In other regions as Moldavian Plateau, Western Plain, and Transylvania Plateau water resources are found sometimes at depths of 300 – 500 m, some of the depth layers being mineralized because salt, methane gas, iron or manganese deposits.

In conclusion, the theoretical potential of the Romanian water resources totalizes 140,49 km^3/year, to which Danube contributes with 87,8 km^3/year, inland rivers with 42,089 km^3/year, and groundwaters with 10,8 km^3/year. Compared with the number of inhabitants, the Romanian potential of water resources represents 6450 m^3/year.inhabitant, figure much superior to the European average that is 4000 m^3/year.inhabitant. Among the European countries, this aspect places Romania on position nine.

Specific geographical position, relief, geology, climate, soil, and vegetation define a series of characteristics for the Romanian potential of water resources, such as:

- Danube river represents over 62% of the water resources potential and it mainly flows at the border of Romanian territory, presently enabling an economical utilization of approx. 20 - 30 km^3/year;
- the inland hydrographical network, most accessible for utilization is randomly distributed in territory;
- the liquid flows of the inner rivers are variable not only from an area to another, but also from a season to another, from an year to another, so, in natural regime, the utilizable potential is only 5 km^3/year, increased with 8,01 km^3/year (available volume) from the 1232 permanent storage lakes realized;
- the groundwater technical-economic utilizable potential is 5,5 km^3/year;
- Romania confronts with extremely rainy years, when river flows grow significantly, producing floods, often catastrophic, causing human losses and damages;
- periodically, a large area of the Romania's territory faces draught conditions that result in a dramatically decrease of water resources, sometimes up to approx. 30% of the annual value.

Taking into account the above considerations, we can conclude that the present utilizable water resources potential is estimated at 41 - 51 km^3/year, meaning 1800 ÷ 2250 m^3/year/inhabitant. Given this situation, some specialists consider Romania as country poor in water resources.

Although water is a regenerable natural resource, it is yet limited with regard to the available annual volume, expressing tendencies of decrease in certain river basins or the impossibility to be used in case of major pollution. Restrictions in water resources utilization may occur due to some other reasons, such as:

- unlike other natural resources, the long-distance transport of the water resources faces many difficulties regarding the technical-economic aspect, fact that confers the Romanian water resources a status of regional resource, being impossible to set up an national inter-connected system;

- The water resources available in Romania's territory are strongly affected quantitatively and qualitatively by human activities: on one hand through drawings closed to the limit of the socio-economic resources (river basin of Argeş) and on the other hand, through a still pronounced pollution (rivers Tur, Lăpuş, Cavnic, Arieş, Târnava, Cibin, Dâmboviţa, Vaslui, Jijia, Bahlui etc.).

3.2. Present status of the local infrastructure.

3.2.1. Localities' water supply

The census of 18 March 2002 presents that the population of Romania counted 21.680.974 inhabitants, out of which 11.435.080 inhabitants in urban area (52,7%) and 10.245.894 inhabitants in rural area (47,3%).

Administratively, Romania is organized in 42 counties, 268 cities and towns and 2686 communes (approx. 15.700 rural localities).

Presently, in Romania there are 2.915 localities that use central systems for drinking water distribution, out of which:

- all the 268 cities and towns (100%);
- 2647 rural localities, representing approx.17% from their total number.

The drinking water distribution networks have a total length of 40.267 km, in urban area ensuring 71% of the equipped streets total length.

The current capacity of the centralized water supply systems for populated areas is 120 mc/s, out of which 48 mc/s is supplied by groundwater, and 72 mc/s by surface water, including Danube.

The annual quantity of drinking water supplied to consumers is approx. 1.350 millions mc, out of which approx. 811 millions mc is intended for domestic use.

In the last 10 years, the total quantity of the water supplied in the network trends to decrease, mainly due to the metering system and the reduction of the industrial activities.

The non-uniform distribution in the country of the water resources, the inadequate level of river flows regularization, the significant pollution of certain rivers cause insufficient water supply sources in large areas of the country during the year, especially during drought or low-temperature winters, when water supply is cut off for days and flows are drastically reduced.

3.2.2. Wastewater treatment and sewerage

Presently there are 644 localities that benefit of public sewerage networks, out of which:

- 266 cities and towns;
- 378 rural localities.

The sewerage network is 16.812 km long, out of which 15.736 km in urban area. The length of the streets equipped with sewerage network represents 51,8% of the total length of the streets.

Having in view the number of the streets equipped with water supply pipes, it has to be mentioned that only 73% of them include sewerage networks as well.

In 206 wastewater treatment plants currently existent in Romania, is treated only 77% of the total flow discharged through the public sewerage networks; 47 towns (among which: Bucharest, Craiova, Drobeta Turnu-Severin, Brăila, Galaţi, Tulcea) discharge the wastewater into the emissary without former treatment.

3.3. Accessibility of services

3.3.1. Drinking water supply

In Romania, from a total of approx. 21,7 mil. inhabitants, the number of the persons that benefit from public network of drinking water is 14,7 mil. (68%), out of which 11,3 mil. in urban area (77%), and 3,4 mil. in rural area (23%).

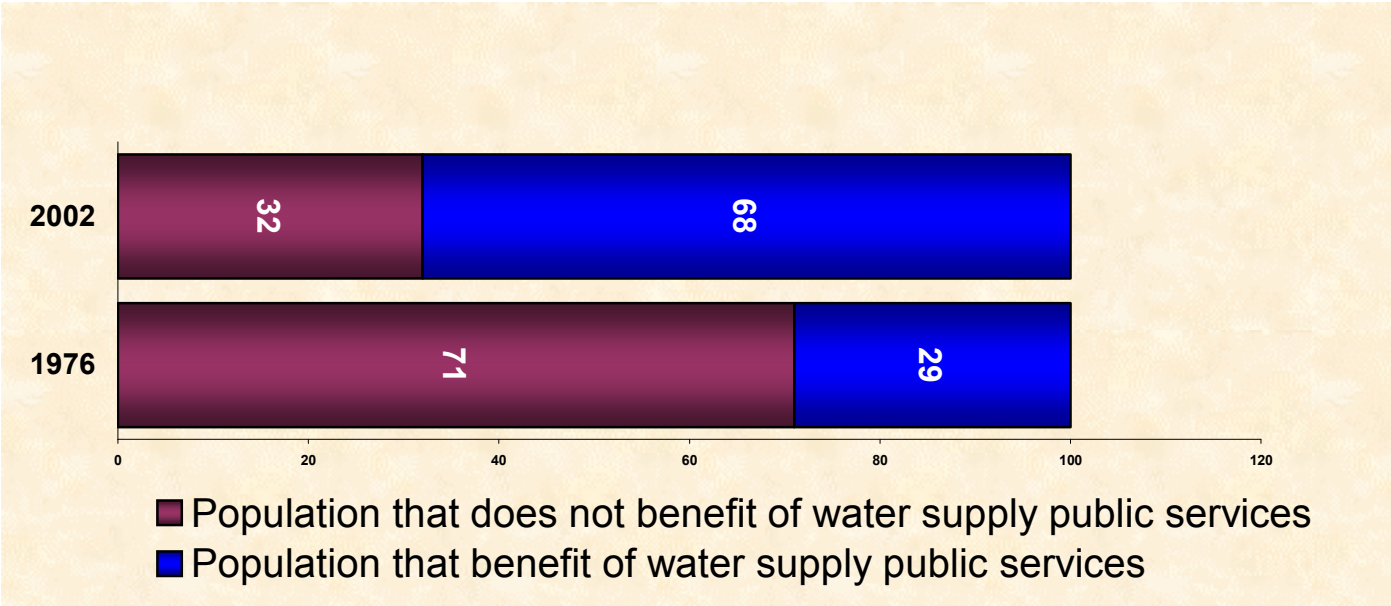


Fig. 2 The evolution of the number of inhabitants with access to the water supply public service

In the above figure, the comparison between present data and those existent in the year of 1976, presents the dynamic of the number of inhabitants that benefit from public network of drinking water supply (fig.2).

During a period of 25 years the percent of users connected to water networks increased from 29% of total population at 68% (fig. 2), given that during the same interval of time major changes have occurred in the relationship between urban and rural population.

The level of endowment with centralized systems of drinking water supply is highly unfavorable in rural area.

3.3.2. Wastewater sewerage

The population that benefit of sewerage service is of about 11,45 mil.

Similar to the case of the drinking water supply, the number of population that benefit from public sewerage service is much higher in urban area than in the rural area - 10,3 mil. (90%) and respectively 1,15 mil. (10%).

The evolution of this indicator compared with the situation of the year 1976 is presented in figure 3.

