

6. THESIS ANNEXES

- Annex No. 1 - the complete list and description of the environmental projects in Romania
- Annex No. 2 - the complete list and description of the environmental projects in Bulgaria

6.1. ANNEX NO. 1 - COMPLETE LIST AND DESCRIPTION OF ENVIRONMENTAL PROJECTS IN ROMANIA

6.1.1. THE REHABILITATION OF THE DISTRICT HEATING SYSTEM IN IASI MUNICIPALITY

TOTAL INVESTMENT

€ 61,237,712

EU INVESTMENT

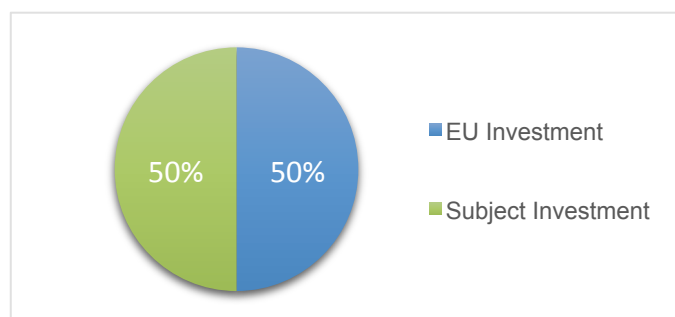
€ 30,618,856

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion fund and European regional development fund for the 2007 to 2013 programming period



In an effort to bring the district heating system in the Iasi municipality in line with EU requirements, this project will rehabilitate the existing urban heating plants and heat supply networks.

As well as decreasing SO₂, NO_x and dust emission concentrations from the heating system (which currently exceed authorised levels), the project will also improve energy efficiency in the heating plants and the transport and distribution networks.

This project is part of an overall action plan for the municipality which aims to reduce emissions and rehabilitate networks. The existing district heating system in Iasi supplies more than 158 000 inhabitants, representing 51% of the population, as well as most of the public institutions and service firms.

In concrete terms, the project consists of a number of key actions, including: equipping the district heating system with upgraded production technologies by retro-fitting three hot water and one steam boiler in two plants to reduce NO_x emissions; installing a desulphurisation unit in the second plant to reduce SO₂ emissions; and installing a dry ash collection system to reduce the quantity of slag and ash deposit. In addition, transport pumps in both plants and in the transport

network will also be retro-fitted in order to increase the energy efficiency of the system.

These actions should bring the infrastructure in line with relevant environmental EU legislative requirements and EU policy for reducing the air pollution. The improved heating system will be operated by CET Iasi SA, entirely owned by Iasi municipality.

More than 158 000 inhabitants, most of the municipality's public institutions and its service firms will benefit from this project. Overall, it will contribute to improving air quality in the area and health levels among the population.

From an economic point of view, it will contribute to making Iasi a more attractive place to invest in and will lead directly to the creation of 197 jobs during the implementation phase.

In terms of environmental benefits, the project will contribute to tackling climate change by sharply reducing SO₂, CO₂, NO_x and dust emissions from the heating system. Additionally, improved energy efficiency in the heating plants and networks will reduce the consumption of primary energy and therefore contribute to a reduction in greenhouse gas emissions.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/the-rehabilitation-of-the-district-heating-system-in-iasi-municipality)

6.1.2. EXTENSION AND THE REHABILITATION OF WATER AND WASTEWATER SYSTEMS IN BRASOV COUNTY

TOTAL INVESTMENT

€ 189,305,930

EU INVESTMENT

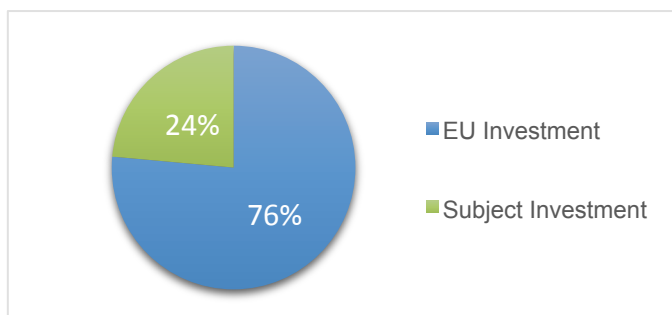
€ 144,693,502

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



The project represents the first step of a long term investment plan for the development and upgrading of the water and wastewater systems in Brasov County. It consists of investments for improving drinking water treatment and distribution as well as wastewater collection and treatment in the agglomerations of Brasov, Stupini, Sacele, Codlea, Feldioara, Rupea, Homorod, Gara Rupea, Hoghiz, Prejmer, Lunca Calnicului and Moieciu. It will be implemented by the Regional Operating Company "S.C. Compania Apa Brasov S.A". The ultimate purpose is to promote the compliance with the relevant EU environmental legislation and in turn improve the quality of the water services.

As regards water supply, the project mainly consists of works for the rehabilitation of well fields, the extension and rehabilitation of 51 km of transmission pipelines, the replacement and construction of new distribution pipelines (about 144 km), the construction and rehabilitation of 3 treatment plants, 7 water reservoirs and 5 pumping and booster stations. As regards wastewater collection and treatment, the project involves the rehabilitation and extension of about 179 km of sewers collectors, the construction and rehabilitation of 9 pumping stations and the rehabilitation of five wastewater treatment plants (for respectively 500 000, 142 000, 22 200, 16 000 and 5 800 population equivalent).

This project complements the first wave of investments implemented through ISPA assistance. In particular, additional population will be supplied through the Tarlung Drinking Water Treatment Plant (DWTP) which is expected to enter into service in summer 2009. Similarly, the rehabilitation of the sewage collector in Brasov will reduce the infiltrations and thus improve the future performance of the waste water treatment plant (WWTP) expected to be upgraded under this project.

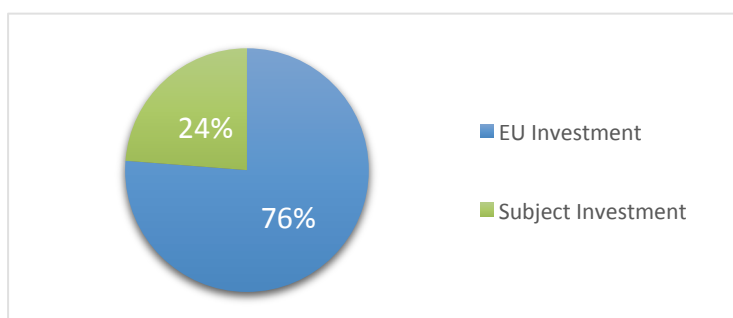
Some 511 572 inhabitants living in the project area will directly benefit from improved water services. Particularly the investment will improve the quality of life of the citizens living in the service area by ensuring better access to drinking water and wastewater services: 100 % of the population of the concerned municipalities will have access to compliant drinking water supply after project implementation, whereas 100% of the population of the concerned wastewater agglomeration will be connected to the sewerage system. Safe drinking water will contribute to reduce health risks for the population. Wastewater disposal and treatment will improve the hygienic conditions and the quality of the environment. Reliable and compliant water services will in turn make the Brasov County a more attractive place to invest in. The project is expected to directly create 300 jobs during the implementation phase and 150 jobs during the operating stage.

Thanks to the improvement of the wastewater collection and treatment, the project will bring about a considerable reduction of organic and nutrient pollution load discharged directly into the receiving water bodies and ultimately in the Danube river. Significant environmental benefits will also stem from the elimination of groundwater and subsoil contamination thanks to the extension of the wastewater system, replacing the existing individual treatments.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/extension-and-the-rehabilitation-of-water-and-wastewater-systems-in-brasov-county)

6.1.3. UPGRADING WATER AND WASTEWATER SYSTEMS IN MURES

TOTAL INVESTMENT
€ 110,875,965
EU INVESTMENT



€ 84,518,530

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period

In order to bring the Mures water and wastewater infrastructure to the level of EU environmental standards, an extension and rehabilitation project was devised for the county.

The project, implemented by the regional operating company 'SC Compania Aquaserv SA', will cover water supply and treatment systems and wastewater collection and treatment systems in Targu Mures, Reghin, Sighisoara, Tarnaveni, Ludus, Iernut and Cristuru Secuiesc.

Expected to directly benefit the estimated 349 000 inhabitants who use the county's water and wastewater services, the project will simultaneously bring the connection rate for both the sewer collection system and the drinking water network to 100%.

The project work is divided into key measures. In terms of the water supply network, these include: the upgrading of water catchment, the construction and rehabilitation of water transmission pipes, reservoirs and water treatment plants, and the extension and rehabilitation of distribution networks, including pumping stations. Regarding the sewerage infrastructure, key measures cover the construction and upgrade of five wastewater treatment plants and the extension and rehabilitation of the wastewater sewerage network, including pumping stations.

In total, 100 km of new or rehabilitated water transmission network and 63 km of new and rehabilitated water distribution network will be provided while the sewer network will be extended by 77 km.

The improved infrastructure will improve the quality of life of all 349 000 citizens living in the county by ensuring better access to drinking water and wastewater services and raising the connection rate for both to 100%. It will be particularly beneficial to the 32 000 inhabitants who will be newly connected to a safe drinking water supply system.

Additionally, the project will impact upon the local economy by directly mobilising 325 jobs during the implementation phase.

An improvement to the wastewater collection and treatment system will bring about a considerable reduction in the organic and nutrient pollution load discharged directly into the receiving water bodies. Significant environmental benefits will also stem from the elimination of groundwater and subsoil contamination, thanks to the extended wastewater system.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/upgrading-water-and-wastewater-systems-in-mures)

6.1.4. THOUSANDS TO ENJOY ENHANCED WATER SERVICES

TOTAL INVESTMENT

€ 95,750,000

EU INVESTMENT

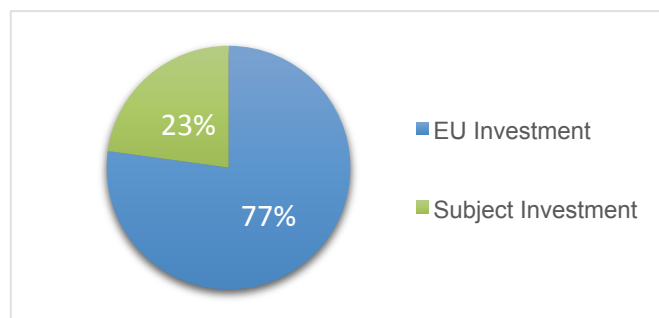
€ 73,890,000

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



A major improvement to water services will soon benefit more than 246 000 inhabitants in south-east Romania. The project will concentrate on investments in drinking water treatment and distribution, wastewater collection and treatment, including two treatment plants.

Work will be spread over several years and carried out in various areas of Braila County. The goal is to ensure better access to drinking water and wastewater services for almost their entire population.

Target areas in the project are Braila, the county's capital, as well as the smaller towns and communes of Ianca, Insuratei, Faurei, Viziru and Tufesti. The main aim there is to meet Romania's water compliance obligations in the Accession Treaty and the objectives of the Operational Programme for Environment.

The work will focus on extension and rehabilitation of water sources, water transmission pipes and water treatment plants, extension and rehabilitation of water reservoirs, pumping and booster stations, and water metering and distribution networks. Also covered are the extension and rehabilitation of the wastewater collection system and rehabilitation of two treatment plants, the latter designed to cope with the needs of areas that have populations of 22 500 and 20 000.

Measures taken in the project are expected to improve water services for almost a quarter of a million people, or around 99% of those living in the service area. Some 55 650 more inhabitants will be connected to the wastewater system which will be fully compliant with EU standards, while an additional 17 140 people will have better access to EU-standard drinking water.

Thanks to improved wastewater collection and treatment, there will be a considerable reduction of organic and nutrient pollution load discharged directly into local water bodies and ultimately into the Danube River. Further environmental benefits will arise from the elimination of groundwater and subsoil contamination, as

a result of the extension of the wastewater system. An estimated 40 jobs will be created while the works are being carried out and 150 jobs in the operating stage.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/thousands-to-enjoy-enhanced-water-services)

6.1.5. IMPROVED WATER, WASTE AND SEWERAGE TREATMENT FOR BOTOSANI COUNTY

TOTAL INVESTMENT

€ 102,472,400

EU INVESTMENT

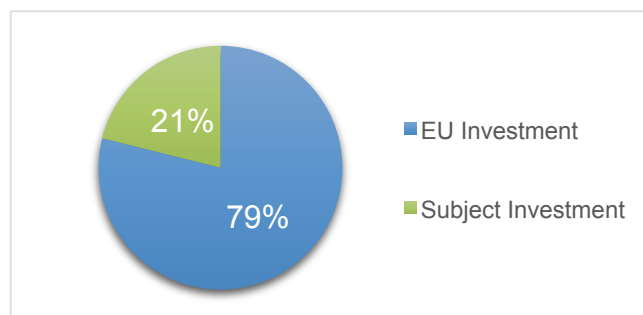
€ 99,249,000

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



By extending and modernising the water supply and sewerage and wastewater treatment systems in Botosani County, 186 800 local residents will directly benefit from improved services.

