

Water and Wastewater Sectors in Romania DEMO Market Brief 2010

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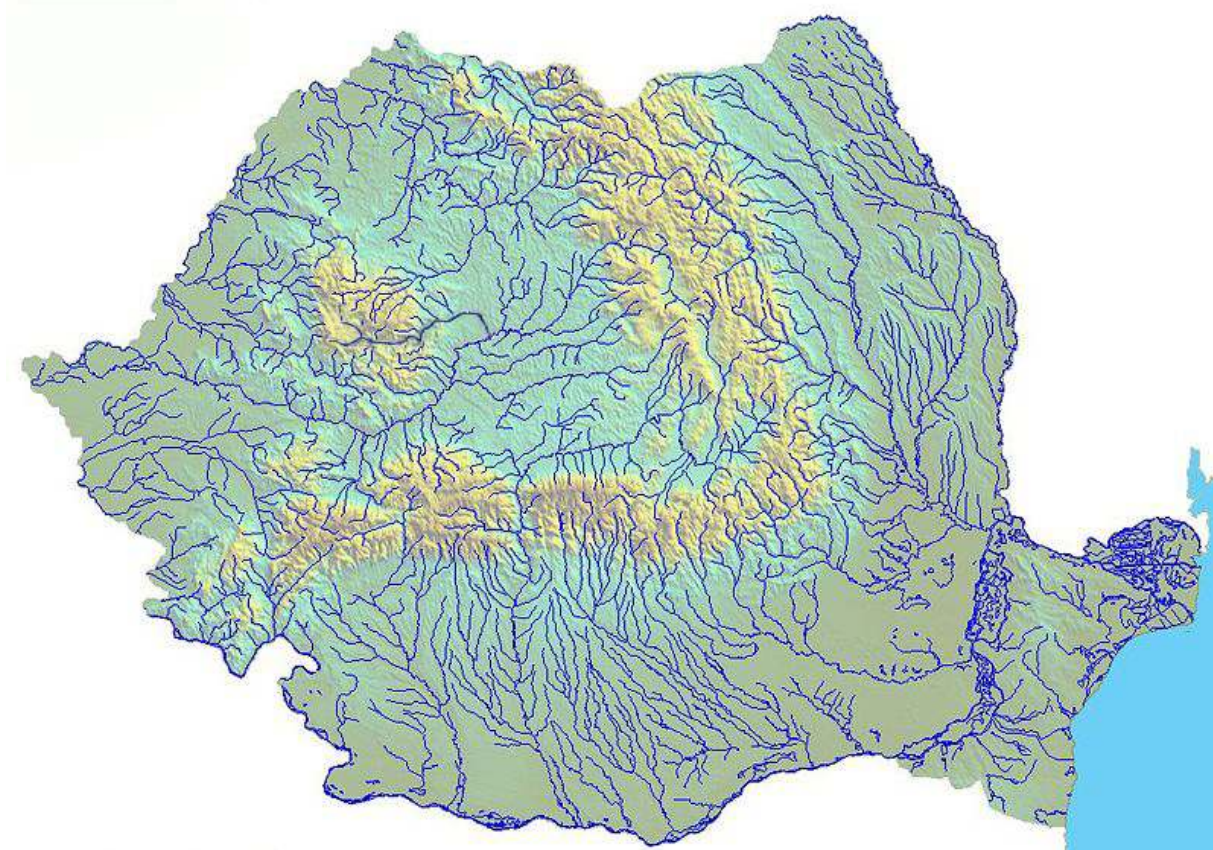
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1. Brief general considerations on the water and wastewater sectors in Romania

The water and wastewater sectors in Romania are characterised by the followings:

- a wide variety of water resources, both in space and time
- water resources composed of surface waters (Danube river, inland rivers, natural lakes and reservoirs) and ground waters
- some 97.4% of the Romania's surface is located in the Danube River Basin
- 11 national river basins (sub-basins) on the national level
- insufficient protection of the water resources
- a low percentage of population connected to the sewerage and waste water treatment systems
- non-functioning of the all existent treatment stations
- non-conform waste management



2. Water management system in Romania

The existing institutional structure in Romania should ensure integrated water management in terms of: quantity – quality, groundwater and surface water.

According to the EU Water Framework Directive, the main objective of the water management policy in Romania is to reach by 2015 “good ecological status” for all waters, through the integrated management of the water resources.

The water resources management at the national level is represented by the Ministry of Environment and Forests and the National Administration “Romanian Waters”.