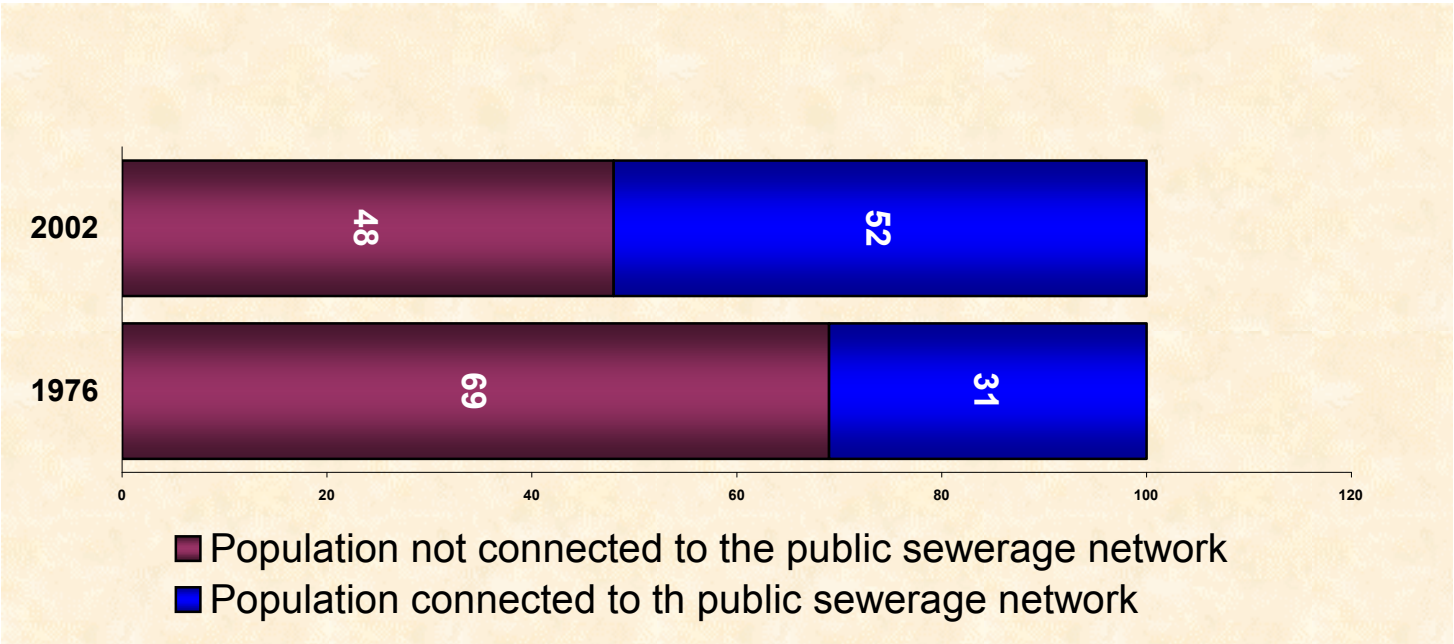
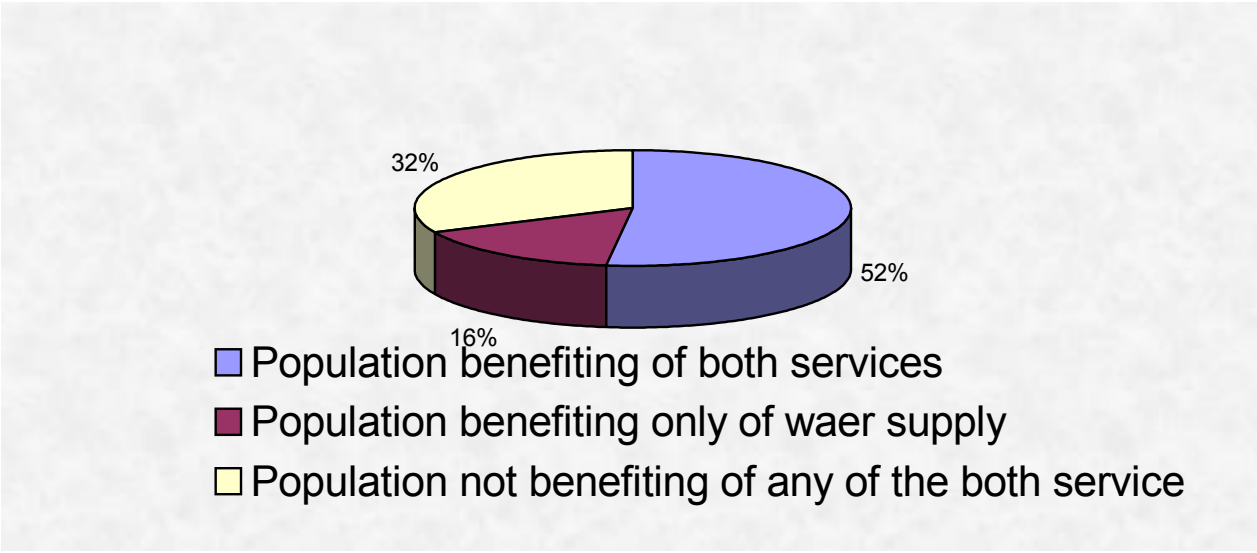


Fig. 3 The evolution of the number of inhabitants with access to the sewerage public service

The population of the country can be grouped in three main categories, depending on the services they use:

- population that benefit of both services - 52%;
- population that only benefit of water supply, but do not benefit of sewerage service - 16%;
- population that do not benefit of water supply neither of sewerage service - 32%;



Population distribution according to its access to these two services is shown in figure 4.

Fig. 4 The accessibility of the public services

According to the census from 2002, the total population that nationally benefit of water supply endowment is 53,2%, out of which 87,6% in urban area and 15,1% in rural area. The distribution on counties of the number of houses endowed with water supply systems compared with the total number of houses is presented below:

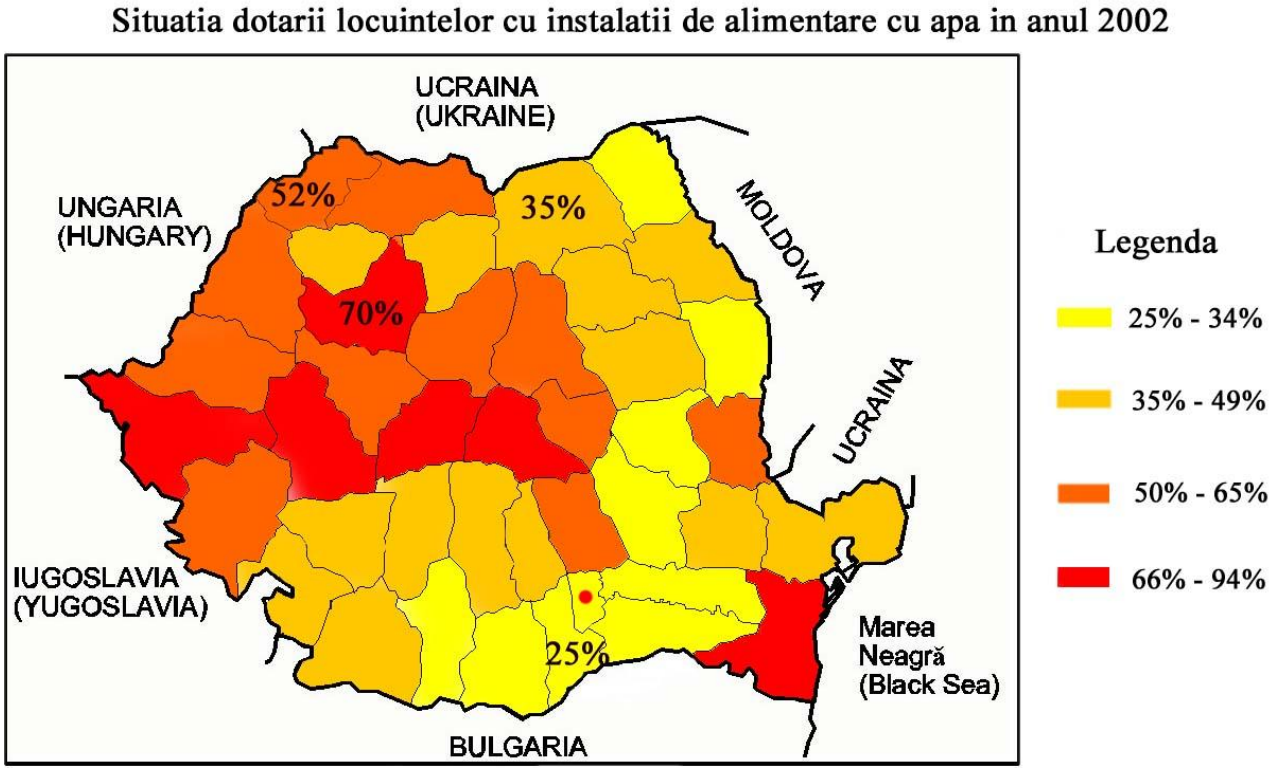


Fig. 5 The status of dwellings endowment with water equipments in 2002

As regards to the sewerage, the houses nationally endowed with such equipment represent 51,1% of the grand total, out of which 85,6% in urban area and 12,9% in rural area.

3.4. The quality of the water supply and sewerage services

3.4.1. The quality of the drinking water

According to the data included in the National Report on monitoring the quality of drinking water in urban area the following situation is given:

The quality of the water supplied through pubic systems is permanently verified by means of samples examination. In 2000 were analyzed 103.553 samples obtained from representative points of the distribution network.

From the microbiological point of view, the water supplied to the population was safe. Out of the total samples analyzed to indicate Total Coliforms and Fecal Coliforms, 3% and respectively 1% were inadequate.

The chemical quality of the water supplied through the public supply systems, only few general indicators of potability described the public network, without analyzing toxic substances as lead, trihalomethane or pesticides. Out of several analyses done in order to detect toxic substances in water - 4% exceeded the admitted maximum concentration, to measure the chemical oxygen demand - 5% exceeded the admitted maximum concentration, out of the measurements for ammonium and nitrates 5% and respectively 3% had inadequate values.

As a conclusion, the monitoring of the drinking water was efficient, microbiological safety being ensured for most of the population.

3.4.2. The quality of the discharged water

The untreated or insufficient treated discharged wastewater has an essential influence on the quality of the natural waters discharged in natural receivers. From this point of view, the most unfavorable situations are reported within the river basins of Prut, Argeş, Vedea and Black Sea. The untreated wastewater largest quantity results from localities sewerage systems (over 89%), chemical treatments (3%), electric power and thermal energy production (8%). Moreover, it has been noticed that the wastewater treatment plants and wastewater pre-treatment plants operation has not been importantly improved in the last years.

The most significant pollutants of the surface waters with organic substances, suspensions, mineral substances, ammonium, fats, cyanides, phenols, detergents, heavy metals are the great urban agglomerations of Timişoara, Craiova, Miercurea Ciuc, Braşov, Sibiu,

Râmnicu Sărat, Slatina, Târgovişte, Ploieşti, Slobozia, Bacău, Bârlad, Vaslui, Botoşani, Iaşi and Bucharest.

Other important pollutants of the water flows are: oil industry, chemical and medicine industry, mining industry and metallurgy, ferrous metallurgy industry and mechanical engineering, food industry, paper industry and the live-stock farms.