The works include constructing and upgrading 3 wastewater treatment plants, leading to the connection of 90% of the wastewater agglomerations to the sewer collection system, and 90% of the agglomerations to the drinking water network, with guaranteed access to safe water resources.

The company SC NOVA APASERV S.A is responsible for carrying out the project works and helping the region meet the water compliance obligations set out in the Accession Treaty and the objectives of the Sectoral Operational Programme for the Environment. The agglomerations covered by the project are Botosani – Catamarasti, Dorohoi – Broscauti, Flamanzi – Frumusica, Vorona – Tudora and Stefanesti – Saveni. The project is expected to directly generate 180 jobs during the implementation phase, another 60 over the long-term.

The investment will enhance the quality of life of citizens living in the service area by ensuring better access to drinking water and wastewater services. The improvement of the wastewater collection and treatment will bring about a considerable reduction in organic and nutrient pollution load discharged directly into the receiving water bodies. Significant environmental benefits will also stem from the elimination of groundwater and subsoil contamination as a result of the extended wastewater system.

The following features reflect the extent of the project in each agglomeration:

Botosani: upgrading the water transmission main and water treatment plant, constructing a discharge pipe, extending and upgrading the distribution network, including new pumping stations, and extending the sewage network;

Dorohoi: upgrading the water treatment plant and transmission main, and extending and upgrading the water distribution network, sewage network and wastewater treatment plant, including new wastewater pumping stations;

Flamanzi – Frumusica: extending the water distribution network and sewage network, including pumping stations, and constructing a new wastewater treatment plant;

Vorona – Tudora: extending the sewage network, including new wastewater pumping stations, and building a new wastewater treatment plant;

Stefanesti – Saveni: constructing a chlorination plant, pumping stations and water transmission main, extending and upgrading the water treatment plant, and building and upgrading reservoirs.

The investment will enhance the quality of life of citizens living in the service area by ensuring better access to drinking water and wastewater services. The improvement of the wastewater collection and treatment will bring about a considerable reduction in organic and nutrient pollution load discharged directly into the receiving water bodies. Significant environmental benefits will also stem from the elimination of groundwater and subsoil contamination as a result of the extended wastewater system.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/improved-water-waste-and-sewerage-treatment-for-botosani-county)

6.1.6. QUARTER OF A MILLION TO GET BETTER SANITATION

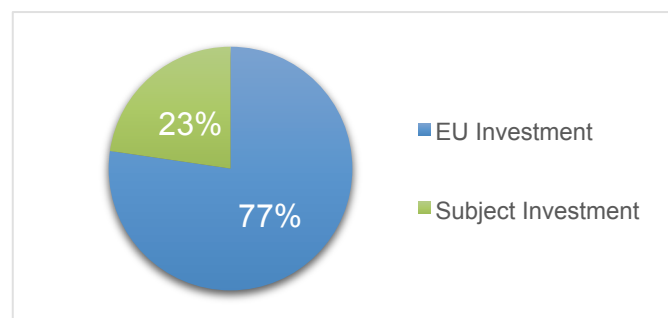
TOTAL INVESTMENT
€ 119,868,031

EU INVESTMENT
€ 92,668,506

PROGRAMMING PERIOD
2007 – 2013

FUND

European Regional Development Fund 2007 – 2013



A major investment will upgrade and extend the drinking water supply and wastewater treatment in eight towns and villages in Maramureş County.

As a result of the works, the entire population of the towns concerned will be connected to a safe drinking water supply and sewage network.

This significant project will improve drinking water treatment and distribution as well as wastewater collection and treatment in Maramureş County in northwest Romania.

It will improve water services for some 272 000 people, one-tenth of the region's population, by extending and rehabilitating the water distribution and sewer networks in the city of Baia Mare and nearby towns Baia Prie, Seini, Borsa, Targu Lapus, Visu de Sus, Sighetu Marmatiei and Cavnic.

The project has been designed to enable Romania to meet its obligations with respect to water treatment under the EU Accession Treaty. To improve access to safe drinking water, the works will include the construction and rehabilitation of over 200 km of water distribution network; 36 km of transmission network; 20 pumping stations; 6 reservoirs, 5 other water sources, 4 chlorination units and 5 water treatment plants.

Connecting the population of eight towns to a municipal sewer network will involve a major extension to existing sewer facilities. In total, 202 km of new sewer network and five new wastewater treatment plants will be built. A further 31 km of sewer network and three wastewater treatment plants will be rehabilitated. Finally, there will be 47 new and rehabilitated pumping stations.

The realisation of the project will deliver much greater protection for human health and the environment. It will reduce pollution in the local area by removing a significant amount of water polluted with organic and nutrient material that is currently discharged directly into watercourses, subsoil and groundwater.

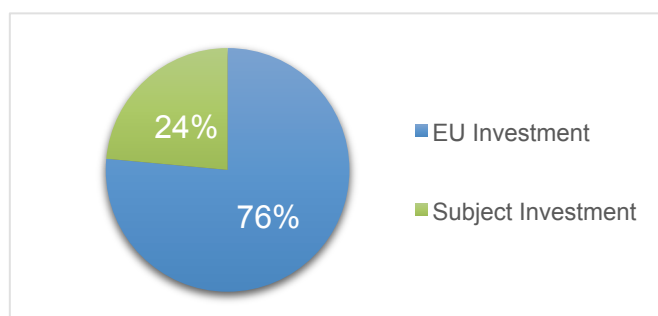
Over the three years of the project, 150 jobs will be directly created. Around 20 jobs will be created in the subsequent operational phase.

The total project cost is some EUR 119 868 031. The EU's European Regional Development Fund will contribute EUR 92 668 506 for the programming period 2007 – 2013.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/quarter-of-a-million-to-get-better-sanitation)

6.1.7. IMPROVED WATER NETWORK REACHING MORE RESIDENTS IN GALATI

TOTAL INVESTMENT
€ 129,805,160
EU INVESTMENT
€ 99,249,000
PROGRAMMING PERIOD
2007 – 2013



FUND

Cohesion Fund for the 2007 to 2013 programming period

Distributing cleaner, safer drinking water to 395 000 residents, alongside improved wastewater collection and treatment, including construction and upgrade works, are the key outcomes of this project in South-East Romania.

Upon completion, 100% of the agglomerations covered will be connected to safe drinking water resources. Furthermore, 97% of the population in the wastewater agglomerations targeted will be connected to the sewerage system.

The regional operating company S.C APA CANAL S.A GALATI will be responsible for carrying out the works, bringing benefits to the 395 000 inhabitants living in the agglomerations of Galati, Tecuci, Targu Bujor, Pechea and Liesti. The investments will improve the quality of life of citizens residing in the service area by ensuring better access to drinking water and wastewater services. The project is also expected to directly create 250 jobs during the initial development phase, another four over the long-term.

The improved wastewater collection and treatment service will bring about a major reduction in organic and nutrient pollution load discharged directly into receiving water bodies. By extending the wastewater system, significant environmental benefits will stem from the elimination of groundwater and subsoil contamination.

The following shows the main infrastructure features being overhauled in the five agglomerations, and includes replacements, rehabilitation, upgrades, extensions and new construction:

Galati: well fields, water transmission network, wastewater treatment plant, and advanced sludge dewatering equipment;

Tecuci: chlorination plant, water distribution network, pumping station, booster stations, sewage network, wastewater pumping stations and wastewater treatment network;

Targu Bujor: well fields, chlorination unit, reservoirs, water transmission network, pumping stations, water distribution networks, sewage network, wastewater pumping stations, wastewater treatment plant;

Pechea and Liesti: chlorination plants and reservoirs, water transmission network and pumping stations, water distribution network, sewage network, wastewater pumping stations and wastewater treatment plant.

The new infrastructure will help the local region meet the water compliance obligations stipulated in the EU Accession Treaty as well as the objectives of the Sectoral Operational Programme for Environment. Overall, 53 525 additional residents will be connected to the drinking water network, with access to safe water resources.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/improved-water-network-reaching-more-residents-in-galati)

6.1.8. BACAU COUNTY SPRUCES UP WATER NETWORK

TOTAL INVESTMENT

€ 117,953,200

EU INVESTMENT

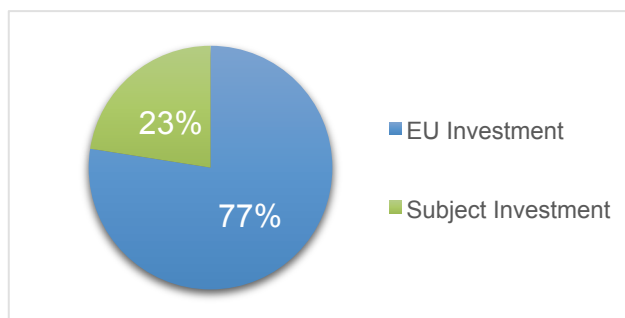
€ 91,391,600

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



Cleaner and safer drinking water, as well as an improved wastewater infrastructure, will soon be accessible by 262 000 residents in Bacau County in North-East Romania.

Once the project is completed, 90% of the population will be connected to water supply and sewerage collection systems, with environmental benefits in the form of less organic and nutrient pollution in receiving water bodies.

The company Apa Bacau CRAB will be responsible for carrying out the project works, bringing benefits to the 262 000 inhabitants in Bacau, Moinesti, Comanesti, Buhushi, Darmanesti and Targu Ocna. Citizens residing in the service area will have an improved quality of life through better access to the drinking water and wastewater services available. The investments in this major project are also expected to directly create 200 jobs in the extension and rehabilitation phase, with another 10 jobs created over the longer term.

Major reductions in organic and nutrient pollution load discharged into receiving water bodies are key outcomes in terms of protecting the environment, and stem from the improved wastewater collection and treatment service. Furthermore, by extending the wastewater system, there will be less groundwater and subsoil contamination.

The following lists the main features to be rehabilitated, upgraded, extended and constructed in the five agglomerations:

- Bacau: water treatment plant, sewage network, pumping stations, pressure pipe and wastewater treatment plant;
- Moinesti: water supply network, sewage network, wastewater pumping stations, pressure pipe and wastewater treatment plants;
- Buhusi: water supply network, sewage network, wastewater pumping stations and wastewater treatment plant;

Darmanesti and Targu Ocna: sewage network, wastewater pumping stations and wastewater treatment plant.

The project's results will help ensure that the local region meets the water compliance obligations set out in both the Accession Treaty and the objectives of the Sectoral Operational Programme for Environment.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/bacau-county-spruces-up-water-network)

6.1.9. IASI COUNTY SETS STAGE FOR IMPROVED WATER AND WASTEWATER MANAGEMENT

TOTAL INVESTMENT

€ 136,109,000

EU INVESTMENT

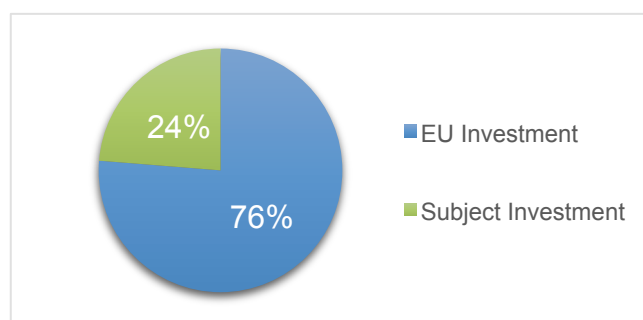
€ 103,809,700

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



A higher quality of life for residents, protected environment, improved drinking water treatment and distribution, and more efficient wastewater collection and treatment are among the key outcomes expected following the construction and upgrade of four wastewater treatment plants in Iasi County.

A total of 386 000 residents will directly benefit from improved water services, with 91% of those in the municipalities concerned being connected to the drinking water supply, and 90% to the sewerage system.

The project is part of a long-term investment plan to develop and upgrade the county's water and wastewater systems. The agglomerations targeted are Iasi, Targu Frumos, Podu Iloaiei and Harlau. The company 'S.C Apal Vital S.A' will be responsible for carrying out the project which is also expected to create 250 direct jobs during the construction phase, another 10 over the long term.

Upon completion, an additional 52 000 residents will be connected to a compliant wastewater system, with an extra 10 400 connected to a safe drinking water supply system. The final result should also see the region meet the water compliance obligations set out in the Accession Treaty as well as the objectives of the Sectoral Operational Programme for the Environment.

The works undertaken primarily involve extending and upgrading transmission pipes and the distribution network, constructing pumping stations, building and upgrading reservoirs, extending and improving the sewage network, including

pumping stations, and constructing and upgrading four wastewater treatment plants in Iasi, Targu Frumos, Podu Iloaiei and Harlau.