The Ministry of Environment elaborates the environmental protection and the water management policies at the national level and the specific regulations for these activities development and harmonization with the general policy framework of the Government, ensures and coordinates the implementation of the Government Strategy on the environmental protection and the water management, accomplishing the role of state authority for synthesis, coordination and control in these fields.

Also, the Ministry of Environment is in charge with international cooperation in the water field, especially the cross-border cooperation within the framework of the bilateral agreements with the neighbouring countries - Hungary, Serbia, Ukraine and Moldova and also within the Convention for Cooperation on the Protection and Sustainable Use of the Danube River and Convention on the Protection of the Black Sea Against Pollution.

Recently, the Protocol of the 21st session of the Romanian - Hungarian Water Management Commission on border water management has been signed in Targu Mures. The participants at the event examined the fulfilment of the agreement commitments, the activities carried out for the flood mitigation, the monitoring of the border water quality by systematic analyses performed separately and jointly, the exchange of the meteorological and hydrological information, the accidental pollution incidents and the pursuit of the functionality of the hydro-engineering works.

The National Administration “Romanian Waters” is the Romanian water management body under the direct authority of the Ministry of Environment. The National Administration manages 11 river basins, through its units - Water Directorates. Its main tasks are: the water resources management, the integrated water monitoring system, the administration of the hydraulic structures, the water protection against pollution and over use, the flood control management, the coordination of the national investments in the water resources field, the

implementation of the EU Directives related to the water, the application of the international and bilateral water conventions.

The national system of the water monitoring includes two types of monitoring: the supervising monitoring with the role to evaluate all the water bodies in the hydrographical basins and the operational monitoring (integrated to the supervising monitoring) for the water bodies with risks of non-complying with the objectives of the waters protection.

Some necessary steps for the improvement of the water management in Romania are:

- the improvement of the infrastructure of the water supply, sewerage and water treatments systems
- the extension of the water supply and sewerage systems in the rural localities
- the improvement of the water quality by the reduction of the pollution caused by the hazardous substances discharged into the aquatic environment
- the flood effects mitigation
- the drought effects mitigation
- the control of the soil erosion and the land degradation
- the use of the water power potential level
- the protection of the Black Sea coast against the erosion and the beach rehabilitation



3. Water pollution in Romania

In regards to the protection of the waters against the pollution caused by nitrates from agricultural sources in Romania, there is in force the Council Directive 91/676/EEC. The goal of the directive is the water protection (water quality monitoring, cadastre of the waters affected by nitrate pollution and designation of the vulnerable areas).

The responsible with this Directive is the Ministry of Environment, with the collaboration of the Ministry of Agriculture, Forestry and Rural Development and the Ministry of Health. The main instruments for the implementation of the Directive are: the action plan, the code of good agricultural practices for the use of the farmers and the programs of measures for the vulnerable areas.

The report of the European Commission regarding the implementation of the Directive 91/676/EEC identified the vulnerable areas in Romania. In 2004 – 2007, the areas vulnerable at the pollution caused by nitrates represented the perimeters of 251 localities in 34 counties and 10 hydro-graphic basins, this meaning a surface of 1,217,147 hectares. The results obtained during 2004 – 2007 and the necessity to re-delimitate the vulnerable areas (which is performed once a four years) requested the expanding of the surfaces declared as vulnerable, including also the potentially vulnerable zones. Thus, at national level, 1,963 localities were identified, representing 137,565 km².



Some examples of the water pollution cases, which were recorded in Romania, are presented below:



- Tones of household waste and PETs reached the Cerna gulf in 2009. The Mayor of the Orsova City declared that this situation was caused by the rushes on the Cerna river, which flushed the unauthorised landfills in Baile Herculane, Mehadia and Toplet localities, drawing along the household waste and dried vegetation into the Danube River.
- An accidental pollution with substances containing chlorine and aluminium occurred in 2009 on the Arges river, in the area of the Pitesti city. The substances resulted from the cleaning of some reservoirs at the water treatment station in Budeasa. The pollution wave covered some one kilometre downstream and was stopped following the intervention of the specialised team from the Arges – Vedea Waters Directorate.
- The company Urban SA made uncontrolled outflows in the Stefanesti accumulation on the Pasarea river, determining fishing mortality. Thus, the company was amended by the National Administration “Romanian Waters” with 75,000 RON. In February 2010, the authorities set permanent monitoring measures of the situation and the collecting of the dead fish from the river.

4. Wastewater treatment in Romania

The wastewater treatment system in Romania is characterized by a low percentage of the population connected to the sewerage and wastewater treatment systems and the non-functioning of the all existent treatment stations.