3.4.3. Process laboratories professional capability to perform analysis

Process laboratories activities in drinking and wastewater treatment stations are worn-out, at the level of water and sewerage operators, regarding:

- endowments;
- staff expertise;
- quality ensuring and checking of the data quality.

Present requirements regarding parameters of water quality along of the technological flow impose another vision on laboratory activities within the water and sewerage systems.

In this stage, the necessary steps are:

- laboratories endowment corresponding with actual demands;
- training of the staff according to the level of competencies;
- certification and accreditation;
- introducing of the Total Quality Management system;
- implementation of a system having a structure specialized for monitoring and inter-calibration of the process laboratories.

3.5. Legal framework. Comparison with European legislation

The water supply and sewerage public services have been affected by various organizational, administrative and technical changes that have generally occurred in the institutional evolution of the Romanian activities.

Presently, the public services are given a high importance with regard to their providing and quality, having in views their role in the process of increasing the quality of life. Taking into account that the social dimension of the services of general interest and their impact on

social cohesion are fundamental, through the existent regulations is under preparation a coherent legal framework that will enable the public services development in compliance with the standards of the European directives.

For a coherent regulation of the services of general interest the normative acts are classified in the following categories and main groups:

Framework legislation:

- Law no. 215/2001 on local public administration
- Law no. 326/2002 on public services of communal husbandry
- Law no. 107/1996 on waters
- Law no. 137/1995 on environmental protection

Specific legislation:

- Government Ordinance no. 32/2002 on the organizing and functioning of water supply and sewerage public services, approved through Law no. 634/2002, amended through G.O. no. 35/2003;
- Law no. 458/2002 on the quality of drinking water
- Decision no. 140/2003 of the Minister of Public Administration for the approval of the Regulations on giving licenses and authorizations in the sector of public services of communal husbandry, conditions of suspension, cancellation or modification;
- Regulations Framework and contract framework of water supply and sewerage public services delegate management

European legislation:

Directive 98/83/CEE on the quality of the water for human consumption

The definition for drinking water presented in Law no. 458/2002 on the quality of the drinking water complies with that foreseen in directive. The law stipulates the obligations of the water producers and distributors and the quality parameters and their limit values. The parameters are classified in conformity with the Directive, thus giving up the previous Romanian technique.

EU Council Directive 91/271/EEC on urban wastewater treatment was entirely adopted by the Romanian legislation through GD

188/2002 (MO 187/20.03.2002) for the approval of the norms regarding the conditions of the wastewater discharge in aquatic medium.

EU Council Directive 91/676/EEC on Water protection against the pollution with nitrates from agriculture was integrally adopted through Government Decision no. 964/2000 regarding the approval of the Action plan for the water protection against the pollution with nitrates from agriculture.

The other water-related Directives of the European Union were transferred to the Romanian legislation through the following normative acts:

Directive name	Transfer to Romanian legislation	Proposed deadline for implementation
Directive 75/440/EEC Decision 77/795/EEC	GD 100 / 2002	1.01.2007
Directive 76/160/EEC	GD 459/2002	1.01.2007
Directive 76/464/EEC	GD 118/2002	1.01.2015
Directive 80/68/EEC	GD 118/2002	1.01.2007
Directive 78/659/EEC	GD 202/2002	1.01.2007
Directive 79/923/EEC	GD 201/2002	1.01.2007
Directive 79/869/EEC	GD 100/2002	1.01.2007
Framework Directive on water 2000/60/EEC	Harmonization of Law 107/1996	1.01.2015

3.6. Financing of the water supply and sewerage public services

The financing of the running costs of the water supply and sewerage public services is ensured through tariffs paid by the consumers. The public authorities do no allocate subsidies for the operating activities and there are no systems for social protection for the water supply and sewerage public services.

With regard to the *investment financing*, we have to highlight that presently the *state budget* faces major constraints and therefore, its contribution in public services and investments financing is significantly reduced.

Furthermore, once the Law of local public finance is enforced, the state budget ensures financing only within certain commitments that local authorities undertook to international financing institutions. On the other hand, *the local authorities* do not have yet sufficient resources to cover the urgent investment needs.

The water supply and sewerage public services operators, whether private companies or autonomous regias, have small financing possibilities mainly caused by:

- a low rate of profit allowed to be included in the tariff;
- delay in revenues collection. It has to be mentioned that there are localities where the average period of revenues collection exceeds 200 days.
- high costs of production, generated by the extensively existent networks and equipment inadequate technical status.
- weak purchasing capacity of population.

Analyzing *the main successful ways that attracted capital* for investments financing, we can conclude:

a. Attracting and utilization of grants.

There are some remarkable achievements in the area of attracting and utilization of grants, among we can name:

- EU grants for financing certain investment projects in 16 towns included in the MUDP program;
- Grants obtained within certain bilateral partnerships, mainly with member states of the EU.

b. **Investments financing by credits**

The most significant achievements in the sector are:

- MUDP I (5 towns), Valea Jiului, MUDP II (10 towns), through loans from the European Bank for Reconstruction and Development, with a value of 120 mil. Euro;
- Rehabilitation of the water supply system of Bucharest city through loans from the International Bank for Reconstruction and Development, total value of 25 mil. Euro;
- Rural water supply Program, approved through G.D. no. 687/1997 and financed through external credits with sovereign guarantee. Up to date has been approved a number of 767 water supply projects, with a total value of 260 mil. USD and 109 projects were completed, with a total value of 34 mil. USD.

However, the involvement in such a program requires a consistent effort of operators and local authorities, as well as long-term commitments that mainly refer to the increase of the operational and financial performances, the utilization of certain modern methods of technical and financial management, and investments in human resources and management informational systems.

c. **The involvement of private capital** and the establishing of public –private partnerships are still at beginning. There are only few examples in the sector: Bucharest, Ploieşti, Fălticeni, Titu, Moreni.

The value of the investments in water supply and sewerage public services infrastructure has increased starting with the year of 2001, due to the efforts done by operators from their own sources, as well by attracting external financing in various programs. The situation of the sector achievements in the period of 2001-2002, as well as the forecast for 2003 is presented in the following table (table no. 1):

Table no.1

Year / notes	ACHIEVED		2002/2001	2003	2003/2001
	2001	2002	%	forecast	%
Investments value (billions ROL)	3143	3477	110	5787	184

The distribution of the investment effort for the water infrastructure modernization and development is not uniform at the level of the local authorities. Based on the data received from territory results the following distribution of the specific investments on counties for the year of 2002 (fig.6):

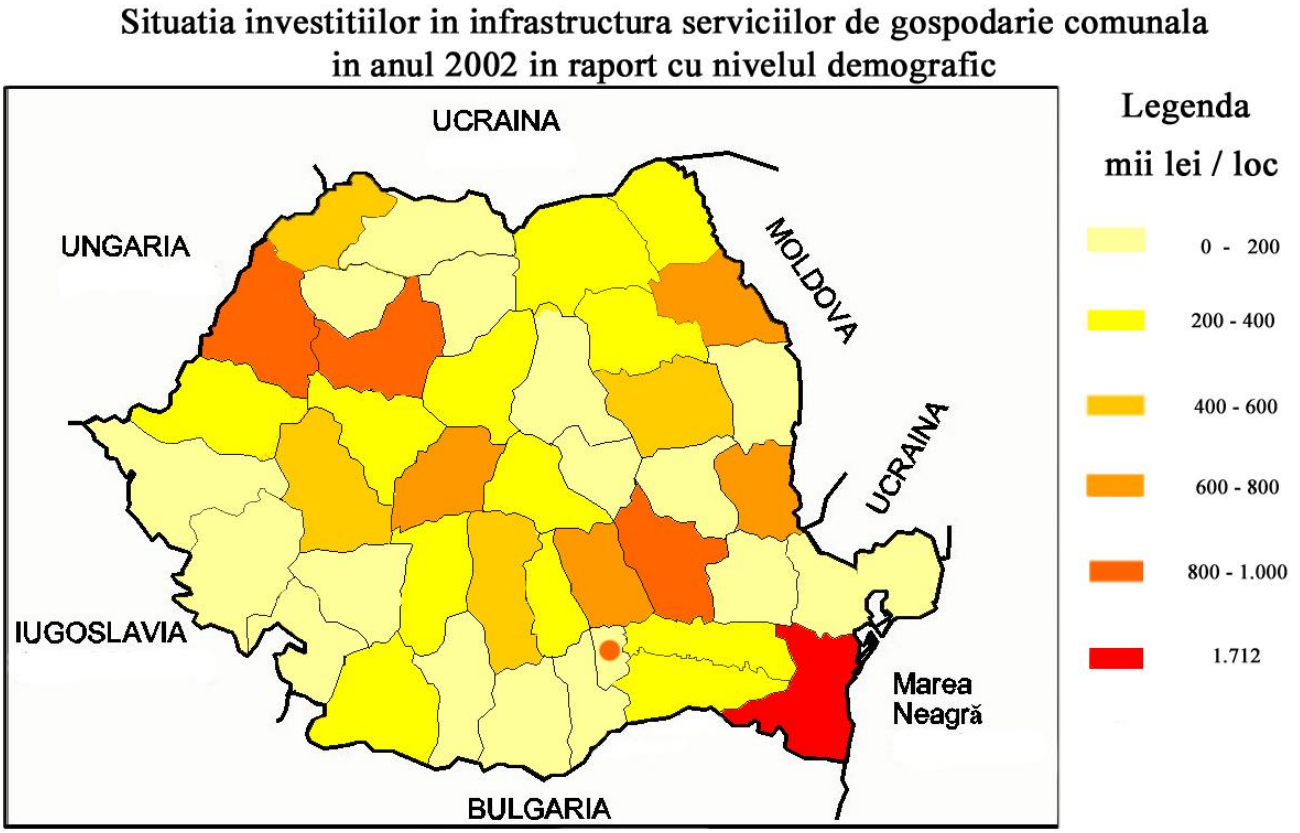


Fig. 6 The situation of the investment in water services infrastructure compared with demographical level

3.7. Human resources involved in the sector of the water supply and sewerage services

Human resource – the one that firmly defines the operational and financial performances of the water supply and sewerage systems – was improved, after the year of 1990, accordingly to the status of the Romanian services of general economic interest reform. The splitting of the county companies of communal husbandry and the establishing of new local companies by specific services provided for each town (e.g. water supply–sewerage, district heating, solid waste, etc.) –indicated a continuous progress regarding the number of the personnel involved and their level of qualification. The major trend of the 90's was to increase the number of the employees. Thus, interesting offers came several times from persons willing to leave former industrial companies that did not motivate and satisfy them anymore and on the other hand, a permanent pressure was exerted on water supply and sewerage companies' management. Furthermore, this aspect occurred while their professional qualification and attitude towards work were often over the average level of the people already hired for many years, but inexperienced.