As regards environmental impacts stemming from the project, the improved wastewater collection and treatment process will result in a marked drop in organic and nutrient pollution load discharged directly into local water bodies. Other environmental benefits also come from the elimination of groundwater and subsoil contamination.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/iasi-county-sets-stage-for-improved-water-and-wastewater-management)

6.1.10. HEATING SYSTEM FOR CLEAN LIVING IN TIMISOARA

TOTAL INVESTMENT

€ 58,346,700

EU INVESTMENT

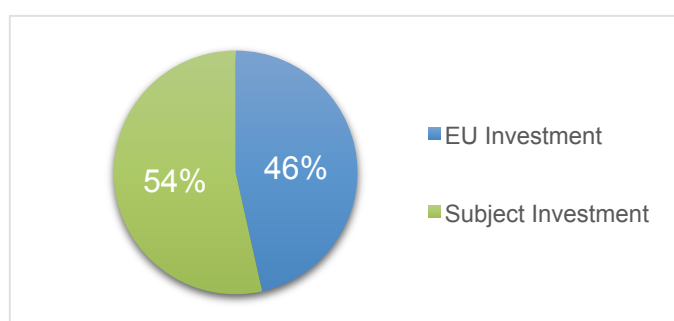
€ 27,131,200

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



Conscious of rising energy costs and fewer energy resources, the municipality of Timisoara has plans to upgrade its existing urban heating plants and heat supply networks, including the installation of a desulphurisation unit and retrofitting of eight pumps.

Emission concentrations in the area currently exceed authorised thresholds, notably SO₂, NO_x and dust. The project is focused on addressing this issue, in doing so helping improve energy efficiency, ensure compliance with EU environmental standards and reduce primary energy consumption, including fossil resources.

The existing district heating system supplies more than 224 360 residents, representing 73% of the population, as well as the majority of public institutions and service sectors. This project features as part of an overall action plan launched by the municipality, with future investments also earmarked for more emission reductions and network upgrading. The overall goal in these efforts is to improve the air quality and health conditions for the population and help make the Bacau area a more attractive place to invest in.

The assets financed by the project are operated by the local operator, Colterm SA, entirely owned by Timisoara municipality. The scale of the project is such that 197 direct jobs will be created during the works phase, each lasting an average of three years.

In a bid to reduce NO_x and SO₂ emissions and increase energy efficiency, the following works will be carried out under the project:

- Retrofitting of two hot water boilers in the CET Centre (58.15 MWt and 116.3 MWt respectively);
- Upgrading of three lignite steam boilers in the CET South (thermal capacity 100 t/h);
- Installation of a desulphurisation unit in the CET South;
- Retrofitting of transport pumps in two plants;
- Setting up of online monitoring equipment (hot boilers and steam boilers);
- Installation of four new frequency converters.

All works will be carried out based on the procurement strategy under four works contracts covering the retrofitting of boilers, pumps and the desulphurisation plant and three service contracts covering technical assistance for project management, project auditing and supervision services.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/heating-system-for-clean-living-in-timisoara)

6.1.11. RAISING THE BAR FOR WATER AND WASTEWATER SYSTEMS

TOTAL INVESTMENT

€ 150,281,399

EU INVESTMENT

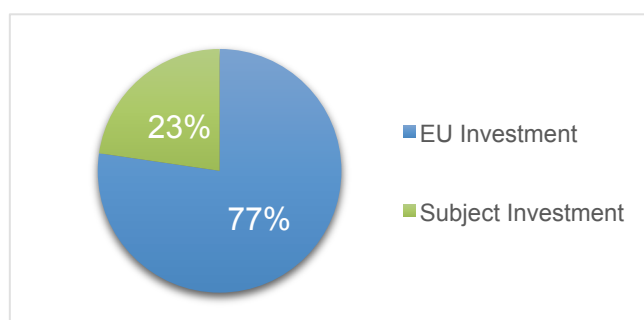
€ 116,178,792

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



This project aims is to raise the standard of water and wastewater infrastructure in specific municipalities in South-West Oltenia in order to bring the systems into line with EU environmental requirements.

Implemented by the regional operating company 'S.C Compania de Apa Oltenia SA', the project comprises the extension and rehabilitation of drinking water and wastewater collection systems in the 12 municipalities of Craiova, Calafat, Bailesti, Filiasi, Segarcea, Dabuleni, Bechet, Ciupercenii, Vechi, Poiana Mare, Tunarii Vechi and Calarasi.

Expected to impact around 389 600 inhabitants, the project work will involve the rehabilitation and extension of water sources, water transmission pipes, reservoirs and the distribution network (including pumping stations). It will also cover the rehabilitation and construction of chlorination plants, the rehabilitation of water treatment plants, the rehabilitation and extension of the wastewater sewerage

network (including pumping stations) and the construction and upgrade of wastewater treatment plants.

A range of work will take place across the municipalities. Examples of specific works in the individual municipalities include: the construction of a sludge storage platform in Craiova; the reconstruction of the wastewater treatment plant in Filiasi; the upgrade of the wastewater treatment plant in Calafat and Ciupercenii Vechi; the rehabilitation of the well field and rehabilitation of the chlorination plant in Bailesti and Poiana Mare; the construction of a wastewater treatment plant in Segarcea, and the rehabilitation and extension of the water distribution network in Calarasi, Dabulenu and Bechet.

Targeting 389 600 inhabitants, the connection rate to the sewer collection system is expected to reach 93.7% on average in the project areas. Meanwhile the connection rate to the drinking water network will reach 99.8%, offering an additional 26 579 inhabitants access to a safe drinking water supply system.

Apart from providing improved infrastructure, the project will also bring employment to the area by creating 450 jobs during the implementation stage.

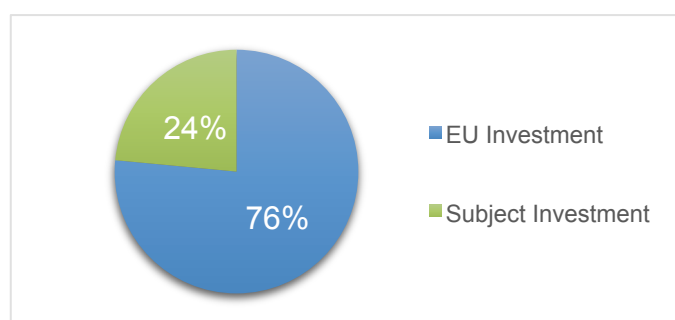
The improvement of the wastewater collection and treatment systems will also considerably reduce organic and nutrient pollution load discharged directly into the receiving water bodies. Additionally, the local environment will benefit significantly from the elimination of groundwater and subsoil contamination, thanks to the extension of the wastewater system.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/raising-the-bar-for-water-and-wastewater-systems)

6.1.12. SUCEAVA COUNTY TO GET IMPROVED ACCESS TO CLEAN WATER

TOTAL INVESTMENT
€ 119,989,198
EU INVESTMENT
€ 91,781,537
PROGRAMMING PERIOD
2007 – 2013
FUND

Cohesion Fund for the 2007 to 2013 programming period



Over 200 000 inhabitants are set to benefit from improved water services thanks to investment in a major water treatment and waste-water collection project in the north-east of Romania.

The project which is spread over five cities in the county of Suceava, consists of the construction and upgrade of seven waste-water treatment plants. The water

distribution network stretching some 162 kilometres (km) will be improved and extended. Pumping stations, water tanks and chlorination units will also get a much-needed upgrade. Over 142 km will be added to the sewage network ensuring that everyone in these areas of the county will be connected to the sewage system.

In addition, 125 jobs will be created in the area for a period of four years while the project is in operation.

Despite being surrounded by numerous fresh water resources including rivers, natural and artificial lakes, the Danube River and ground waters, Romania still has relatively small supplies of clean drinking water compared to other European countries.

Until now, untreated or inadequately treated waste water has been discharged directly into local water resources thus causing contamination and therefore reducing the access to clean drinking water. In addition, not everyone is fortunate enough to be connected to both water and sewage systems. The risk to human health is high and the quality of life has also suffered.

Improving waste-water collection, upgrading sewer networks and building new pumping stations and water treatment plants will all serve to reduce the pollution of the water resources, groundwater and subsoil.

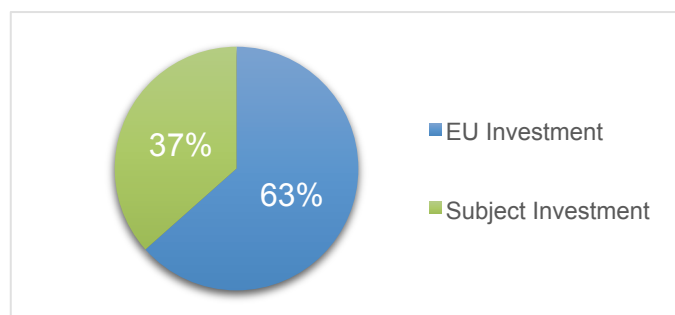
Such an investment is crucial to improve the lives of the people living in the country. Being connected to a proper functioning sewage system and having access to sufficient supplies of clean water will significantly improve the quality of their lives and reduce the risk of disease.

An improved water supply and sewerage infrastructure has several environmental benefits. Better waste water collection and treatment will ensure that pollutants containing nutrients which can stimulate growth of aquatic life and wreak havoc on ecosystems, will no longer be discharged into rivers and lakes. In addition, contamination to subsoil will also be reduced.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/suceava-county-to-get-improved-access-to-clean-water)

6.1.13. THOUSANDS TO BENEFIT FROM NEW WATER AND SEWERAGE SYSTEMS

TOTAL INVESTMENT
€ 128,389,032
EU INVESTMENT
€ 81,455,746
PROGRAMMING PERIOD
2007 – 2013



FUND

Cohesion Fund for the 2007 to 2013 programming period

People living in the county of Vaslui in north-east Romania look set to enjoy safe mains drinking water and better sewerage treatment facilities thanks to a major project backed by the EU's Cohesion Fund.

The project calls for the construction, extension and rehabilitation of a variety of water and wastewater infrastructures in the agglomerations – or areas – of Vaslui, Barlad, Husi and Negresti.

Measures include building and upgrading water supply pipes, reservoirs, chlorination plants and treatment plants, as well as the construction of pumping stations and the extension and rehabilitation of the sewerage network – including the revamp of four wastewater treatment plants (WWTPs).

Overall, the project benefits about 133 000 people. The goal is to ensure that 99 % of the population is connected to both water and wastewater services which must operate according to parameters laid down in relevant EU directives. Work is carried out in order to meet the obligations of Romania's Accession Treaty with the EU. The completed project connects an additional 60 188 inhabitants to the local wastewater system and 40 980 people to safe mains drinking water supplies.

The project is expected to create 29 jobs after completion of the implementation phase. The Regional Operating Company – S.C. AQUAVAS S.A. VASLUI – will manage the new infrastructure.

Total investment for the project “Rehabilitation of water supply and wastewater systems and WWTPs in Vaslui, Barlad, Husi and Negresti agglomerations in Vaslui county” is EUR 128 389 032, with the EU's Cohesion Fund contributing EUR 81 455 746 for the 2007 to 2013 programming period. The project falls under the Operational Programme: Environment, priority “Extension and modernisation of water and wastewater systems”.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/thousands-to-benefit-from-new-water-and-sewerage-systems)

6.1.14. CLEANING UP LIFE QUALITY IN NORTH-EAST ROMANIA

TOTAL INVESTMENT

€ 55,095,293

EU INVESTMENT

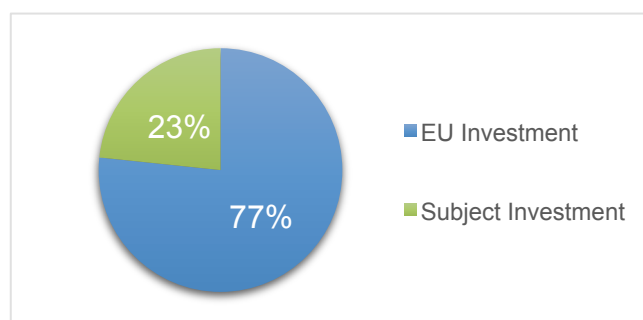
€ 42,232,195

PROGRAMMING PERIOD

2007 – 2013

FUND

European Regional Development Fund 2007 – 2013



A vast new waste collection system will cut pollution and boost sanitation for thousands in a former capital of Moldavia.

Improved recycling and landfill will do more than tidy up the landscape in an area known as “The Cultural Capital of Romania”. 840 000 people, the entire population of Romania’s Iași county, will see their lives improved with better sanitation and reduced emissions. Proper waste collection and composting will bring the best EU environment laws to this cultural, artistic and academic region.

Environmental damage, health risks and economic costs can all be reduced by sorting waste according to a specially designed system, known as the waste hierarchy. Instead of sending all unwanted products to be dumped in landfill or burnt in incinerators, the hierarchy favours sorting and recycling waste as much as possible.

To make this possible, the “Integrated Waste Management System in Iași County” will improve existing waste services and install new facilities. Collection equipment and transfer systems will be built or upgraded, while sorting and treatment stations will be created to handle waste. Four sub-standard landfill sites will be closed, and the remaining landfill capacity brought into line with the highest standards.

Households and businesses in towns and cities will all benefit from separate waste collection procedures, to stream different types of refuse. Composting will be made an integral part of the new waste system, favouring biodegradable and reusable end-of-life refuse. This will bring the amount of waste sent to landfill down to just 35 % of the total.

Meanwhile 59 % of waste will be recycled by 2013. For glass waste the recycling target will be even higher, at 76 %. The recycling rates will be 65 % for paper and cardboard, and 63 % for metal and plastic. Even 22 % of wood will be recycled.