According to the EU requirements, by December 2010, the percentage of the population connected to the sewerage networks in Romania must reach 60.8% and the percentage of the population connected to the treatment stations must reach 50.5% at the national level.

The responsible authorities for the wastewater treatment issues in Romania are: the Ministry of Environment and Forests, the Ministry of Administration and Interior, the Ministry of Regional Development and Tourism, the National Environmental Guard, the National Administration “Romanian Waters”, the National Regulatory Authorities for Public Services of Communal Management, the Local Services for Water and Waste Water.

The Directive 91/271/EEC has as objective the protection of the environment from the adverse effects of the urban wastewater discharges and discharges from certain industrial sectors and concerns the collection, treatment and discharge of the domestic wastewater, the mixture of wastewater and the wastewater from certain industrial sectors.

The stipulated transition periods for the wastewater collection are as follows:

- at the latest 31 December 2013 for all discharges from agglomerations of more than 10,000 population equivalents (p.e.)

- at the latest 31 December 2018 for all discharges from agglomerations of between 2,000 and 10,000 p.e.

The stipulated transition periods for wastewater treatment are as follows:

- at the latest 31 December 2015 for all discharges from agglomerations of more than 10,000 p.e.
- at the latest 31 December 2018 for all discharges from agglomerations of between 2,000 and 10,000 p.e.

One significant problem in Romania is represented by the fact that Bucharest does not have a wastewater treatment plant. The construction works at the Glina wastewater treatment station, located in Ilfov county (near Bucharest) started during the Communist period but they have not been finalised yet.

When finalised, the Glina plant will treat the sewage waters of the capital city and those of the nearby localities and will be turned over for operation to Apa Nova, the manager under a concession contract of the water supply and sewerage networks in Bucharest. The plant's treatment process is expected to generate 400 - 500 tonnes of mud per day, which will be turned into biogas, subsequently used for the energy production.

According to the monitoring report of the National Administration "Romanian Waters" in 2008, the volume of the wastewater evacuated from Bucharest and the neighbouring localities is of 354.3 million m³ per year, representing all the wastewaters evacuated directly into the Dambovitza river, after passing through a mechanical step.

The wastewaters contain nutrients (reflected by the high levels of nitrogen – annual average of 27.037 mg/l and total phosphorus – average of 3.99 mg/l), these parameters sustaining the necessity of the advanced treatment of the wastewaters. The maximum volume of the overflow wastewaters is of some 18 m³/s.

The EU directives in the water management field impose, especially to the big cities, the building of the treatment stations with tertiary step, in order to achieve the good status of the waters, respectively the quality grade II. At present, Romania does not have a treatment station with tertiary step, capable to treat the wastewater from the content of nutrients, respectively total phosphorus and total nitrogen.

5. Funds in the water and wastewater sectors in Romania

The strategy and the distribution of the funds on the environment sectors are performed through the Sector Operational Programme Environment (SOP Environment). The programme covers the period of 2007 - 2013 but its objectives also look forward to Romania's development needs beyond 2013 by laying the foundations for sustainable economic development.



The SOP Environment has the following priority axes:

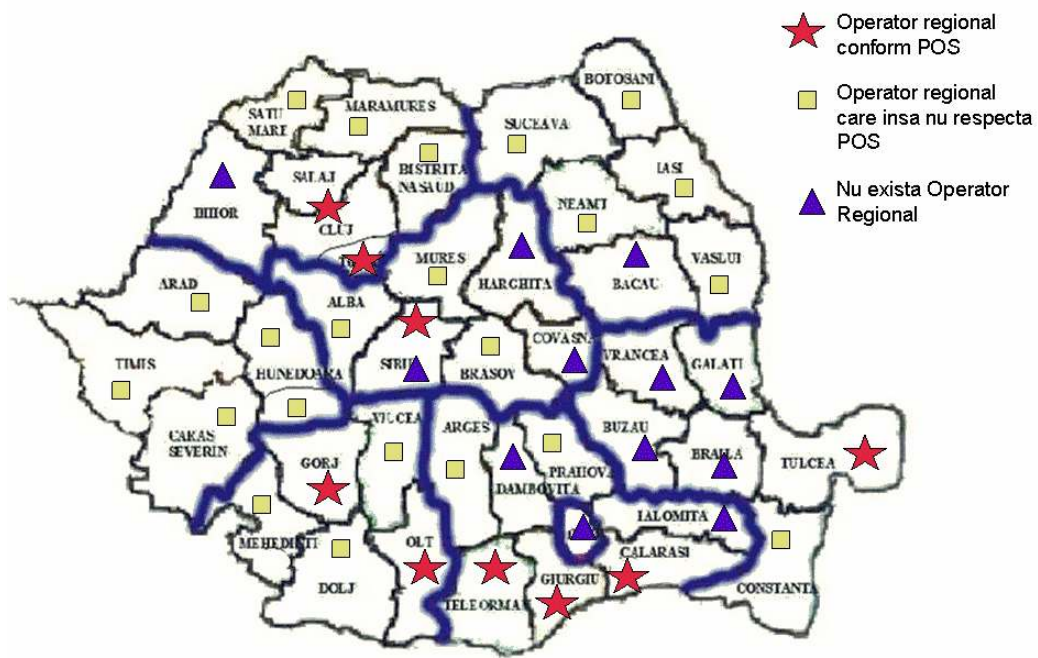
- Priority Axis 1 - Extension and modernization of water and wastewater systems
- Priority Axis 2 - Development of integrated waste management systems and rehabilitation of historically contaminated sites
- Priority Axis 3 - Reduction of pollution and mitigation of climate change by restructuring and renovating urban heating systems towards energy efficiency targets in the identified local environmental hotspots
- Priority Axis 4 – Implementation of adequate management systems for nature protection
- Priority Axis 5 - Implementation of adequate infrastructure of natural risk prevention in most vulnerable areas
- Priority Axis 6 – Technical assistance