The lack of specific actions required by a modern management of the human resources (e.g. personnel assessment - number of positions, position requests, necessary number of employees) – frequently led to an increase of

the personnel number through the employing of those who offered their professional knowledge and abilities. Given that new employees had an appreciated, but gained in industrial area qualification, training activities, nearly professional reconversion in the water supply and sewerage field were imposed. However, the training activities were necessary also to the old personnel, due to the great amount of technical, technological and legal news brought by`90s.

Through their activities, the professional and employers associations were the first that endeavored to respond the numerous demands induced by the new structures - autonomous regias, at beginning and afterward, private companies. Among these needs - competing with those of modernization and development of the water supply and sewerage services infrastructure – and based on emergency and immediate need criterion, the managers gave importance to the training activities that were organized by a growing number of organizations, not necessarily specialized in this sector of activity. Presently, this aspect is still valid and it applies to high education and occasionally, to high school graduated employees, according to the situation existing in the small and medium size companies. This last aspect also weights in reshaping the Romanian water companies structure. If educated personnel had the chance to attend training actions (courses, workshops, sessions) particularly developed based on the identified needs, the qualified and unqualified operational staff, does not benefit yet of vocational training. The courses that are to be soon organized for this large category of personnel (90% of the total number) that effectively contribute to the quality of the performed works are vocational ones, where practical training measures 80% of their duration.

To ensure the funds necessary for a professional approach of the permanent training process, GO no. 32/2002, approved by the Law no. 634/2002 foreseen a quota of 0,5% of the salaries fund that may be used on this purpose.

4. Main objectives and priorities of the water supply and sewerage services

A. Specific mid-term strategic objectives (2004 – 2007)

4.1. The decentralization of water supply and sewerage public services

Local authorities are responsible to organize and to ensure the functioning of the water supply and sewerage public services. It is necessary to support the operational and financial performances improvement measures in the view of increasing the safety and the quality of the services to the population through:

1. The elaboration of a special legislation on the shareholders' general assemblies and administration boards functioning and on the responsibilities that rest with them within the framework of commercial companies that supply water and sewerage public services.
2. The elimination of superposed competencies of the regulatory and of the local authorities.
3. Laws simplification in the purpose of acceleration of the procedures and of the mechanisms of obtaining approvals necessary to operators.

4.2. Extension of centralized systems of water supply and sewerage and increasing of population degree of access to these services

Low degree of technical equipment as well as the missing of sources in certain areas make more difficult the access of the population to the services offered by the water supply and sewerage systems, controlled and monitored by the authorities. Measures have to be taken in order to extend the water supply and sewerage systems and to increase the population access degree to these services, through:

- The promotion of new national investments programs with international financing.
- To accelerate the implementation of rural infrastructure development programs (Rural Development Program, SAPARD).
- To promote regional development programs regarding water supply services (Zetea, Sălaj, Izvarna).

- Urgent promotion of fiscal legislation that foresights deductions for investors and investments in water supply and sewerage services infrastructure.

4.3. The market economy principles promotion

Water supply and sewerage public services have monopoly character because of the situation of captive consumers of the beneficiaries connected to the centralized systems. In order to ensure the competition, measures will be initiated to put in competition the services operators, the financing capitals and the management, through:

- The duty to tender the service in the cases in which the operator registers financial losses or if he cannot assure a corresponding quality of water supply and sewerage that he is supplying.
- The operating licenses redraw for supplying agents that don't achieve the established performance criteria.
- The reorganization of public services companies in commercial companies that rely under the authority of local public administration.
- The delegation of water supply and sewerage public services administration, as well as their privatization will take place in transparent conditions.

4.4. Attraction of private capital in the investments financing within the framework of water supply and sewerage public services

Urgent needs of investments for the re-habilitation, modernization and development of water supply and sewerage public services are estimated at 620 mil €/year for the period of 2004 – 2007.

Because of budgetary constrains that characterize the transition periods, the financing of these investments cannot be achieved but in a low degree from public funds, which makes the attraction of the public capital an urgent necessity.

Measures will be promoted to attract the private capital in the area of water supply and sewerage public services, through the establishment of certain public-private partnerships, in the purpose of financing urgent investments, such as:

- The preparation and the implementation of BOT investment projects for extensions and developments of the drinking water treatment plants and wastewater treatment plants.
- The settlement of certain minimal investment limits for water and wastewater systems re-habilitation, in the framework of concession contracts, which will be submitted to public tenders.
- Regional grouping of water supply and sewerage public services operators in order to be more attractive for strategic investors and more competitive in comparison with other operators.

4.5. The promotion of sustainable development and environment protection measures.

Water supply services are directly influenced by the water resources quality, while the sewerage ones have a special impact on those. The sewerage services can take part in a substantial manner to the limitation of the pollution level by the efficient collection and sewerage of the wastewater, but, in the same time, they can represent an important pollutant factor, if the wastewater treatment process is inappropriate.

The sustainable development of the water and sewerage services supposes:

- Technical status of infrastructure improvement by increasing of water tanks capacity, and fixing the cases of over dimension following the decreasing in water consumption and the correlation with the best international technology;
- Efficient use of E.U. funds for co-financing programs that embrace water supply and sewerage public services infrastructure development measures (ISPA, SAPARD, SAMTID).
- Programs development along the countries within the Danube's river basin in the view of protecting the environment in this European area.
- The development of efficient water supply and sewerage public services, administrated in the spirit of a quality and performance culture.

4.6. The Promotion of Social Partnership

Within the framework of the globalization process that we are facing today, it is very important that all social partners take part at decisions with major impact on the population. The role of professionals, of the NGOs and of the big public services companies is essential in assuring quality services, requested by customers.

Water supply and sewerage public services have an essential role in citizens' social cohesion, in ensuring a decent living and in keeping social peace.

Starting from these principles, efforts will be made in the following directions:

- Enhancing the implication of social society structures, mainly of the trade unions and employers associations in the process of strategies, politics and field programs elaboration.
- The settlement of partnership programs in the view of relationships consolidation with interest representation associations of the beneficiaries of the water supply and sewerage public services.
- Permanent transparency and communication with the consumers trough mass-media means and direct information, through actions of "Open doors day" type, in order to find out the exact needs of the consumers.

4.7. Professional Training – A Major Factor in Increasing the Quality Level within the Water Supply and Sewerage Public Services

As the performances of the companies that offer water supply and sewerage public services are more closely and persevering measured, assessed and monitored, the management of the human resources will have the place that it deserves.

Close analyze of the differences between the requirements of the workplaces and the capability of the persons that occupy them, the assessment and the hyerarhisation of the jobs, and, from here on, the creation of a salaries hierarchy, the elaboration of the multi-annual instruction and professional improvement plans, etc., are concrete actions that have to be achieved with the managers' action will, the trade-unions' sustain and, especially, with the specialists' professional assistance.

The creation of a budget for the human resources management, with a distinct budget line for professional training, which amounts up to 0.5% of the salaries fund was especially mentioned in the GO no. 32/2002 approved by the Law no. 634/2002 constitute the start condition in a managerial competition that will be brought to us by the next period.

The design and the establishment of certain instruction, specialization, reconversion and professional improvement vocational centers will conduct to the supply of adequate courses to the largest staff category, the workers – specialized and unspecialized – the same as to the conception of instruction actions for middle and low management.

The implementation of the 11 European directives regarding water quality becomes an absolute priority in this period (2004 – 2007), both for central authorities, as for local administrations and, respectively water supply and

sewerage services operators. The new requirements and the strictness of their appliance will determine a sensitive necessity of instruction and informational actions for all types of staff involved.

Once with the beginning of the process of implication of the private capital in the administration of water supply and sewerage systems, it's probable that the level of priority accorded to the professional training will increase significantly.

C. The main strategic objectives on long term (2007 – 2022)

The main strategic objectives on long term are the following:

- To meet the water demand of the population;
- To ensure the drinking water's quality and to comply with the 98/83 EC Directive;
- To complete of the urban wastewater treatment in compliance with the 91/271/EEC Directive;
- Access to information, the education and the population awareness on the necessity to save water;
- Institutional and legal correlation with the European Union, in the view of ideas and solutions change, etc.
- The scientific research development in the view of an integrated management of the field, in the purpose of the introduction of the technical and scientific program in the field, and to ensure the environmental protection;
- Water supply and sewerage systems performance permanent monitoring, that ensure the quality of the supplied services;
- Instruction and permanent improvement training programs elaboration;
- Public consultation and its stimulation that along with water users identify projects and define politics in water supply and sewerage field;
- Regional and international co-operation in water supply and sewerage field; setting up a Regional Center for Central and East Europe in Romania;
- Controlled opening of the market of water and sewerage public services and stimulating a competitive environment in this area;
- Environmental protection for a sustainable development.

5. Estimation of the costs related to the implementation of the Medium and Long-Term Strategy

5.1. Overview

The assumption that has been taken into account in the evaluation of the investment needs for water and wastewater services are :

Ø Time horizon for compliance with European Union directives for water and wastewater is 15 years, starting with 2007 ;

Ø The forecast regarding population growth until 2020 show a negative trend: from 22,430,450 inhabitants in 2001 to 20,887,500 inhabitants in 2020, out if which:

- in urban area: from 12,274,134 inhabitants in 2001 to 10,808,500 inhabitants in 2020;
- in rural area: from 10,146,564 inhabitants in 2001 to 10,079,000 inhabitants to 2020;

Ø Population benefiting by complete services is:

- For urban area: 10.0 mil. inhabitants;
- For rural area: 8.0 mil. inhabitants.