The project has been designed to include: the construction of two waste transfer stations; the construction of a new sorting plant and the extension of an existing plant; the introduction of separate waste collection and home recycling systems; the construction of one biological treatment plant and the completion of a composting station; work on an extension to one landfill site and the closure of four non-compliant landfills; and a major technical assistance and public awareness campaign.

Revenue will be collected as tax from infrastructure users and as income from the sale of recycled goods and compost. 150 jobs are likely to be created during implementation of the project, with an additional 136 created after completion.

Total investment for the project “Integrated Waste Management System in Iași County” amounts to EUR 55 095 293, with the EU’s Regional Development Fund contributing EUR 42 232 195 through the “Development of integrated waste

management systems and rehabilitation of historically contaminated sites" priority of the "Environment" Operational Programme for the 2007 – 2013 programming period.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/cleaning-up-life-quality-in-north-east-romania)

6.1.15. EXTENSION AND THE REHABILITATION OF WATER AND WASTEWATER SYSTEMS IN TURDA-CAMPIA TURZII REGION, IN CLUJ COUNTY

TOTAL INVESTMENT

€ 79,906,606

EU INVESTMENT

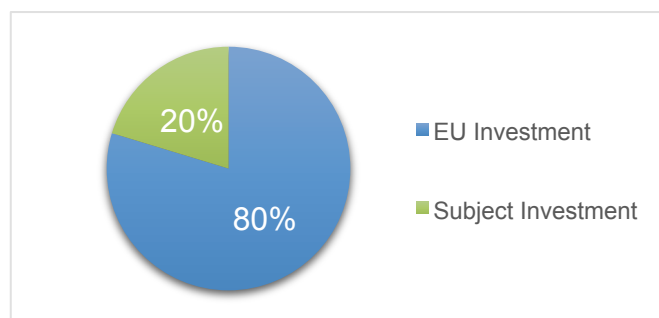
€ 63,679,761

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



The project consists of investments concerning drinking water treatment and distribution, as well as wastewater collection and treatment for six agglomerations situated in the Turda-Campia Turzii region. It will be implemented by the Regional Operating Company "S.C Compania de Apa Aries S.A" in 2 towns (Turda, Campia Turzii) and 4 communes (Mihai Viteazu, Viisoara, Sandulesti, Luna).

The ultimate purpose of the project is to help those towns and communes comply with the relevant EU environmental legislation and in turn improve the quality of the water services and the environment.

As regards water supply, the project mainly consists of the extension of the network with 11 km and rehabilitation of 73 km pipelines, the improvement of one drinking water treatment plant and of three water reservoirs, the construction of two chlorination plants and one pumping station as well as the rehabilitation of three pumping station. As regards wastewater collection and treatment, the project involves the rehabilitation and extension of 77 km of the network, the construction of 8 pumping stations and the rehabilitation of 1 wastewater treatment plant (110 000 persons equivalent).

Some 97 000 inhabitants living in the project area will directly benefit from improved water services. Particularly, the investment will improve the quality of life of the citizens living in the service area by ensuring better access to drinking water and wastewater services: 100 % of the population living in the five towns will have access to compliant drinking water supply after project implementation and 100% of the population of the concerned wastewater agglomerations will be connected to the sewerage system. Safe drinking water will contribute to reduce health risks for the

population. Wastewater disposal and treatment will improve the hygienic conditions and the quality of the environment. Reliable and compliant water services will in turn make the area a more attractive place to invest in. The project is expected to directly create about 390 jobs during the implementation phase.

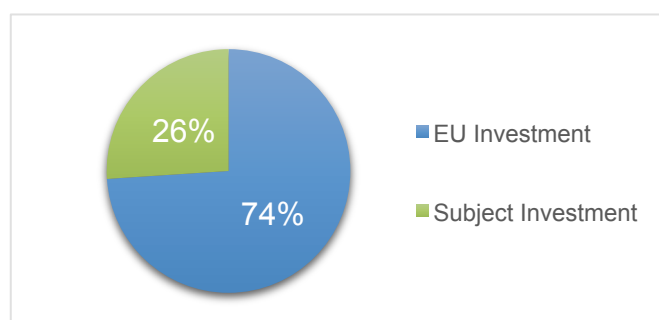
Thanks to the improvement of the wastewater collection and treatment, the project will bring about a considerable reduction of organic and nutrient pollution load discharged directly into the various receiving water bodies. Significant environmental benefits will also stem from the elimination of groundwater and subsoil contamination thanks to the extension of the wastewater system, replacing the existing individual treatments. The expected reuse of sludge in agriculture will also allow for corresponding savings in chemical fertilizers.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/extension-and-the-rehabilitation-of-water-and-wastewater-systems-in-turda-campia-turzii-region-in-cluj-county)

6.1.16. EXTENSION AND THE REHABILITATION OF WATER AND WASTEWATER SYSTEMS IN CLUJ – SALAJ COUNTIES AREA

TOTAL INVESTMENT
€ 196,911,998
EU INVESTMENT
€ 145,643,721
PROGRAMMING PERIOD
2007 – 2013
FUND

Cohesion Fund for the 2007 to 2013 programming period



The project represents the first step of a longterm investment plan for the development and upgrading of the water and wastewater systems in Cluj and Salaj counties. It consists of investments for improving drinking water treatment and distribution as well as wastewater collection and treatment in eight agglomerations located in the Cluj and Salaj Counties: Cluj-Napoca, Zalau, Dej, Gherla, Simleu Silvaniei, Jibou, Huedin and Cehu Silvaniei. It will be implemented by the Regional Operating Company "S.C. Compania de APA Someș S.A.(CASSA)". The ultimate purpose is to promote compliance with the relevant EU environmental legislation and in turn improve the quality of the water services.

As regards water supply, the project mainly consists of works for the rehabilitation of groundwater sources, the extension of 22 km of transmission pipelines and the replacement of some 19km, the replacement and construction of new distribution pipelines (about 143 km), the rehabilitation of one drinking water treatment plant and 14 water reservoirs. As regards wastewater collection and treatment, the project involves the rehabilitation and extension of about 120 km of sewers collectors, the construction and rehabilitation of 30 pumping stations and the rehabilitation of eight

wastewater treatment plants (for respectively 367 000, 85 000, 35 000, 20 000, 13 200, 11 400, 9 400 and 5 400 population equivalent).

Some 500 000 inhabitants living in the project area will directly benefit from improved water services. Particularly, the investment will improve the quality of life of the citizens living in the service area by ensuring better access to drinking water and wastewater services: 96 % of the population of the concerned municipalities will have access to compliant drinking water supply after project implementation, whereas 79% of the population of the concerned wastewater agglomeration will be connected to the sewerage system. Safe drinking water will contribute to reduce health risks for the population. Wastewater disposal and treatment will improve the hygienic conditions and the quality of the environment. Reliable and compliant water services will in turn make the Cluj and Salaj areas a more attractive place to invest in. The project is expected to directly create 240 jobs during the implementation phase and 40 during the operational phase.

Thanks to the improvement of the wastewater collection and treatment, the project will bring about a considerable reduction of organic and nutrient pollution load discharged directly into the various receiving water bodies. Significant environmental benefits will also stem from the elimination of groundwater and subsoil contamination thanks to the extension of the wastewater system, replacing the existing individual treatments. The expected reuse of sludge in agriculture will also allow for corresponding savings in chemical fertilizers.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/extension-and-the-rehabilitation-of-water-and-wastewater-systems-in-cluj-salaj-counties-area)

6.1.17. FIRST-CLASS NEW WATER SERVICES

TOTAL INVESTMENT

€ 83,274,500

EU INVESTMENT

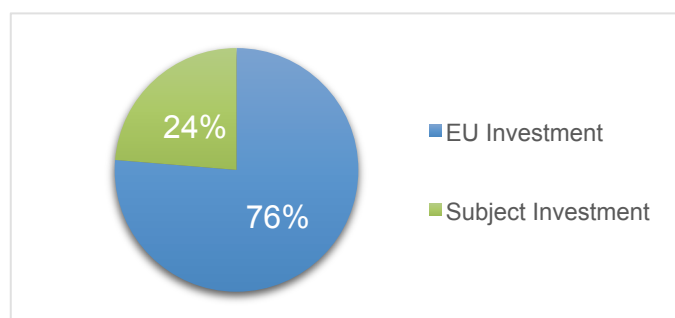
€ 63,542,200

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



The city of Oradea and three nearby towns are getting a major upgrade to their water services, with direct benefits for some 240 000 people.

This large-scale project focuses on improvements to drinking water and wastewater infrastructure. Once completed, it will include a number of new reservoirs and pumping stations.

Bihor County is located in north-western Romania. Home to more than half a million people, it partly shares a border with Hungary.

The goal of this project is to extend and renovate water supply and treatment systems as well as wastewater collection and treatment. Investments will centre on Oradea, the county's capital city, while including the town of Beiuș (57 km to the south-west), Tinca (a small commune some 32 km to the south), and Biharia (a large commune around 10 km to the north). The planned improvements will bring water services in these areas up to EU standards.

The work will be carried out by a domestic firm – CS. Compania de APA Oradea S.A. With regards to drinking water, the measures to be taken mainly consist of extending water sources and transmission pipes; developing and renovating distribution networks; and constructing reservoirs, chlorination plants, and pumping stations. In terms of the wastewater sewerage network, activities will include the construction of pumping stations and outlet pipes, together with the construction and the upgrading of wastewater treatment plants.

In total, the project will notably deliver 40 km of new transmission mains, a new and renovated distribution network of around 140 km, nine new pumping stations, three new reservoirs, and four new chlorination plants. For wastewater disposal and treatment, the areas concerned will, for example, benefit from sewer networks being extended by more than 125 km, 24 new pumping stations, plus three new and upgraded wastewater treatment plants.

Following completion of the project, close to 240 000 people in the target area will enjoy better access to drinking water and wastewater services. An estimated 99.6 % will have access to drinking water conforming to EU standards, representing an increase of around 26 400 inhabitants; and 98.9 % of those living in the target area will be connected to the improved sewerage system.

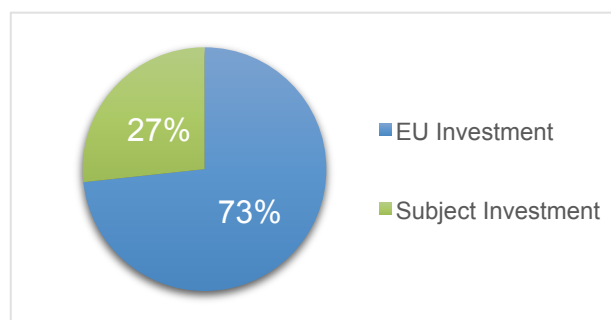
During the implementation phase, the work will generate over 310 jobs. Moreover, improvements in the wastewater collection and treatment processes are sure to lead to significant reductions in organic and nutrient pollution locally. The environment in the target area will also benefit from reduced groundwater and subsoil contamination.

The project "Extension and modernisation of water and wastewater infrastructure in Bihor county" has a total eligible budget of EUR 83 274 500, with the EU's Cohesion Fund contributing EUR 63 542 200 for the 2007 to 2013 programming period.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/first-class-new-water-services)

6.1.18. A MODERN, HYGIENIC SOLID WASTE SYSTEM FOR CLUJ

TOTAL INVESTMENT
 € 52,899,193
EU INVESTMENT
 € 38,773,186
PROGRAMMING PERIOD
 2007 – 2013
FUND



European Regional Development Fund 2007 – 2013

Citizens of Cluj County in north-western Romania will reap the benefits of an integrated solid waste management system that will preserve the environmental beauty of this area and bring improved health, employment and investment.

The County Council of Cluj will be responsible for implementing this solid waste management project for the entire county. This will involve integrating the various elements of such a system – separation, collection, transport, treatment, recycling and disposal. Implementation of this project will ensure that Cluj County meets the country's national environmental priorities.

As part of this project, every household in Cluj County will receive three bins for the separate collections (for mixed waste, biodegradable waste and packaging waste) and, in addition, rural households will receive composting units to encourage them to process biological waste at home. A newly constructed sorting plant will be used to further organise the solid waste.

Three transfer stations will be built for the next step in the journey for household waste (in Huedin, Mihai Viteazu and Gherla). From there, the waste will be moved to landfill and, to this end, six non-compliant landfill sites will be closed and/or rehabilitated and one will be built in Cluj Napoca. Biological waste will be treated at a newly built simple mechanical biological treatment plant.

All 688 000 inhabitants of Cluj County will benefit from the decline in illegal dumping, reduced health risks and an improved environment thanks to this vital project. For example, 50 % less biodegradable waste will be landfilled and 55 % of packaging waste will be recycled as a direct result of this project.

It can only be successful if all citizens play their part so a public awareness campaign will be run to inform the public about reducing waste at source and separating it for collection.

Modernising the waste management system will also boost employment and make the area a more attractive destination for investment. During the during implementation phase of the project, 220 jobs will be created, with a further 250 created for its operation.