One of the specific objectives of the SOP Environment is to improve the quality and access to the water and wastewater infrastructure, by providing water supply and wastewater services in most urban areas by 2015 and by setting efficient regional water and wastewater management structures.

The SOP Environment has a contracting rate of the allocated funds of some 66%, being the most successful operational programme developed in Romania. In the first eight months of 2009, 487.47 million RON (some 115 million EUR) were paid to the beneficiaries of the projects financed through the SOP Environment.

In March 2010, the Romanian Government approved a Decision for the implementation of a Programme related to the rehabilitation and modernization of the roads with the county and local interest, the water supply, sewerage and wastewater treatment in villages and administrative – territorial units with tourism resources of national interest. The Programme will be coordinated by the Ministry of Regional Development and Tourism.

The selection of the financed projects will be done by the Ministry of Regional Development and Tourism, based on the proposals sent by the county councils in collaboration with the local councils. The programme will be financed using state funds and also local funds obtained through external credits and public – private partnerships.



Source: Augustin Boer

6. Projects in the water and wastewater sectors in Romania

Some examples of projects in the water and wastewater fields in Romania are presented below.

6.1 International Network Tisa – I On TISA

The Maramures County Council approved the project “International Network Tisa – I On TISA”, promoted by the County Council in partnership with the Maramures Water Management System. The project will be submitted for financing within the Programme South – East Europe. The project intends to improve the prevention of the environment risks represented by the accidental pollutions in the Tisa river basin, part of the Somes – Tisa hydro-graphic basin. The total value of the project is of 835,000 EUR.

6.2 Water treatment station in Craiova

The biggest water treatment station in Romania, both in terms of surface and potential will be finalised by the end of 2010 in the Craiova city. The beneficiary of the project is the Water Company “Oltenia” in Craiova. The project’s value is of 70.378 million EUR, out of which 75% represents EU funds and 25% represents funds from the Craiova Local Council. The project includes the rehabilitation and the modernisation of the existent treatment station in order to treat a volume of wastewater estimated at some 136,000 m³ per day. The project started in 2008.

6.3 Glina wastewater treatment plant

The Bucharest Mayoralty will invest 6.7 million EUR in the wastewater treatment plant in Glina, Ilfov county, for the construction of a micro water power station and a power station fuelled by biogas. In March 2010, the Bucharest City Hall won a licence from the National Energy Regulatory Authority for the building of the two stations. The two stations are expected to reduce the fees for the wastewater treatment services. The station that will use the biogas will have two groups that will generate a total installed power of 3.88 MW and a thermal power of nearly 4.4 MW.

For the investment in the two stations, the Bucharest City Hall will use EU funds (54.6%), a loan from the European Investment Bank (29.93%), a loan from the European Bank for Reconstruction and Development (11.97%) and state budget funds (3.5%). This investment is part of a project of 100 million EUR for the construction of the Glina wastewater treatment station.