The towns and cities classification according to their population is showed in the Table 2 :

Table 2

No	Category	Criterion (no. of inhabitants)	No. Of towns	Total no. of inhabitants	% from total country inh.	% from total urban area inh
1	Cities and big towns	over 100 thousands	25	6.583.791	30,37	57,5
2	Towns (cat. 1-3)	about 20 thousands	80	3.222.829	14,80	28,1
3	Small towns	under 20 thousands	163	1.628.460	7,51	14,2
4	Total urban area	-	268	11.435.080	52,68	100

5.	Total inhabitants - Romania	-	-	21.680.974	100	-

We can mention that the small towns, some of them with less than 20 thousands inhabitants, are situated in mountain areas, tourist (bath) area (over 40 small towns) or they have a preponderant agriculture character, being close with rural area from which they are coming.

The villages have between 500-4000 inhabitants and usual they are linked by agriculture, and sometimes to other types of activities, as forestry, mining, commercial or tourist activities.

The total costs for investment needs have been evaluated based on specific indicators, calculated as a ratio between value of investment needs for modernization of systems and the inhabitants' number. The sources of data are feasibilities studies, ongoing projects, methodologies and guidelines for assessment of costs to compliance with EU norms.

5.2. Evaluating the investments needs required for water supply and sewerage services in urban area

The results of the analysis of the ongoing projects and/or the approved feasibility studies show the following unit values per an inhabitant needed to rehabilitate and to modernize existing capacities (fig.7) :

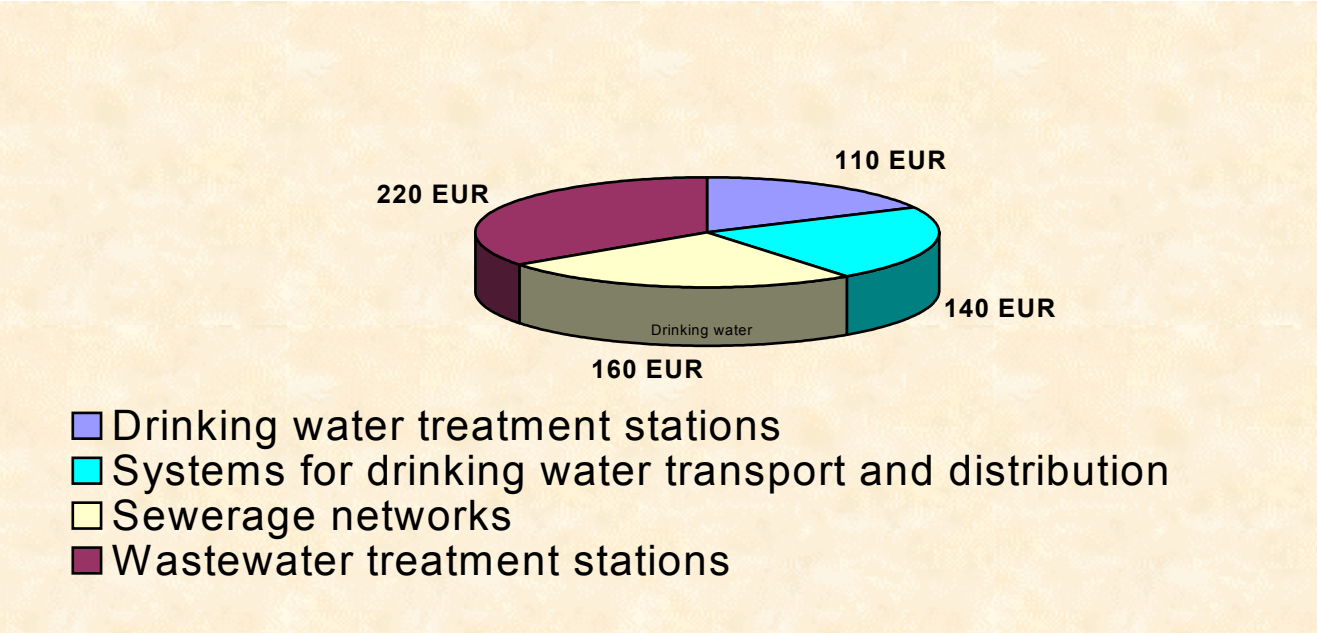


Fig.7 Specific investment value per inhabitant needed for rehabilitation of existing systems in urban area

Table 3

No. of inhabitants	Type of investment	Specific value (Euro/ Inhabitant.)	Total investment value (billions Euro)
10.000.000	Drinking water treatment plants	110	1.1
	Water transport and distribution	140	1.4
	Total drinking water supply	250	2.5
	Sewerage networks Wastewater treatment plants	160 220	1.6 2.2
	Total sewerage and WWTP	380	3.8
	GRAND TOTAL	**530**	**6.3**

As presented in the Table no. 3, the total amount of investment needs for rehabilitation and modernization of existing drinking water supply and wastewater systems in order to comply with the European standards is:

Total investments value **6.3 billions Euro**

out of which:

- drinking water supply 2,5 billions Euro
- sewerage 3,8 billions Euro

Assuming an uniform yearly rate of investment, the yearly average value is about 315 millions euro/year.

5.3. Evaluating the investment needs required for the water supply and sewerage services in rural area

Specific investment value for new drinking water supply and sewerage works has been calculated taking into consideration the following assumptions:

- Ø All 8,000,000 inhabitants from rural area will be supplied with drinking water until 2017;
- Ø In a first stage, drinking water supply systems will ensure drinking water at communal taps, following to allowed personal connections, after sewerage extension, in the second stage. In this stage, the systems will ensure an average consumption of 170 liter/day/capita.
- Ø The sewerage networks will be completed until 2022. Wastewater treatment plants will be build with 2-3 steps, starting with mechanical treatment, following biological treatment and tertiary treatment, if will be the case.

Given the above assumption, specific investment value will be (fig. 8):

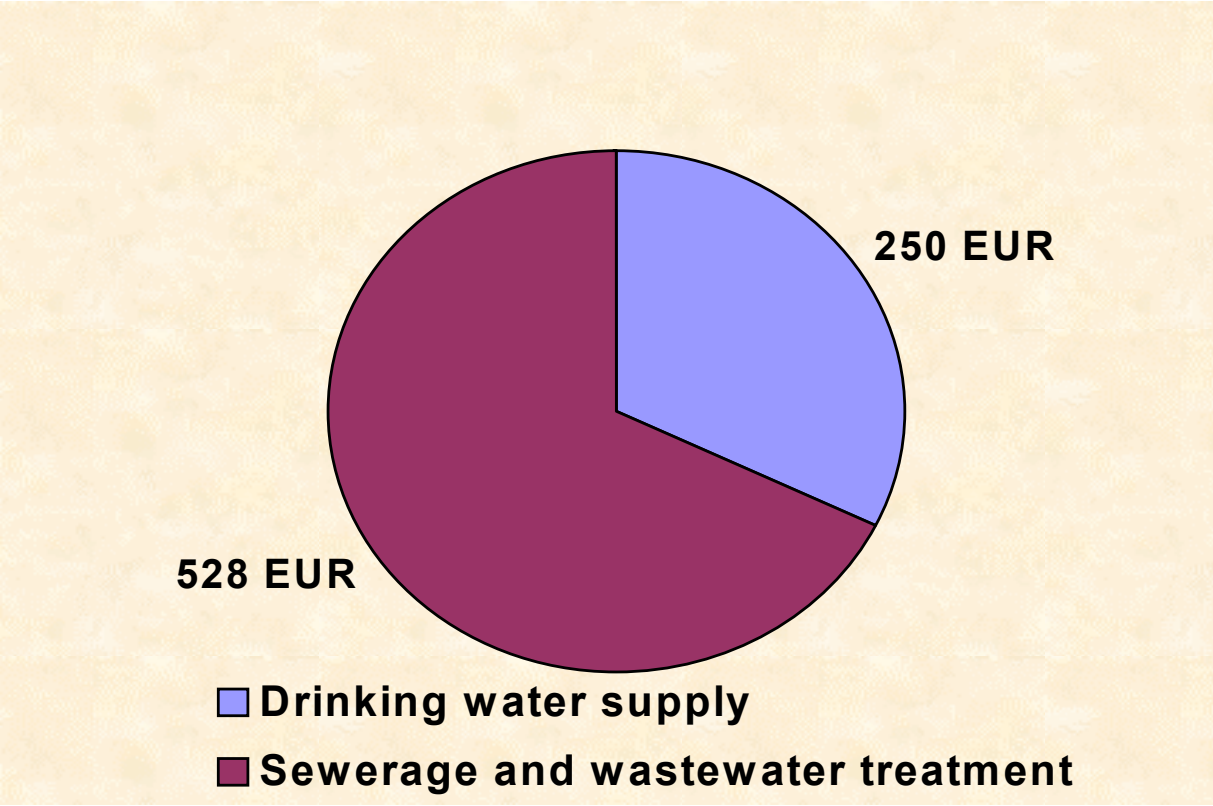


Fig. 8 Specific investment value per inhabitant needed for new systems in rural area

Table 4

No. of inhabitants	Type of investment	Specific value (Euro/ inhabitant.)	Total investment value (billions Euro)
8.000.000	Drinking water supply	250	2.0
	Sewerage and wastewater treatment plants	528	4.2
	TOTAL	**778**	**6.2**

As presented in the Table no. 4, the total amount of investment needs for extension of the drinking water supply and wastewater systems in rural area is:

Total investments value **6.2 billions Euro**

out of which:

- drinking water supply 2.0 billions Euro
- sewerage 4.2 billions Euro.

Assuming an uniform yearly rate of investment, for the period of 2004 - 2017 the yearly average value is about 365 millions euro/year, and for the period of 2017 – 2022 the yearly average value is about 220 millions euro/year.