The project "Integrated waste management system in Cluj County" has a total eligible budget of EUR 52 899 193, with the EU's European Regional Development Fund contributing EUR 38 773 186 for the 2007 to 2013 programming period.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/a-modern-hygienic-solid-waste-system-for-cluj)

6.1.19. EXTENSION AND THE REHABILITATION OF WATER AND WASTEWATER SYSTEMS IN CALARASI COUNTY

TOTAL INVESTMENT

€ 99,451,813

EU INVESTMENT

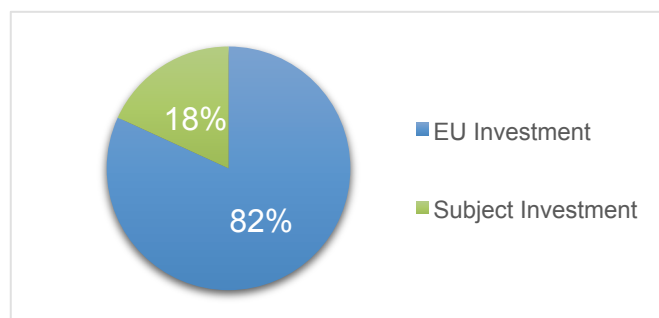
€ 81,389,048

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



The project represents an investment plan for the development and upgrading of the water and wastewater systems in Calarasi County. It consists of investments in drinking water treatment and distribution, wastewater collection and treatment. It will be implemented for the agglomerations of Calarasi, Urziceni, Oltenita, Lehliu, Fundulea and Budesti. It will be implemented by the Regional Operating Company "ECO AQUA S.A", Calarasi. The ultimate purpose is to promote the compliance with the relevant EU environmental legislation and in turn improve the quality of the water services.

As regards water supply, the project consists of works for the rehabilitation of drinking water system. The rehabilitation of water transmission pipes will consist of rehabilitation and extension of the distribution network for 85 km of pipes, 5 new water reservoirs.

As regards the wastewater collection and treatment, the project involves the rehabilitation and extension of 81 km of sewers, the construction of 13 pumping stations, the extension and rehabilitation of 5 wastewater treatment plants. The target population served will be of 117 000 persons.

Some 117 000 inhabitants living in the project area will directly benefit from improved water services. Particularly, the investment will improve the quality of life of the citizens living in the service area by ensuring better access to drinking water and wastewater services: 96 % of the population of the concerned municipalities will have access to compliant drinking water supply after project implementation, whereas 100% of the population of the concerned wastewater agglomeration will be connected to the sewerage system. Safe drinking water will contribute to reduce health risks for the population. Wastewater disposal and treatment will improve the

hygienic conditions and the quality of the environment. Reliable and compliant water services will in turn make the Calarasi County a more attractive place to invest in. The project is expected to directly create 150 jobs during the implementation phase and 40 during the operational phase.

Thanks to the improvement of the wastewater collection and treatment, the project will bring about a considerable reduction of organic and nutrient pollution load discharged directly into the Danube river and ultimately the Danube basin. Significant environmental benefits will also stem from the elimination of groundwater and subsoil contamination thanks to the extension of the wastewater system, replacing the existing individual treatments. The expected reuse of sludge in agriculture will also allow for corresponding savings in chemical fertilizers.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/extension-and-the-rehabilitation-of-water-and-wastewater-systems-in-calarasi-county)

6.1.20. IMPROVED WATER AND WASTEWATER MANAGEMENT IN ROMANIA

TOTAL INVESTMENT

€ 138,860,717

EU INVESTMENT

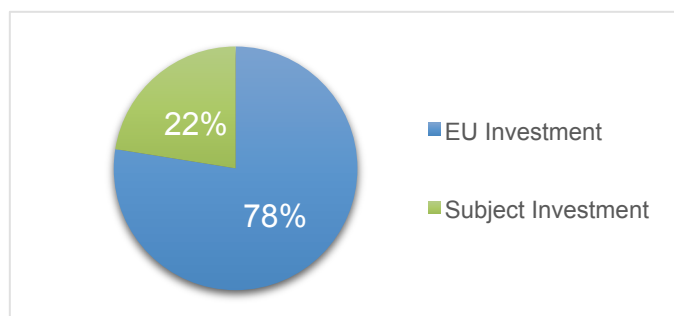
€ 107,647,179

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



Over 170 000 residents in Dâmbovită, Romania's most densely populated county, will gain access to clean water and an upgraded and rehabilitated modern water supply and wastewater service.

The development and upgrading of the water and wastewater systems in Dâmbovită County represents the first step in a long term investment plan for the region. The project consists of infrastructure investments to upgrade drinking water treatment and distribution, and wastewater collection and treatment; it will include six treatment plants.

The project will be implemented by the Regional Operating Company "S.C. Compania de Apa Targoviste – Dambovită S.A.", and will focus on rehabilitating the water supply, wastewater collection and treatment systems in Targoviste, Moreni, Gaesti, Pucioasa, Titu and Fieni. The target population is estimated to be around 172 000 inhabitants. Its aim is to meet the water compliance obligations in the Accession Treaty and the objectives of the Sectoral Operational Programme for Environment.

More precisely, work will focus on the extension and rehabilitation of well fields, chlorination plants and water transmission pipes, extension and rehabilitation of the distribution network, including pumping stations, the creation and rehabilitation of reservoirs, extension and rehabilitation of the sewage network, including pumping stations and construction and upgrading of six wastewater treatment plant.

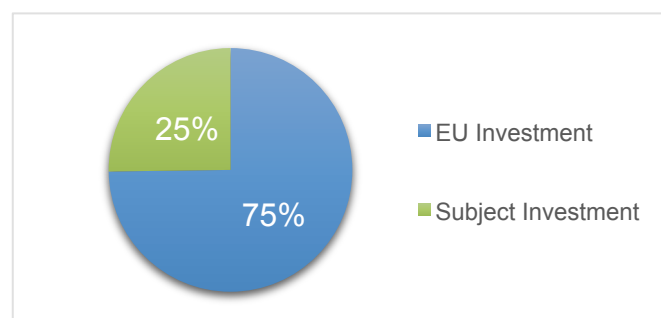
This project will ultimately lead to improving the quality of life of the population living in the Dambovită area, by ensuring better access to drinking water, and wastewater and sewerage services. Assessing the more specific benefits of this project, it is estimated that 95% of the inhabitants will be connected to the drinking water network and safe water resources, representing an additional 25 800 inhabitants connecting to the safe drinking water supply system. While the connection rate to the sewer collection system will reach 94%, bringing in an additional 59 391 inhabitants to the wastewater system. The project is also expected to directly mobilise 310 jobs during the implementation phase and 10 jobs during the operating stage.

Looking at the environmental impact of the project, significant benefits will stem from the elimination of groundwater and subsoil contamination, thanks to the extension of the wastewater and sewerage systems. Improvement to the wastewater collection and treatment system will also bring about a considerable environmental saving, reducing the levels of organic and nutrient pollutants discharged directly into the receiving water bodies.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/improved-water-and-wastewater-management-in-romania)

6.1.21. WIDER ACCESS TO EU-STANDARD WATER SERVICES

TOTAL INVESTMENT
€ 99,776,000
EU INVESTMENT
€ 74,621,100
PROGRAMMING PERIOD
2007 – 2013
FUND



Cohesion Fund and European Regional Development Fund for the 2007 to 2013 programming period

A quarter of a million people living in Romania's Argeş County are to enjoy significantly improved water services by 2016, with investments co-funded by the EU focusing on drinking water and wastewater.

Work will centre on Pitesti, the county's capital, and four surrounding areas. It will be carried out by the regional operating company APA Canal 2000 S.A.

This project will ensure better access to drinking water and wastewater services in a part of Arges County in southern-central Romania. Besides Pitesti, a city of some 170 000 people, it will include the towns of Merisani, Stefanesti, Cosesti-Buzoesti and Topoloveni.

The project will meet Romania's environmental priorities and will employ 150 people during its implementation. Specific goals include improvements to the treatment and distribution of drinking water, as well as the collection and treatment of wastewater, in line with EU water standards.

The upgraded water distribution network will cover 186 km, notably featuring eight new reservoirs, 20 new or rehabilitated wells, and nine new pumping stations. As for the wastewater network, it will cover over 287 km, 50 new or improved pumping stations, and four new or improved wastewater treatment plants.

Investments in Pitesti will concentrate on rehabilitation of a water treatment plant, construction of a new chlorination unit and reservoirs, plus larger and improved transmission and distribution networks. Also foreseen is an extension of the sewage network, with new or rehabilitated pumping stations and upgraded wastewater treatment plants.

Merisani, north-west of the city, will acquire new wells, reservoirs and a chlorination plant. The town will also see construction of transmission pipes and a distribution network.

Stefanesti, across the River Arges to the east, is to get an extended and rehabilitated well field, plus new reservoirs and chlorination plants. Its transmission network and extension will be extended and the distribution network upgraded.

Cosesti-Buzoesti which lies south-west of the city, will acquire an extended and rehabilitated well field, a new water treatment plant, plus extensions or improvement of its water transmission and distribution networks. Its sewage network will also be given a major upgrade.

Lastly, Topoloveni, situated to the east of the city, will see improvements to its well field, a new water treatment plant and reservoir, plus extensions or rehabilitation of its water transmission and distribution networks. The town's wastewater network will be greatly enhanced too.

The project will deliver better water services to around 224 000 people: all will enjoy connection to safe drinking water and the sewerage system. Environmental benefits are also expected from the wastewater work, with reduced local pollution of groundwater and subsoil.

The "Extension and rehabilitation of water and wastewater infrastructure in Arges County" project has a total eligible budget of EUR 99 776 000, with the European

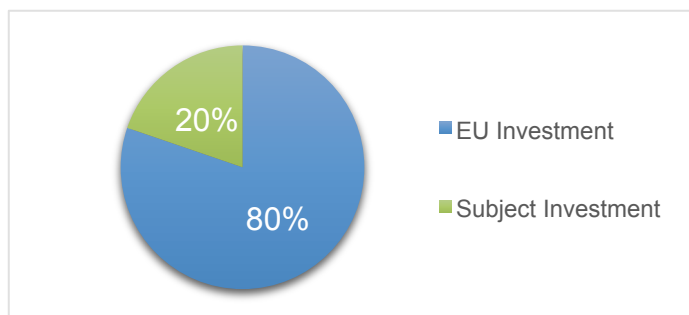
Regional Development Fund and Cohesion Fund together contributing EUR 74 621 100 for the 2007 to 2013 programming period.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/wider-access-to-eu-standard-water-services)

6.1.22. EXTENSION AND THE REHABILITATION OF WATER AND WASTEWATER SYSTEMS IN TULCEA COUNTY

TOTAL INVESTMENT
€ 113,786,589
EU INVESTMENT
€ 91,307,621
PROGRAMMING PERIOD
2007 – 2013
FUND

Cohesion Fund for the 2007 to 2013 programming period



The project purpose is rehabilitation of the water supply system and wastewater collection and treatment systems in the agglomerations of Tulcea, Sulina, Isaccea and Macin in order to meet the water compliance obligations in the Accession Treaty and the objectives of the Sectoral Operational Programme for Environment.

It mainly consists of the measures for rehabilitation of groundwater sources and river intake, rehabilitation of water transmission pipes, pumping stations and water treatment plants (sand filter, coagulation – flocculation, granulated activated carbon and chlorination), rehabilitation and creation of water reservoirs, pumping stations, water metering and distribution networks and rehabilitation and extension of the wastewater collection and the implementation of three wastewater treatment plants (respectively 100 000 pe, 5 000 pe and 10 000 pe). Target population served will be around 106 000 inhabitants.

Some 106 000 inhabitants living in the project area will directly benefit from improved water services. Particularly, the investment will improve the quality of life of the citizens living in the service area by ensuring better access to drinking water and wastewater services.

Safe drinking water will contribute to reduce health risks for the population. Wastewater disposal and treatment will improve the hygienic conditions and the quality of the environment. Reliable and compliant water services will in turn make the Tulcea County a more attractive place to invest in.

Significant environmental benefits will stem from the elimination of groundwater and subsoil contamination thanks to the rehabilitation of the wastewater system.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/extension-and-the-rehabilitation-of-water-and-wastewater-systems-in-tulcea-county)

6.1.23. ENSURING SAFE DRINKING WATER AND MODERN SEWERAGE SYSTEMS IN VRANCEA COUNTY

TOTAL INVESTMENT

€ 97,484,764

EU INVESTMENT

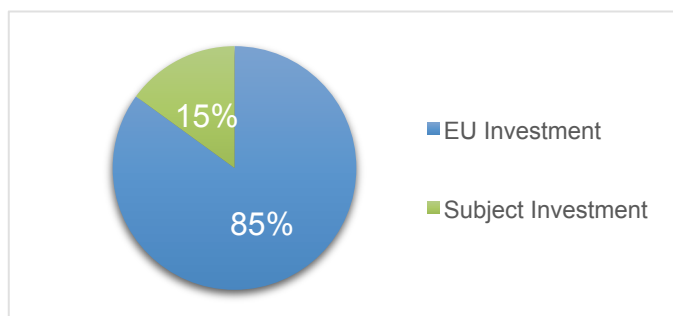
€ 82,862,049

PROGRAMMING PERIOD

2007 – 2013

FUND

European Regional Development Fund 2007 – 2013



The modernisation and extension of the drinking water and sewerage systems in six areas in Romania will benefit almost 160 000 people.