6.4 Water treatment station in Braila

The works at the water treatment station in Braila, part of the ISPA programme, started in July 2009. The winner of the tender was the Turkish – German consortium: System Yapi - Passant



6.5 Wastewater treatment station in Cristesti

The rehabilitation and modernisation works of the wastewater treatment station of the Targu Mures city, which is located in Cristesti, were finalised. The rehabilitation works of the wastewater station were of 8.6 million EUR, out of which over 1.5 million EUR represented an ISPA grant and over 7 million EUR represented a loan from the European Bank for Reconstruction and Development. The works were performed by the company Spaans Babcock Alewijnse from the Netherlands.

The main target of the works was the complying with the EU environment directives, including related to the nitrate and the phosphorus in the waste waters in Targu Mures and the neighbouring areas. Through this investment, also the pollution of the Mures river will decrease.

7. Legislation in the water and wastewater sectors in Romania

The Romanian legislation followed various steps in order to be harmonized with the EU requirements. The objectives of the Romanian legislation are to expand the scope of the water protection to all waters (rivers, lakes, coastal waters and groundwater), the combined approach of the emission limit values and the quality standards and the elaboration of the Management Plan of the river basins.

The Management Plan of river basins takes into account the integrated monitoring of the water, the heavily modified water bodies, the reconstruction of the rivers, the economical analysis at the river basin level, the public participation and the international cooperation.

The main legislative acts in the water field in Romania are the Water Framework Directive 2000/60/EC and the Water Law 107/1996.

Water Framework Directive 2000/60/EC

The purpose of this Directive is to establish a framework for the protection of the inland surface waters, the transitional waters, the coastal waters and the groundwater, through the development of the integrated policy in the water field in the European Community

The Directive prevents further deterioration, protects and enhances the status of aquatic and terrestrial ecosystems, promotes the sustainable water use based on a long-term protection of the available water resources, aims at the enhanced protection and the improvement of the aquatic environment, ensures the progressive reduction of the pollution of the groundwater and prevents its further pollution, contributes to mitigating the effects of the floods and the droughts.

The Directive stipulates: the coordination of the administrative arrangements within river basin districts, the environmental objectives, the review of the environmental impact of the human activity and the economic analysis of the water use, the register of the protected areas, the waters used for the abstraction of the drinking water, the monitoring of the surface water status, the groundwater status and the protected areas, the recovery of the costs for the water services, the combined approach for point and diffuse sources, the programme of measures, the river basin management plans, the strategies against the pollution of the water, the strategies to prevent and control the pollution of the groundwater etc.

Water Law 107/1996

The law stipulates the followings: the definition of the environmental objectives and the classification of the water status, the definition and characterization of the surface water bodies of the artificial and heavily modified water bodies, the definition of the river basin

district, the coordination of the measures related to the surface and groundwater bodies which belong to the same ecological, hydrological and hydro-geological system, the establishment of the new monitoring system based on the environmental objectives, the ensuring of the good water quality supply for the population, the economical analysis of the water services based on the long term prognosis of the water supply and water demand within the river basin, the introduction of the cost recovery principle of water services etc.

Other important legislative acts are the Council Directive 91/676/EEC, related to the protection of the waters against the pollution caused by nitrates from agricultural sources, the Council Directive 98/83 EC, related to the drinking water quality, the Council Directive 76/464/EEC, related to the pollution caused by certain dangerous substances discharged into the aquatic environment.

8. Events in the water and wastewater sectors in Romania

8.1 Romenvirotec

The 17th edition of the international exhibition Romenvirotec took place in Bucharest, in March 2010. The event was organized under the patronage of the Ministry of Environment and Forests. The main fields presented at the event were: the water pollution prevention, the soil protection, the sound pollution prevention, the recycling waste, the sanitation, measuring and control technologies, the labour safety, the management of the unconventional energy sources, the protection against floods.

The edition in 2010 recorded 101 exhibitors, compared to 98 in 2009 and covers 2,100 sqm compared to 1,541 sqm in the previous edition. The participants in 2010 were companies from Romania, Austria, Denmark, France, Germany, Italy, UK, Bulgaria and the Netherlands.

8.2 Water Forum

The Water Forum, organised by the Romanian Water Association, took place in June 2010 in Bucharest. The event included a seminar on the financing opportunities through the SOP Environment, SOP, a conference on the development of the water supply and sewerage systems in the rural communities, an international exhibition, a workshop on the German technologies in the water field, etc

8.3 TAIEX Seminar

The Taiex Seminar took place in April 2010, in Constanta. The event was focused on the European experience related to the urban wastewater treatment.

Sources used include:

- The Romanian Ministry of Environment and Forests
- The Ministry of Regional Development and Tourism
- The National Administration “Romanian Waters”
- The European Commission
- The National Environmental Guard
- Various publications and media

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