5.4. Evaluating the total investment needs required for water supply and sewerage services

The total investment needs for rehabilitation of the infrastructure of the water and wastewater public services, based on calculation from 5.2 and 5.3 above is as follows (fig. 9):

- Water supply and sewerage in urban area 6.3 billions Euro
- Water supply and sewerage in rural area 6.2 billions Euro

TOTAL **12.5 billions Euro**

meaning an annual average of 625 billions Euro/year.

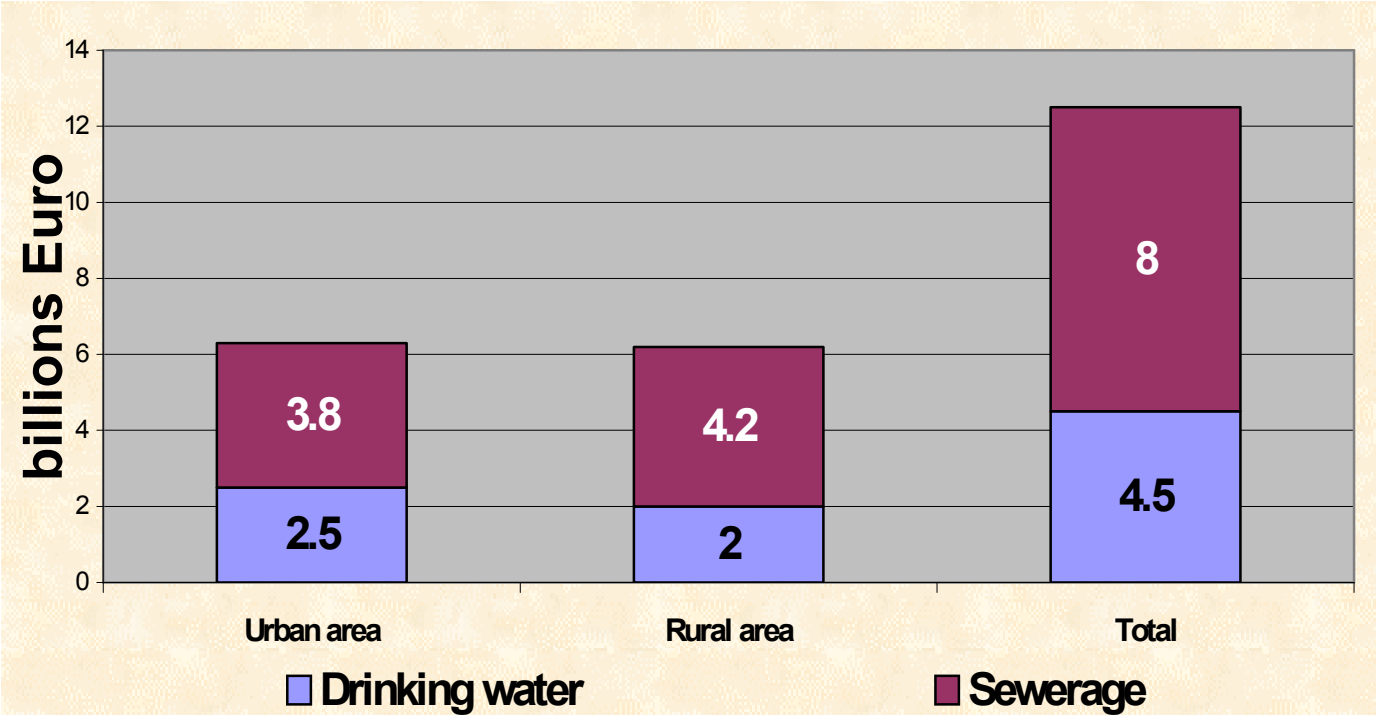


Fig. 9 Total investment needs for water and sewerage

These values are similar to the values of the Conformity Plan with the Law 458/2002, consolidated at national level (Annex no.1).

6. Possible financing sources for the national programs of water supply and sewerage public services modernization and development

The State Budget faces in this period major constraints. Therefore, reducing the State Budget finances for local public services and investments has become an important demand.

On the other hand, the local authorities currently do not have yet sufficient resources to cover all emergency needs. Therefore, they should have in view the main three ways of attracting capital to finance water supply and sewerage public services:

- attracting and using bi- and multilateral grants;
- using credits to finance public services and local infrastructure investment works with governmental or local authorities guaranties;
- stimulating the private capital involvement (public-private partnership).

6.1 Attracting and using the bi- and multilateral grants.

It is normal that the scenarios for financing the investment projects in Romanian urban infrastructure will have in view the EU grants as well as funds from other European donors based on the following arguments:

i) Romania is a candidate country towards accession;

ii) is a part of the European ecosystem, polluter and receiver as well;

iii) it is a country that has signed the most of Treaties and Conventions regarding environment and sustainable development.

Several investments programs for local infrastructure are in different stages of preparation and implementation, having financial support from European Union.

6.1.1. ISPA

ISPA is one of the three pre-accession financial instruments to assist Romania, along with the other pre-accession countries, to catch up EU environmental standards, and to familiarize with the policies and procedures related to Structural and Cohesion Funds.

Under environment component, beneficiaries of the investment projects are local authorities, public services operators and citizens.

Thus, several water and wastewater investment projects have been financed with more than 680 millions euro EU grant contribution (Arad, Buzău, Brăila, Braşov, Cluj-Napoca, Constanţa, Craiova, Focşani, Iaşi, Oradea, Timişoara, Paşcani, Satu-Mare, Sibiu, Piatra-Neamţ, Târgu-Mureş, Valea Jiului) – see Annex no.2.

Other applications, such as those prepared by local authorities from Bucureşti, Tulcea and Bacău, are very advanced from technical point of view and local authorities from Baia-Mare, Botoşani, Deva, Hunedoara, Galaţi and Drobeta-Turnu-Severin benefit of technical assistance in preparation of their application.

6.1.2. SAPARD.

In order to support rural communities, European Union offers financial support through SAPARD. Under measures 2.1 “Development and improvement of rural infrastructure”, there are financed the following types pf projects:

- New works for drinking water supply;
- Extension and modernization of main pipes and distribution networks, water tanks, pumping stations, and water treatment plant
- New sewerage networks;
- Extension and modernization of the existing wastewater treatment plants and sewerage networks.

Actual status of the approved projects is presented as follows:

- number of proposed and approved projects: 55, with a total value of 42,897 thousands Euro.

6.1.3. Small and Medium Towns Infrastructure Development Program (SAMTID).

Small and medium towns are the most affected localities by the reduction of the budget provision for investments. After the State Budget transfers to local budgets cutting off, these towns, meantime having a high unemployment rate, and many of them mono-industrial, stopped any investment in modernization and development of water supply and sewerage services infrastructure.

The extension of lacking of investment period can create a major crisis of the local public services in the small and medium towns, with negative impact on social stability and on public health.

Taking into consideration that in Romania more than 230 localities are small and medium towns where live about six million of inhabitants, most of them with low incomes and seriously affected by the transition period, Ministry of Public Administration and Internal Affair make all efforts to reinforce public services sector and to increase the quality and accessibility of these services for these localities. To achieve this goal, Ministry of Public Administration and Internal Affair prepared Small and Medium Town Infrastructure Development Program (SAMTID). SAMTID purpose is to support small and medium towns to solve their emergencies in the area of water supply and sewerage services. The Strategy for Public Administration Reform Acceleration, approved by Governmental Decision 1006/2001, includes this program rationale.

The most important financing source for SAMTID Program is a multi-annual Phare Economical and Social Cohesion investment component. European Bank for Reconstruction and Development and European Investment Bank have been required to express their interest in the program. They expressed their availability to co-finance and participate in the program implementation. Local Authorities received a substantial support from Regional Infrastructure Program, financed by USAID under Balkans Stability Pact, in order to identify their projects and prepare their proposals.

Total program value is estimated about 380 millions euro, with the following breakdown:

- 50% Loan (EBRD and EIB) ;
- 50% Grant Phare Economical and Social Cohesion and National Fund;
- Local authorities will finance project preparation and project implementation quality ensuring.

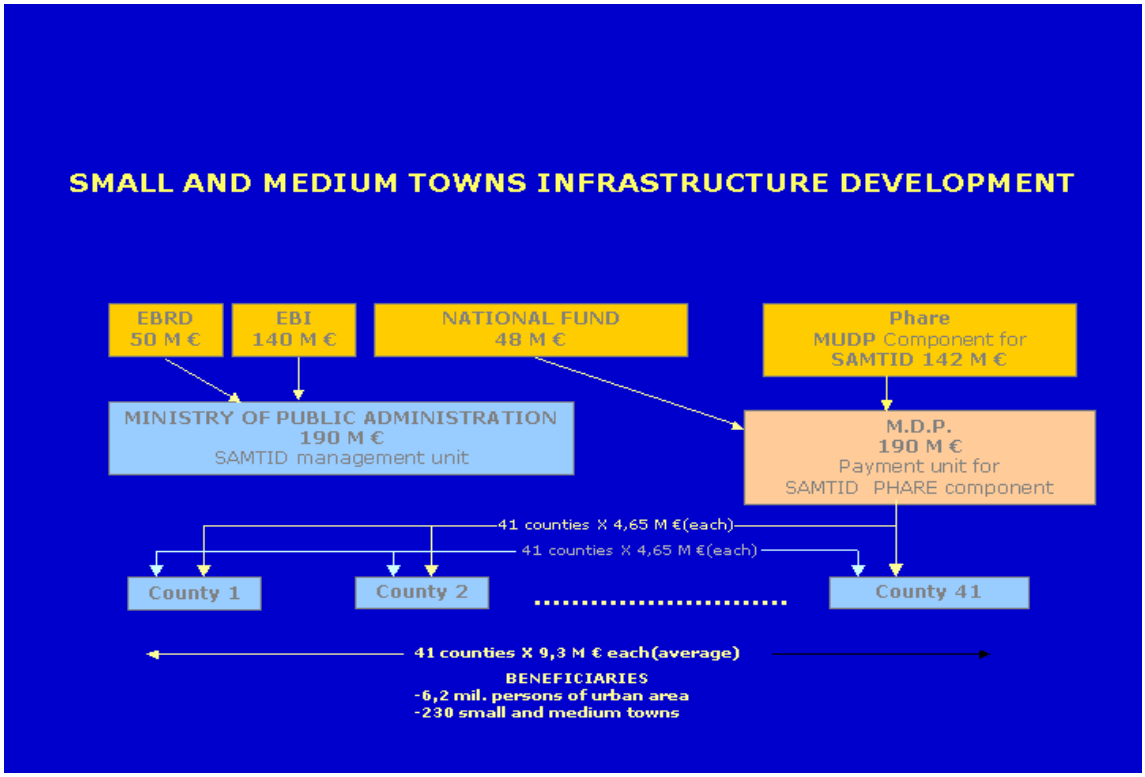


Fig. 10 SAMTID Program financing scheme

A number of 20 associations of local authorities submitted their applications for project proposals to be financed under Phare ESC 2002 investment component until 14th July 2003 – the deadline for the Pilot Phase Call for proposals.