A four-year project is bringing wastewater collection and infrastructure up-to-date and providing all inhabitants in six towns, cities and villages in Southern Romania (Focșani, Panciu, Adjud, Odobești, Mărășești and Homocea) with access to safe drinking water.

This represents connecting over 33 000 people to the drinking water supply and over 66 000 to the sewerage system.

Thanks to this project, drinking water distribution networks are being extended by 65 km and an existing 97 km modernised. A further 40 km of networks to collect water is being brought into service.

In addition, some 27 water wells, 5 tanks, 4 laboratories and 4 pumping stations are being renovated or built.

Sewerage networks are being extended by 154 km and an existing 37 km modernised. Some 17 wastewater pumping stations and 5 treatment plants are also under construction or in the process of being renovated.

This work, due to be completed in 2014, is ensuring that the local population has water and sanitation systems in line with EU water quality requirements and is concretely improving the daily lives of the region's inhabitants.

Total investment for the project "Reabilitarea și modernizarea sistemului de alimentare cu apă și canalizare în județul Vrancea" ("Rehabilitation and modernization of the water and wastewater supply systems in Vrancea county") is EUR 97 484 764, with the EU's European Regional Development Fund contributing EUR 82 862 049. The project is funded through the priority axis "Extension and modernization of water and wastewater systems" of the Operational Programme "Environment" for the 2007 – 2013 programming period.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/ensuring-safe-drinking-water-and-modern-sewerage-systems-in-vrancea-county)

6.1.24. INTEGRATED AND EXEMPLARY WASTE MANAGEMENT

TOTAL INVESTMENT

€ 20,959,726

EU INVESTMENT

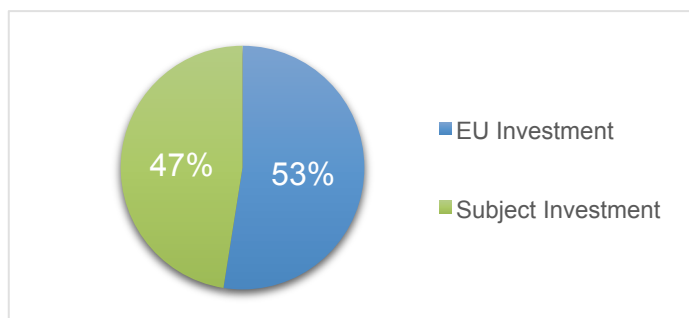
€ 11,004,825

PROGRAMMING PERIOD

2007 – 2013

FUND

The Instrument for Structural Policies for Pre-Accession (ISPA)



The Instrument for Structural Policies for Pre-Accession (ISPA) is co-financing the installation of an ecologically sound and efficient waste treatment system at Ramnicu Valcea.

The town of Ramnicu Valcea (pop. 120,000) extends from the foothills of the South Carpatians to the banks of the Olt, a tributary of the Danube and one of Romania's main watercourses. Situated at the heart of a region renowned for its spas and health resorts and endowed with a rich historic and cultural heritage, the town is a popular tourist destination as well as being an important industrial centre.

Worrying problems had arisen with regard to waste management in the area: the absence of an efficient system of household waste management (at least 20% of inhabitants living without regular waste disposal service) had led to an increase in the number of dumps situated near inhabited areas. Waste was gathered and stockpiled in a tip situated 12 km from the town centre on the banks of the Olt, leading to pollution of the river.

In 2000, the local authorities of Ramnicu Valcea presented a proposal to the European Commission entitled "Integrated waste management in Ramnicu Valcea", devised in partnership with the German cooperation agency (GTZ). In November 2001, the Commission approved a subsidy of 11.04 million euros for the project, within the framework of the ISPA. The town's contribution to cofinancing was 4.6 million euros, and the Romanian government provided 2.5 million.

The project consists in:

- Improving the waste collection system, by implementing a system of selective collection, providing bins and special containers for recyclable and dangerous waste, and by organising a media campaign and providing sources of information (website, household guide, etc.);
- Closing the Raureni tip which was opened in 1978 and no longer matched current environmental and sanitary norms;

- Creating a new ecological depot at Feteni, in accordance with European directives, with a 1 000 000 m3 capacity and a life expectancy of 19 years;
- Constructing a composting station where biodegradable waste will be treated and turned into fertilizer.

The project is expected to: reduce risks of polluting surface water; lower air and soil pollution; eliminate potential sources of illness; reduce the amount of waste released into the environment by recycling glass, metal, plastic, paper and organic waste; improve public health and the quality of life of inhabitants; create 68 full time jobs. The directors of the project hope that the experience will prove useful for other regions of Romania; Ramnicu Valcea is the second town in Romania to benefit from ISPA funding for implementing an integrated waste disposal system.

In 2002, thanks to this project, the town of Ramnicu Valcea was awarded the certificate of “Good Practice in Environmental Protection”, issued jointly by the town of Dubai (United Arab Emirates) and the United Nations programme for sustainable urban development “UN-HABITAT”.

This wasn’t the first time that the environmental initiative of Ramnicu Valcea was rewarded: on several occasions the town has received the diploma of “Town en route to European integration” (1999, 2000, 2001) from the European Union. In 2003 Ramnicu Valcea was a finalist in the “Sustainable European Town” prize alongside eleven other towns including Oslo, Seville, Heidleberg and Helsinki.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/integrated-and-exemplary-waste-management)

6.1.25. EXTENSION AND THE REHABILITATION OF WATER AND WASTEWATER SYSTEMS IN OLT COUNTY

TOTAL INVESTMENT

€ 72,787,679

EU INVESTMENT

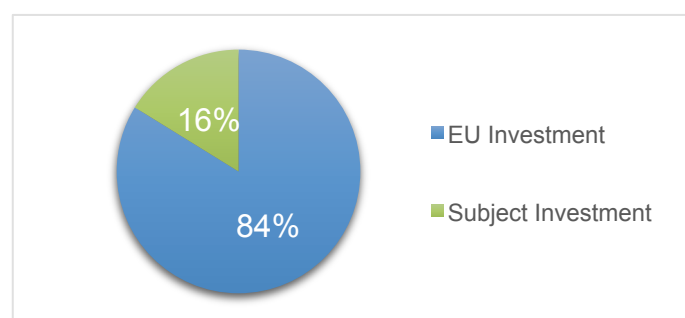
€ 60,999,949

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



The project represents the first step of a long-term investment plan for the development and upgrading of the water and wastewater systems in Olt county. It consists of investments for improving drinking water treatment and distribution as well as wastewater collection and treatment in the agglomerations of Slatina, Scornicesti, Draganesti Olt, Piatra Olt and Potcoava. It will be implemented by the Regional Operating Company "S.C Compania de Apa Olt S.A". It aims at complying

with the relevant EU environmental legislation and in turn improve the quality of the water services.

As regards water supply, the project mainly consists of works for the rehabilitation of well fields, the extension of 10 km of transmission pipelines and the replacement of some 12 km, the replacement and construction of new distribution pipelines (about 103 km), the construction and rehabilitation of 6 chlorination plants, 9 water reservoirs and 18 pumping stations. As regards wastewater collection and treatment, the project involves the rehabilitation and extension of about 36 km of sewers collectors, the construction of 4 pumping stations and the rehabilitation of four wastewater treatment plants

Some 116 000 inhabitants living in the project area will directly benefit from improved water services. Particularly, the investment will improve the quality of life of the citizens living in the service area by ensuring better access to drinking water and wastewater services: 100 % of the population of the concerned municipalities will have access to compliant drinking water supply after project implementation, whereas 82% of the population of the concerned wastewater agglomeration will be connected to the sewerage system in Slatina and Scoricinesti and 54% in Draganesti Olt, Piatra Olt and Potcoava. Safe drinking water will contribute to reducing health risks for the population. Wastewater disposal and treatment will improve the hygienic conditions and the quality of the environment. Reliable and compliant water services will in turn make the Olt county a more attractive place to invest in. The project is expected to directly create 720 jobs during the implementation phase.

Thanks to the improvement of the wastewater collection and treatment, the project will bring about a considerable reduction of organic and nutrient pollution load discharged directly into the Danube river, and therefore in the Danube delta. Significant environmental benefits will also stem from the elimination of groundwater and subsoil contamination thanks to the extension of the wastewater system, replacing the existing individual treatments. The expected reuse of sludge in agriculture will also allow for corresponding savings in chemical fertilizers.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/extension-and-the-rehabilitation-of-water-and-wastewater-systems-in-olt-county)

6.1.26. EXTENSION AND REHABILITATION OF WATER AND WASTEWATER SYSTEMS IN GORJ COUNTY

TOTAL INVESTMENT

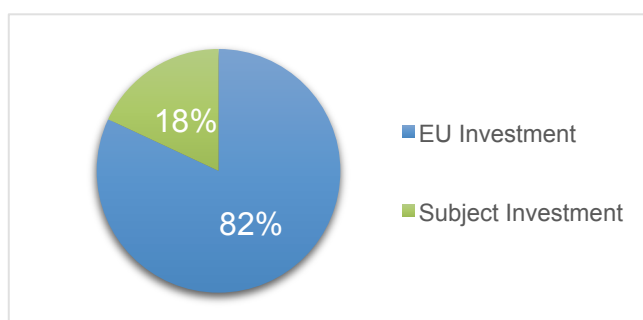
€ 90,750,846

EU INVESTMENT

€ 74,373,313

PROGRAMMING PERIOD

2007 – 2013



FUND

Cohesion Fund for the 2007 to 2013 programming period

The project consists of investments concerning drinking water treatment and distribution, as well as wastewater collection and treatment for five towns situated in the county of Gorj. It will be implemented by the Regional Operating Company "S.C. Aparegio S.A" in the agglomerations of Targu Jiu, Motru, Bumbesti Jiu, Targu Carbunesti and Ticleni.

The ultimate purpose of the project is to help those towns comply with the relevant EU environmental legislation and in turn improve the quality of the water services and the environment.

As regards water supply, the project mainly consists of the measures for rehabilitation of groundwater sources and river intake, the rehabilitation of 17 km of transmission pipelines, the replacement and construction of 88 km distribution pipelines, the rehabilitation and construction of 7 drinking water treatment plants and 3 water reservoirs. As regards wastewater collection and treatment, the project involves the rehabilitation and extension of about 63 km of sewers collectors, the construction and rehabilitation of 7 pumping stations and the rehabilitation of 4 wastewater treatment plants (respectively 107 000, 7 500, 4 200 and 4 000 persons equivalent).

Some 123 500 inhabitants living in the project area will directly benefit from improved water services. Particularly, the investment will improve the quality of life of the citizens living in the service area by ensuring better access to drinking water and wastewater services: 100 % of the population living in the five towns will have access to compliant drinking water supply after project implementation and 100% of the population of the concerned wastewater agglomerations will be connected to the sewerage system. Safe drinking water will contribute to reduce health risks for the population. Wastewater disposal and treatment will improve the hygienic conditions and the quality of the environment. Reliable and compliant water services will in turn make the area a more attractive place to invest in. The project is expected to directly create about 420 jobs during the implementation phase.

Thanks to the improvement of the wastewater collection and treatment, the project will bring about a considerable reduction of organic and nutrient pollution load discharged directly into the various receiving water bodies. Significant environmental benefits will also stem from the elimination of groundwater and subsoil contamination thanks to the extension of the wastewater system, replacing the existing individual treatments. The expected reuse of sludge in agriculture will also allow for corresponding savings in chemical fertilizers.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/extension-and-rehabilitation-of-water-and-wastewater-systems-in-gorj-county)

6.1.27. VALCEA COUNTY CLEANS UP ITS ACT

TOTAL INVESTMENT

€ 98 874 509

EU INVESTMENT

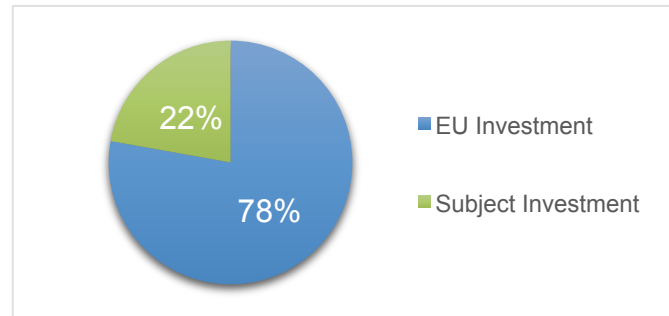
€ 76 935 536

PROGRAMMING PERIOD

2007 – 2013

FUND

European Regional Development Fund 2007 – 2013



Six towns in Southwest Romania will gain improved drinking water facilities and an upgraded wastewater treatment network.

The project will connect over 90 % of the local population to both a safe drinking water supply and the sewer network, and help reduce environmental pollution.

This project is designed to improve both the drinking water supply network and wastewater collection and treatment for 187 000 people living in six towns in Valcea County, south-west Romania.

The major infrastructure project will be carried out by regional water company SC APAVIL S.A. for the inhabitants of Ramnicu Valcea, Dragasani, Calimanesti, Olanesti, Babeni and Balcesti. Ramnicu Valcea (pop. 92 000) is the capital of Valcea County, and lies on the banks of the Olt river, the longest river flowing exclusively through Romania and which flows to the Danube some 180 km to the south.