The efforts to attract bi and multilateral grants to finance local infrastructure investments must continue. We can consider a better preparation and implementation of the projects, and a better management of the funds to decrease donors' concerns regarding Romania capacity to absorb and administrate these funds, could lead to an annual grant allocation of over 300 millions euro for the period of 2004 – 2007.

6.2 Use of credits in financing the public services and local infrastructure investment works

The usage of bank credits in financing of the infrastructure projects must be extended for the follows reasons:

- Provisions from the State Budget are diminishing due to budgetary constraints;
- Yet private capital express a smaller interest comparing to the needs of capital for this type of investments;
- Loan means economical efficiency and financial discipline, and these characteristics are missing in the sector, for the moment;

- Loan allows a more equitable sharing of the duties related to urgent investments in infrastructure (generating benefits for long term) between more generations of the future beneficiaries.

Therefore, the following programs with co-financing with loans from international financial institutions are under preparation and/or preparation:

A. Rural Development Program with a total value of 100 millions USD, financed by International Bank for Reconstruction and Development

In February 2003, Romania negotiated the Loan Agreement no. 4654RO with International Bank for Reconstruction and Development for a value of 40.0 millions USD, aiming to finance the Rural Development Program. At 1st August 2002, all required conditions were completed and the Loan Agreement started to be in force. The table 5 presents the list of localities included in the program in the first stage:

Table 5

County	**No. of population benefiting**
Botoşani	56 868
Călăraşi	86 067
Dolj	68 610
Sălaj	61 895
Tulcea	68 541

B. **Small and Medium Towns Infrastructure Development (SAMTID)** addresses to the small and medium towns investments needs for drinking water supply and sanitation. Its value is about 380 millions euro, with a co-finance from EBRD and EIB.

C. ISPA – Environmental component require co-financing from International Financing Institutions with a value of 400 millions euro in credits. Until now, were negotiated and signed loan agreements for 55 millions euro with EIB, having sovereign guaranties, and for 60 millions euro with EBRD having guaranties from local authorities.

Thus, a total annual amount of **150 millions euro will be attracted in this way in the period of 2004 – 2007**.

6.3 Stimulating private capital involvement (public-private partnership).

Local public services must involve private capital as public-private partnership because:

i) Private interest brings more discipline in local public budgeting and increase economic efficiency of the operator;

ii) it concentrates long-term capital in the public services area;

iii) it introduces elements of free competition in a sector characterized as a monopoly, and this competition cause an increase of services quality.

Private capital involvement and long-term and solid public-private partnerships are at the beginning, at the moment.

In the next period, private capital involvement in major investments will be supported, using BOT (Build-Operate – and Transfer). This type of public-private partnership is necessary for important investments for the extension of existing systems.

The licensing process, performance indicators achievement, public bids for the services where actual operators were not licensed, are the ways used for the opening of the public water and sewerage services market for strategic investors.

Thus, a total annual amount of **115 millions euro will be attracted in this way in the period of 2004 – 2007**.

The fig.11 presents potential financing sources for medium term investments (2004-2007).

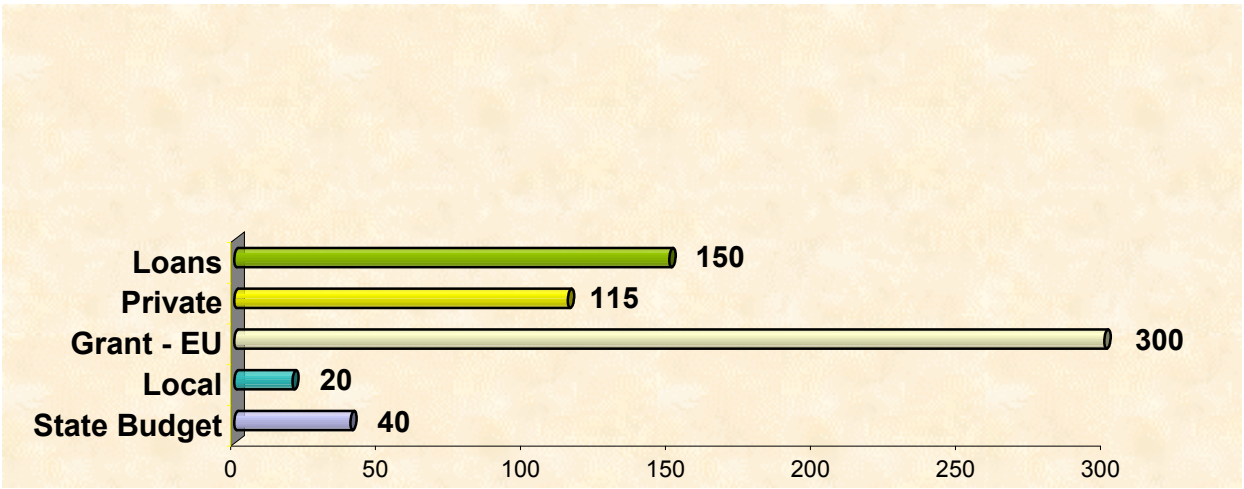


Fig. 11 Financing sources structure in the period 2004 – 2007 (millions euro/year)

7. Administrative reform in the water supply and sewerage public services sector

7.1. Local public administration and operators relationships

From the administrative point of view, water supply and sewerage public services are to be organized and managed by local public authorities, according to the following principles:

- Local public authority owns public assets which are used within the operation of these services;
- Operators, disregarding their juridical status, receive the right to operate on the basis of a delegation contract;
- The service delegation contract and its attribution rules are made according to models elaborated by ANRSC;
- The tariffs are to be approved by the conceding authorities and verified by ANRSC;
- Management activity will be assessed on the basis of certain contracts and performance criteria.

In order to reach desired performances in terms of quality/cost ratio, it is necessary to generalize the following concepts:

- Operators' performances assessment and for this purpose will be institutionalized the benchmarking procedures;
- Separation of service operation activity of the social protection. Social protection of the low income categories of the population has to be insured by special programs financed from local or state budget sources;
- The balance between costs and incomes, with a permanent control of the tariff;
- The salary to be maintained at the level negotiated with the trade-unions federations, with respect of the existing regulations.

7.2. Operators Relations with ANRSC

Water supply and sewerage public services operators' relationships with the National Regulatory Authority for Public Utilities (ANRSC) are settled in conformity with legal framework in force for the sector.

From the most important ANRSC's attributions that concern the direct relationship with public utilities operators we remind here:

- To elaborate frame-regulations regarding the organization, co-ordination and functioning of public services;

- To attest/authorize the operators, regardless the equity's nature;
- To approve water supply and sewerage prices and tariffs level in function of certain parameters;
- To supervise tenders for the delegation of the services administration;
- To ensure the elaboration and the harmonization of standards, norms and technical prescriptions with the existing European Union's regulations;
- To award, suspend, redraw or modify licenses and authorizations.

7.3. Reduction of operators' number process

Many of water supply and sewerage public services operators are not able to offer performance, to sustain development programs or to be efficient partners within the local infrastructure modernizing process.

That is why it is necessary to reduce the operators' number, taking into account the following:

- Economical-financial performances and personnel quality;
- Preparation and sustainment of programs developing potential;
- Integration of management on river basins.

Operators' number reduction measures, in compliance with these criteria, have to belong to local authorities, and ANRSC will be involved only in the appliance of licensing procedures and, respectively, in the monitoring of service delegation contracts.

We can assess that if this policy will be properly managed, will be reached a level of about 80 – 100 water supply and sewerage public services operators until 2007 and of about 40 – 50 until 2015.

8. Increase the importance of permanent professional training of the personnel within the water supply and sewerage public services

The organization of the professional training of the personnel working in water supply and sewerage public services has to be achieved taking into account the following principles:

- Periodical identification of training needs, starting from the operator's performance criteria, assumed by the management;
- Permanent assessment of knowledge, abilities and professional skills level of the whole personnel, beginning with every workplace requirements;
- The elaboration of multi-annual timetables for professional training (instruction, specialization, perfectionning, reconvention);
- Permanent training of the working personnel within vocational courses and periodical examination of materials, equipments, installations and new technologies working techniques;
- Organization of specialized courses for low management (technicians) that respond to the specific needs of this personnel category;
- Periodical professional attestation of the personnel within water supply and sewerage public services. In accordance to this principle, a special importance for medium managers is the certification of PC operation ability by ECDL (European Computer Driving License).

9. The perspective of the operators and social partners' relationship

In order to offer quality services, adapted to the communities' specific needs, it have to be found communication means among all stakeholders, in the purpose of development and modernization of the water supply and sewerage public services.

In Romania, the legal framework necessary to the development of certain social partnerships both at national, regional or local level among employers associations, trade unions and government, respectively local public authority exists.

It is necessary to increase the involvement of social partners, especially of the employers associations for the anticipation of necessary competencies corresponding to the modifications foreseen in the occupational area following technology evolution and work organization.

In order to obtain agreements regarding work organization, it is necessary to maintain a permanent dialogue and to sustain negotiations between employers associations and trade unions.

It is also necessary that social partners find ways of collaboration in order to put in practice objectives as: attraction of financing for investments, professional training, ensuring quality and adjustment to the European standards.