The project will connect 96 %, on average, of people in the towns affected to a safe drinking water supply, while 91 % will be connected to the sewer network. This will contribute, on the one hand, to better public health protection, and on the other, to a significant reduction in the volume of water contaminated with nutrient and organic pollution that is currently discharged directly into water courses, as well as polluting groundwater and the local subsoil.

The improvements will also help Romania to meet the environmental and public health obligations of its EU accession treaty.

The works phase of the project will last for three years and create 250 jobs. Ten further full-time jobs will be created for the long-term operation of the water networks.

Improvements to the drinking water supply will require 79 km of distribution network to be built or rehabilitated, along with 26 km of transmission network, three pumping stations, five water reservoirs and three extended and upgraded water treatment plants.

For the wastewater disposal and treatment side of the project, APAVIL will add 114 km of sewers, rehabilitate another 14 km, and install or upgrade 51 pumping stations. Wastewater treatment facilities will be newly constructed or substantially upgraded in each of the six towns.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/valcea-county-cleans-up-its-act)

6.1.28. GREEN, CLEAN HEATING INVESTMENTS IN ROMANIA

TOTAL INVESTMENT

€ 59,332,500

EU INVESTMENT

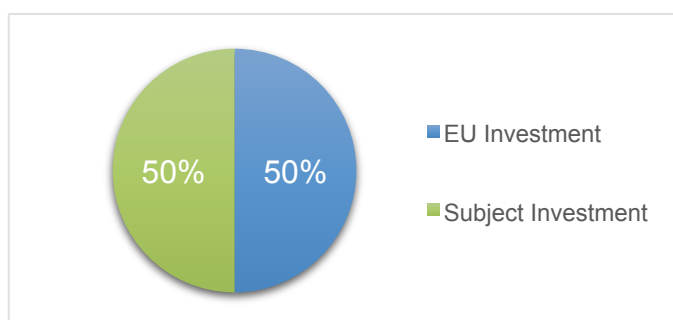
€ 29,666,250

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



Improvements to urban heating systems in the South-West Oltenia region of Romania will bring a boost to human health and to the fight against climate change.

The project to modernise district heating in South-West Oltenia's Râmnicu Vâlcea municipality will also make sure air pollution standards are in line with EU norms.

The rehabilitation project will cut sulphur, NOx and dust emissions, bringing associated health benefits to all those living in the Râmnicu Vâlcea area. Improvements to the urban heating network will have a positive impact on the 70 % of the municipality's population who are connected to the system.

Energy efficiency improvements will reduce greenhouse gas emissions and so support efforts to tackle climate change. Examples of work to be carried out during the six-year implementation phase include the installation of new 'low NOx burners', to cut coal dust emissions. Heating pumps and water pumps will be renovated to improve efficiency, and a new system will be put in place to detect network leaks.

A public awareness campaign will also be launched to increase overall understanding of air quality problems.

The South-West Oltenia region has agreed to carry out future associated investments in renewable energy to improve air quality standards.

Long-term benefits of the project will not be limited to the fields of health and environment. 117 new jobs are expected to be created while project work is in progress, each lasting about two years. In addition, improved air quality and living standards are also likely to attract new investors to this area of central Romania long after the new system is in place.

Finally, it is predicted that energy efficiency gains and probable tariff increases will help create a financially sound district heating system and reduce Râmnicu Vâlcea's need for subsidies.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/green-clean-heating-investments-in-romania)

6.1.29. IMPROVEMENTS TO WATER INFRASTRUCTURE IN MEHEDINTI COUNTY

TOTAL INVESTMENT

€ 67,000,000

EU INVESTMENT

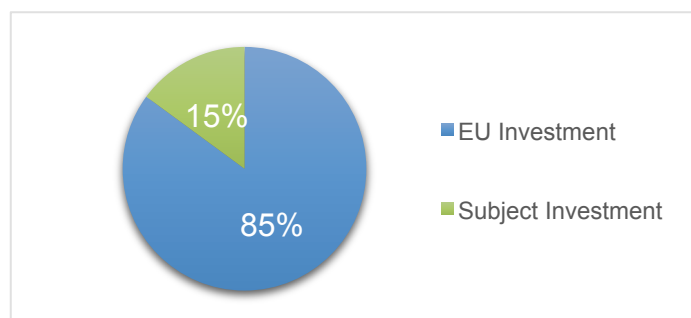
€ 57,000,000

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



Ten agglomerations are to receive a major overhaul of their infrastructure for drinking water and wastewater improving the standard of living for citizens and enabling Romania to meet its national environment priorities and compliance obligations in the EU Accession Treaty.

Under this project, investments will be made into rehabilitating and extending the drinking water infrastructure (in terms of treatment and distribution) and the wastewater infrastructure (in terms of collection and treatment). The number of citizens directly benefitting from this project will be in the region of 140 000. As a result of this project, 99.6 % of these agglomerations will have access to safe drinking water and 96.7 % will be connected to the sewerage system.

Through the rehabilitations and extension of the water infrastructure, the organic and nutrient pollution load reaching water channels will be greatly reduced and groundwater and subsoil contamination will be eliminated. This in turn will have positive effects on the population's health. Furthermore, employment will be boosted in the county as 197 jobs will be created during the implementation stage of the project.

The agglomerations that are the focus of this project are Dobreta Turnu Severin, Strehaia, Vanju Mare, Baia de Arama, Simian, Cujmir, Branistea, Gura Vail, Rogova and Comanda. Each agglomeration has its own requirements and is therefore receiving tailored infrastructure support. This support includes rehabilitation and/or extension of some or all of the following elements: the distribution network; water catchment network; sewage network; and the water transmission network. Pumping stations, reservoirs, wastewater treatment plants, chlorination units, nitrate reduction

installations, and water transmission networks will be constructed in accordance with the requirements of each agglomeration.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/improvements-to-water-infrastructure-in-mehedinti-county)

6.1.30. INVESTMENT IN WATER AND SEWERAGE SYSTEM TO IMPROVE PUBLIC HEALTH AND ENVIRONMENT IN WESTERN REGION OF ROMANIA

TOTAL INVESTMENT

€ 133,500,639

EU INVESTMENT

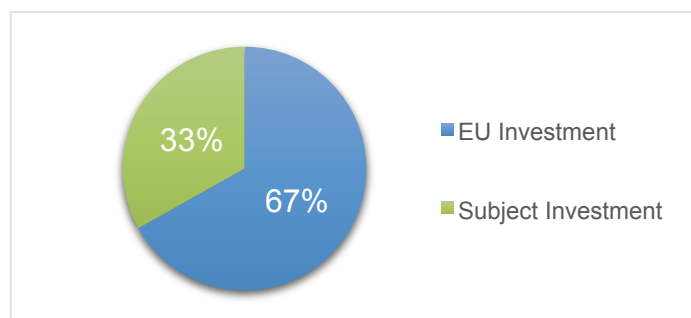
€ 89,252,991

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund for the 2007 to 2013 programming period



A multi-million euro investment package to modernise the water and wastewater infrastructure of a number of townships in western Romania is estimated to benefit around 138 000 people, improve the quality of drinking water and to bring wastewater treatment into line with European standards.

The project involves the rehabilitation and extension of the water distribution and wastewater sewerage networks and the upgrade and construction of water transmission pipes, reservoirs, chlorination and treatment plants, wellheads, pumping stations and wastewater treatment plants.

When the project is completed towards the end of 2015, 63 989 inhabitants of the Țaras Severin Municipality whose properties do not currently have access to the wastewater sewerage system, will have been connected. This will bring the number of household whose wastewater is treated prior to discharge to 100 %. In addition, a further 19 050 people living in the municipality will, for the first time, be connected to a safe drinking water supply system, bringing the number of households connected to the drinking water network to 100 %.

Inhabitants of the agglomerations of Resita, Caransebes, Bocsa, Otelu Rosu, Moldova Noua, Oravita, Anina and Baile Herculane will benefit from the investment which will see the creation of 150 jobs during the construction phase (which is scheduled to run from April 2013 to December 2015) and 12 jobs during the operational phase.

The improvements will bring the quality of drinking water and the treatment of wastewater in the municipality into compliance with Romania's obligations under the EU Accession Treaty. Public health in the municipality is expected to improve from

the improved hygiene that access to running water normally brings. In addition, the environment will benefit from the fact that all wastewater from households and businesses will be treated prior to discharge.

The assets financed by the project are expected to be operated in house by the beneficiary, the utility company SC Aquacaras SA.

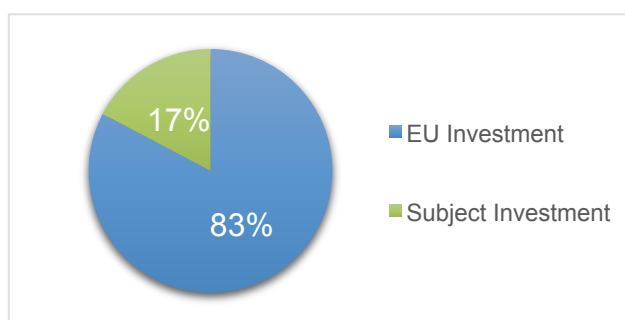
The “Modernisation of Water and Wastewater Infrastructure in Țaras Severin County” project has an estimated total project cost of EUR 133 500 639, of which the EU’s Cohesion Fund will contribute EUR 89 252 991 from the 2007 to 2013 programming period budget under the operational programme “Environment”. The national contribution will be EUR 44 247 648. The project is funded through the priority “Extension and modernisation of water and wastewater systems” of the Operational Programme “Environment”.

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/investment-in-water-and-sewerage-system-to-improve-public-health-and-environment-in-western-region-of-romania)

6.1.31. IMPROVED WATERWORKS EXTENDED TO TENS OF THOUSANDS OF CITIZENS IN ROMANIA

TOTAL INVESTMENT
€ 106,684,333
EU INVESTMENT
€ 88,232,538
PROGRAMMING PERIOD
2007 – 2013
FUND

Cohesion Fund for the 2007 to 2013 programming period



An overhaul of the wastewater infrastructure means safe, clean drinking water bringing this region up to European standards.

Hunedoara County, located in the west of Romania, is home to almost 500 000 people. The project addresses the clean water needs of a large number of the county’s inhabitants living in the agglomerations of Deva, Hunedoara, Brad, Calan, Hateg and Simeria. The works are carried out ‘in-house’, meaning by a provider that is owned by the municipality, namely APA PROD S.A. This company was established in 2001 by Hunedoara County Council and other local councils to manage the collection, treatment and distribution of water for the benefit of citizens. As the operator is already majority owned by the municipality, there are no issues around state aid.

The project involves all parts of the water system – collection, distribution, and treatment plants. New wastewater treatment plants are being constructed in Hunedoara, Calan and Deva and the existing treatment plants in Santamaria Orlea and Brad overhauled. The agglomerations of Brad, Simeria, Hateg, Hunedoara, Calan and

Deva have their wastewater collection systems extended and rehabilitated. The drinking water transmission pipes for water supply are being extended and rehabilitated in Hateg, Calan, Simeria, Deva and 14 other localities. Pumping stations, reservoirs and chlorination plants form part of the construction works.

In all, 32 km of the transmission network and 76 km of the distribution network is being constructed, rehabilitated and/or extended as necessary. Finally, the project is providing technical assistance for project management and supervision.

When this project is fully implemented, the areas mentioned will be in compliance with the Accession Treaty and the objectives of the Sectoral Operational Programme for Environment. An additional 16 500 people will be connected to the wastewater system and an additional 9 300 people will be connected to the water supply system as a result of the project. In total, 160 000 people will benefit from the project i.e. 100 % of the population in the localities mentioned. The implementation of the project is expected to create 150 jobs.

Access to a clean water supply and effective wastewater system is the right of every European citizen and this project aims to bring this area of Romania up to standard. What's more, effective water distribution is necessary for industries and businesses so this overhaul makes the region a more desirable place to set up business which in turn has an effect on employment.

Total investment for the project "Extension and rehabilitation of water and wastewater Infrastructure in Hunedoara County" is EUR 106 684 333 with the EU's Cohesion Fund contributing EUR 88 232 538 for the 2007 to 2013 programming period. The project is funded through the priority "Extension and modernisation of water and wastewater systems" of the Operational Programme "Environment".

(Source: http://ec.europa.eu/regional_policy/index.cfm/en/projects/romania/improved-waterworks-extended-to-tens-of-thousands-of-citizens-in-romania)

6.2. ANNEX NO. 2 - COMPLETE LIST AND DESCRIPTION OF ENVIRONMENTAL PROJECTS IN BULGARIA

6.2.1. KEEPING THE DANUBE BLUE

TOTAL INVESTMENT

€ 6,376,563

EU INVESTMENT

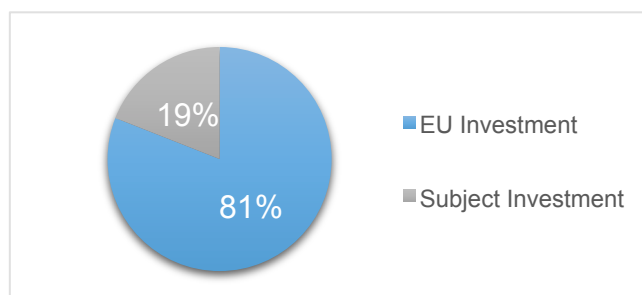
€ 5,003,647

PROGRAMMING PERIOD

2007 – 2013

FUND

The Instrument for Structural Policies for Pre-Accession (ISPA)



A major port on the River Danube faced serious environmental and human health problems due to decades of infrastructure neglect. By the end of 2010, after completion of Bulgaria's most extensive water project, Ruse will have a world-class water supply and sewerage system.