The agreement between the administration – employers associations – trade-unions will have to function in compliance with EU principles and probably the three structures will realize agreements regarding the following:

- Respect of collective work contract provisions;
- Level of salaries and raising rate;
- Professional training;
- Respect of work protection norms and assurance of corresponding work conditions;
- Assurance of protection equipments and of salary increases for over usual danger work;
- Involvement of personnel in company's performances improvement programs and raise of public services quality;

An important objective will have to be to make aware the consumer public. The consumers will have to be educated from the school banks regarding the importance of these services for population's health and level of living, as by:

- Editing information brochures for citizens;
- Realization of short movies to be broadcasted on national and local television channels;

- Debates on different subjects, such as: services quality, their cost, what negligence and bad water supply interior networks administration means, etc.
- Personal contact: advising, conferences and public debates;
- Special events: opened doors day, water and wastewater treatment plants visits, etc.
- Citizens' taking part at the administration's decisions, through the institutionalizing of their consulting means;
- Education and stimulation of the civic spirit.

10. Final conclusions and recommendations

- Water supply and sewerage public services are part of the larger area of public utilities of general economical interest which regulation began in the European Union by the elaboration of a Green Book that was launched in Brussels in May 2003, in order to be debated in all member and candidate countries;
- The quality of surface waters used to get drinking water, the protection of underground water against pollution created by certain dangerous matters, the water protection against the pollution with nitrates from agricultural sources, the quality of water for human consumption, the treatment of town wastewater, the administration of waters at the level of river basin are features regulated through directives of the European Union. Their provisions have been transposed in the Romanian law and will be entirely implemented during the transition period that is negotiated with the European Commission within the accession process;
- Water supply and sewerage public services have an economical dimension and a social one, powerfully tied in between. From the economical point of view, they create the premises of the realization of the production processes at a high number of activities from other fields of the national economy and they represent a point of sale for several products from other economical fields. From a social point of view, water supply and sewerage public services assure work places for a high number of employees, but especially they assure drinking water necessary to human life and body hygiene for an important part of the country's population;
- National strategy for the water supply and sewerage public services field has to be designed and monitored at central level, with the participation of all interested factors. The implementation of this strategy has to be sustained by economical, technical, scientifically, financial, law and institutional means.
- Local authorities have to elaborate their own strategies for the development and modernization of water supply and sewerage services and are directly responsible of assuring the population with corresponding quality services at an affordable price;
- In the development of this strategy it has to be taken into account a double dimension for water: quality and quantity. That means, in addition to investment activities is needed to focus the efforts of operators and public authorities on the promoting the total quality management concepts, including quality of the service and water quality;
- The most trendy worldwide and adequate technical solution will be applied during modernization and development works;
- Storage drinking water tanks capacity will be increased and network overcapacity situations as a result of decreasing water consumptions will be addressed;
- In the purpose of extending water and sewerage infrastructure and raising administration and financing capacity of these public services, so that they

can answer to the requests of European directives, local authorities have to associate themselves on the criteria of belonging to the same river basin in order to delegate this service to operators that achieve performance from the technical, organizational and financial point of view;

- Operators licensing process made by ANRSC has to conduct to the increasing of the performances of those that stay on the market and subsequently of the quality of the services offered to the population;
- Operators' own sources and local budgets cannot assure the modernization and the development of water infrastructure within a reasonable period of time. That is why efforts have to be made in order to attract as many grants as possible from the European Union and its member countries, as well as from other international donators. In the same time, in order to complete financing sources have to be established public-private partnerships, and there where it is the case and following elaborated analyses regarding economical efficiency, for prioritary and urging investments will be also attracted certain loans, generally for co-financing;
- For 2004 - 2007 period have to be ensured annually financial resources for investments in a quantum of about 625 mil. EUR;
- Professional and vocational training will have to be included in the contractual tasks for all water supply and sewerage public services operators, and will have to be monitored the same as the other performance indicators;
- Civil society represented by employers associations and trade-unions, professional and consumers associations will have to be an active presence, beside central and local public authorities, in the process of implementation of the sustainable development strategy of water supply and sewerage public services.

Annex no. 1

Assessment of the costs related to the Conformity Plans with the Law no. 458/2002 on Drinking Water Quality

County	Inhabitants No.	No of towns with drinking water supply systems	No of communes with drinking water supply systems	Extension and rehabilitation works		Value of works (millions Euro)		
				Treatment plants l/s	Network Km	Treatment plants	Distribution networks	Total
Alba	382.999	11	42	588	426	17,850	57,084	74,934
Arad	461.730	8	67	320	2486	10,420	333,124	343,544
Arges	653.903	6	57	3732	1928	78,170	271,549	349,719
Bacau	708.751	8	20	531	231	16,535	47,232	63,767
Bihor	600.223	9	51	627	2352	21,395	318,179	339,574
Bistrita-Nasaud	312.325	4	17	603	932	19,365	129,883	149,248
Botosani	454.023	4	39	1520	268	32,200	64,867	97,067
Braila	373.897	4	27	146	455	4,160	63,003	67,163
Brasov	588.366	9	16	500	94	15,000	15,396	30,396
Bucuresti	1.921.751	1		18820	800	376,400	107,200	483,600
Buzau	494.982	4	53	183	658	6,405	89,172	95,577
Calarasi	324.629	5	25	1143	198	34,705	26,532	61,237
Caras-Severin	333.396	8	18	1509	759	47,315	145,495	192,810
Cluj	703.269	6	67	3205	2511	69,650	344,924	414,574
Constanta	715.172	11	44		200		31,800	31,800
Covasna	222.274	5	11	385	122	12,750	19,748	32,498
Dambovita	541.606	6	32	317	786	9,510	105,324	114,834
Dolj	734.823	5	3	1765	117	53,025	15,678	68,703
Galati	619.522	4	29	5930	236	120,000	31,624	151,624
Giurgiu	298.022	3	4	350	136	10,500	18,524	29,024
Gorj	387.407	7	24	203	225	7,105	30,150	37,255
Harghita	326.020	9	27	299	237	9,215	37,196	46,411
Hunedoara	487.115	13	21	1021	310	30,930	41,794	72,724
Ialomita	296.486	4	31	481	299	15,295	40,066	55,361
Iasi	819.044	4	21	1350		27,750		27,750
Ilfov	300.109	2	28	83	109	2,905	14,606	17,511
Maramures	510.688	8	50	1890	271	42,750	37,314	80,064
Mehedinti	306.118	5	28	1554	55	33,290	7,370	40,660
Mures	579.862	7	48	960	293	28,800	39,673	68,473
Neamt	557.084	4	36	420	98	12,600	40,864	53,464
Olt	490.276	7	47	401	230	12,935	38,895	51,830
Prahova	829.224	14	55	550	479	16,750	64,346	81,096
Salaj	248.407	4	37	750	240	22,500	39,960	62,460
Satu-Mare	369.096	4	29	996	88	30,610	11,792	42,402
Sibiu	422.224	9	9	2196	257	66,320	34,438	100,758
Suceava	690.941	8	28	2546	413	57,785	75,442	133,227
Teleorman	436.926	5	8	398	92	12,545	13,328	25,873
Timis	677.744	7	55	664	698	20,710	93,532	114,242
Tulcea	258.639	5	36	1662	325	34,170	43,750	77,920
Vaslui	455.550	4	34	1066	355	32,310	47,570	79,880
Valcea	413.570	8	27		569		76,246	76,246
Vrancea	390.268	4	40	160	113	15,181	32,310	47,491
	21.698.461					**1.487,811**	**3.096,980**	**4.584,791**

Annex no.2

ISPA projects status

	ISPA project	Project name	Total eligible costs	ISPA Grant	LoanBEI, BERD
			Euro	Euro	Euro
	ENVIRONMENT				
1.	Constanța	Wastewater treatment station/Sewerage system	96,556,653	72,417,490	24,139,163
2.	Iaşi	Wastewater treatment system	51,378,000	38,533,500	12,844,500
3.	Valea Jiului	Wastewater treatment plant Danuțoni	9,680,000	7,260,000	2,420,000
4.	Craiova	Sewerage system and WWTP	70,378,000	52,783,500	17,594,500
5.	Arad	Wastewater treatment plant	18,000,000	13,500,000	4,500,000
6.	Brăila	Wastewater treatment plant /Sewerage system	59,877,400	44,908,050	14,969,350
7.	Cluj	Wastewater treatment plant /Sewerage system	46,755,800	35,066,850	11,688,950
8.	Focşani	Wastewater treatment plant /Sewerage system	15,876,500	11,748,610	4,127,890
9.	Oradea	Wastewater treatment plant /Sewerage system	23,906,000	16,734,200	7,171,800
10.	Timişoara	Wastewater treatment plant /Sewerage system	48,080,000	34,136,800	13,943,200
11.	Târgu Mureş	Drinking water and rehabilitation of the wastewater treatment system	27,909,400	20,932,050	6,977,350
12.	Paşcani	Wastewater treatment system	16,262,000	12,196,500	4,065,500
13.	Braşov	Drinking water supply and drinking water treatment plant	58,708,624	41,683,123	17,025,501
14.	Satu Mare	Rehabilitation of the water supply and sewerage system	37,355,000	26,522,050	10,832,950
15.	Buzău	WWTP, sewerage system and distribution network	35,433,550	26,220,827	9,212,723
16.	Sibiu	Modernization of the water supply and sewerage system	37,588,000	25,559,840	12,028,160
17.	Piatra Neamț	Water supply, drinking water treatment plant and sewerage system	28,594,545	21,159,963	7,434,582

	ISPA Projects	Project name	Total eligible costs	ISPA Grant	Loan BEI, BERD
			Euro	Euro	Euro
	Technical Assistance for ISPA Environment projects preparation				
1.	Bucureşti	Technical Assistance	1,810,000	1,357,500	452,500
2.	Preparation of a 5 new ISPA applications	Technical Assistance for ISPA preparation in Baia Mare, Botoşani, Drobeta, Deva and Hunedoara	3,500,000	2,625,000	875,000