Under the five-year project, the city's facilities are being upgraded or new ones built to ensure compliance with two key EU laws on drinking water and urban waste water. Ruse is replacing some 20 km of mains water pipes and its new waste water treatment plant allows for expected population growth until 2030, while waste sludge is to be used as an alternative power source.

Crumbling water infrastructure resulted in thousands of litres of Ruse's untreated sewerage pouring into the Danube daily. Around 45% of its clean water was also lost from leaks in obsolete pipes, mixing with the untreated sewerage and making water supplies unreliable, expensive and dangerous.

Begun in 2005, the Integrated Water Project involves the Bulgarian Ministry of Regional Development, three consultancies helping the municipality manage the project, and ViK, the water company. The main goals are to protect the environment by reducing pollution in the Danube and to increase the reliability of the city's water supply and the efficient use of water resources.

The total estimated cost of the project is €57.8 million, with an EU contribution of €35.1 million under the Instrument for Structural Policies for Pre-Accession (ISPA). Almost three-quarters of the financing is for modernising the sewerage system and building a treatment plant, with the rest for improving the supply of clean water.

For Ruse's 160 000 inhabitants, the project has delivered a completely new sewerage system and treatment plant to deal with the previously untreated domestic and industrial sewerage. The plant meets the latest EU standards and is spread over 42 000 square metres, with a further 100 000 square metres set aside for future use.

Remaining sludge will eventually be fed into a digester tank, to produce methane gas that will fuel a biogas power plant and heater.

The city now also enjoys an uninterrupted supply of cleaner water and an extended distribution network. Some 20.5 km of mains pipes are being replaced with new ones twice the diameter, and the new pumping station at the city's water source is notably 25% more energy efficient than the previous one.

The local environment and inhabitants' health are sure to benefit from the end of uncontrolled sewerage discharge into the Danube. The project has also preserved drinking water resources, created numerous jobs and plays a role in minimising flood risk.

(Source: http://ec.europa.eu/regional_policy/en/projects/bulgaria/keeping-the-danube-blue)

6.2.2. RIVER SYSTEMS GIVEN THE ROYAL TREATMENT IN BULGARIA

TOTAL INVESTMENT

N/A

EU INVESTMENT

€ 11,230,000

PROGRAMMING PERIOD

2007 – 2013

FUND

The Instrument for Structural Policies for Pre-Accession (ISPA), Cohesion Fund (2000-2006)

This project was seen as vital to local communities given the high level of concern for protecting both the environment and residents. The facility benefits the environment in terms of the cleanliness of water flowing into local rivers, and consequently flora and fauna habitats, and residents in the region and visitors to the region in terms of public health and an attractive, clean natural environment. With a full tertiary treatment, reductions in nitrogen and phosphorous will meet the requirements for sensitive areas.

The wastewater collection project was one of the 36 priority projects of the 'National Programme for construction of urban Waste Water Treatment Plants (WWTPs) in the Republic of Bulgaria'. In addition to treating wastewater from the cities of Gorna Oriahovitza (pop. 45 000) Liaskovetz (pop. 12 000) and Dolna Oriahovitza (pop. 4 000), and protecting the Danube River basin, the facility has been designed to meet the requirements of the Urban Waste Water Treatment Directive for agglomerations with population equivalents of over 10 000.

This particular project was significant in that it was considered to be a pilot project in the water sector in Bulgaria – it was the first project to finance a tertiary treatment WWTP in the fragile area of the Danube River basin. Apart from construction of the plant, several elements of the collection system were also financed. The Yantra River which is a tributary to the Danube River, also sees pollution from untreated sewerage

discharged into its waters, however this trend looks set to reverse with the new facilities. By 2030, the domestic, commercial and industrial wastewater of some 102 000 people will be treated.

(Source: http://ec.europa.eu/regional_policy/en/projects/bulgaria/river-systems-given-the-royal-treatment-in-bulgaria)

6.2.3. WASTE NOT, WANT NOT

TOTAL INVESTMENT

N/A

EU INVESTMENT

€ 44,190,000

PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund (2000-2006)

As part of a major national effort to replace existing disposal sites, Bulgaria has recently built five new regional solid waste landfills. The project brings the nation into line with European regulations on solid waste management and avoids potential environmental damage from pollution and unregulated landfills.

The new sites form part of the Bulgarian National Waste Management Programme. A key goal is to build or reconstruct regional landfills and reduce the solid waste network from the existing 700 sites down to 56 new disposal sites.

Landfilling used to be Bulgaria's main disposal method for solid waste. In 1997, 99% of the nation's collected waste was dumped in some 700 landfills, most of which did not comply with EU requirements on solid waste management.

National authorities decided to address this situation in part by building five regional waste disposal sites. These were to replace more than 100 existing disposal sites serving the areas of Montana, Ruse, Sevlievo, Silistra, and Sozopol. Three-quarters of the total funding for this work came from the EU's Cohesion Fund, the rest being nationally financed.

The project aimed to achieve solid waste management in full compliance with European and Bulgarian regulations and thereby avoid potential environmental damage from old polluted and unregulated landfills. Further objectives were to reduce pollution into the Danube and into the Black Sea basin, to shut down some of the oldest and most polluted disposal sites, and to rehabilitate the former disposal sites.

As a result of the five-year project, some 100 jobs were created in the operational phase. Fly-tipping sites were closed and there were improvements in waste management and control. Reuse and recycling ratios have increased, and today there are more organised collections and transportation.

More environmentally friendly disposal of waste also helps to prevent the leaching of contaminants into the water table and the River Danube, and has led to better monitoring.

The newly built Ruse landfill replaces 19 tipping sites. It has three cells for non-hazardous domestic waste, two for inert waste, and two for hazardous waste. Cleaner solids come out of the system which then go back into the landfill, while unpolluted water is absorbed by the sewerage system. The Montana landfill offers five cells with a drainage system for leachate collection, a bottom water-tight seal, and a gas pipeline for methane in the surrounding dyke, plus modern dedicated infrastructure.

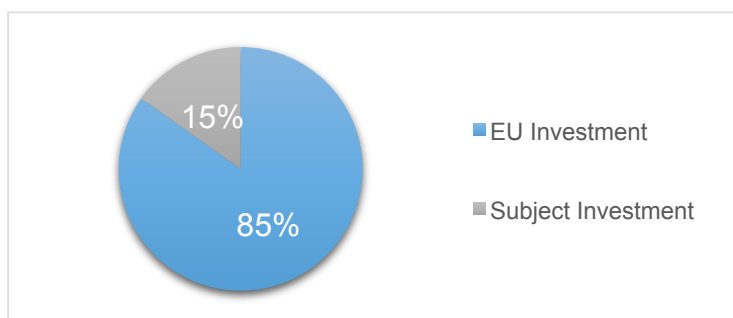
(Source: http://ec.europa.eu/regional_policy/en/projects/bulgaria/waste-not-want-not-2)

(Source: http://ec.europa.eu/regional_policy/en/projects/bulgaria/raising-the-standard-of-water-infrastructure-in-gabrovo)

6.2.4. EFFICIENT RISK PREVENTION AGAINST NATURAL DISASTERS THROUGH CROSS-BORDER COOPERATION IN THE DANUBE AREA

TOTAL INVESTMENT
€ 11,508,671
EU INVESTMENT
€ 9,761,655
PROGRAMMING PERIOD
2007 – 2013
FUND

European Regional Development Fund (2007 – 2013)



Through the development of joint monitoring systems and improved cooperation between public authorities, academic circles and rescue services in Bulgaria and Romania, damages caused by environmental disasters such as hail, air pollution and floods in the Danube border area have been reduced.

The joint risk monitoring project brings benefits to the 5.1 million inhabitants currently living on both sides of the Danube, who can be rescued more quickly and efficiently in the case of an emergency due to better emergency preparedness and training of the intervention services, the purchase of new equipment, and improved flood risk management. At the same time, the exchange of best practices in seminars and study visits, and the adoption of European standards result in strengthened environmental policies, leading to long-term environmental protection.

The cooperation focuses on fields of environmental policy where an integrated monitoring and reaction system can generate the highest benefits. These are:

- Improvement of emergency preparedness and disaster consequences mitigation,

- Air quality monitoring and pollution control,
- Flood risk management, and
- Prevention of disasters caused by hail through anti-hail missiles.

Local authorities use the data obtained in the research activities carried out in the partner institutes and universities to draft joint risk management plans and implement model projects. They also adopted a joint glossary of terms in Romanian, Bulgarian and English to facilitate understanding. Finally, the purchase of emergency equipment, such as rescue equipment, and monitoring instruments, for example for air quality monitoring, has enabled the project partners to carry out their joint activities.

At the same time, public information about the possible risks is also strengthened, for example through the publication of a handbook and maps pointing out the risks in the area.

Total investment for the project “Joint Risk Monitoring during Emergencies in the Danube Border Area” is EUR 11 508 671 with the EU’s European Regional Development Fund (ERDF) contributing EUR 9 761 655 through priority axis 2 of the “Romania-Bulgaria Cross-Border Cooperation Programme” Operational Programme for the 2007 – 2013 programming period.

(Source: http://ec.europa.eu/regional_policy/en/projects/bulgaria/efficient-risk-prevention-against-natural-disasters-through-cross-border-cooperation-in-the-danube-area)

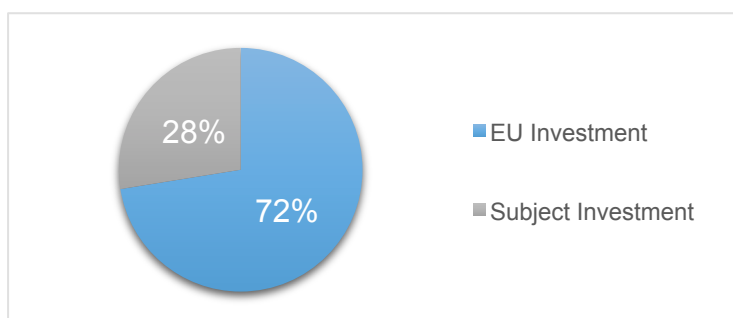
6.2.5. CONTROLLING THE WATER CYCLE

TOTAL INVESTMENT
€ 69,726,600
EU INVESTMENT
€ 50,525,300
PROGRAMMING PERIOD

2007 – 2013

FUND

Cohesion Fund (2007 – 2013)



A water project in Severozapaden, Bulgaria is set to improve the water network for residents and the environment, with safer and better access to drinking water and 100% of the population connected to the sewerage network (up from 87%).

The Vratsa agglomeration will soon be served by modern water infrastructure, with upgrading work being carried out on some 78 km of main and secondary water supply branches, benefiting the 77 000 residents in the project area.

The plant facilities will be owned by the Municipality of Vratsa which will provide the water company, VIK Vratsa OOD, with the infrastructure for operations and

maintenance. The investments made will help Vratsa comply with EU drinking water and urban wastewater directives. A reliable and compliant water service is expected to help make the Vratsa area a more attractive place to invest in.

For the water supply aspect of the project, the works on the 78 km of supply will include replacement of the asbestos-cement pipes with HDPE pipes. The 33 km transition water main from the Srechenska Bara dam to Vratsa will also be reconstructed. A key aim is to improve supply security and decrease operation and maintenance costs by replacing worn-out water mains and reducing water losses.

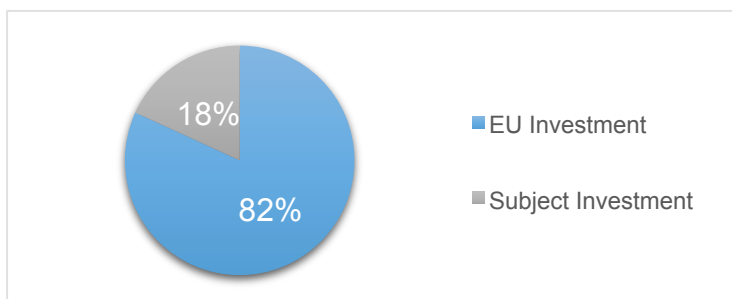
In terms of wastewater collection and treatment, the project involves reconstructing and upgrading about 8 km of the existing main sewer collectors and about 13 km of the secondary sewer network, as well as extending about 26 km of the sewer collector network and renovating the agglomeration's wastewater treatment plant which will eventually have the capacity for a population equivalent of 94 000. The technology to be applied is activated sludge nutrient removal with aerobic sludge stabilisation. The sewer collector network in the Podbalkanski, Kulata and Bistrets districts will also be extended, with sewer branches built along town streets connected to the main sewer collectors.

The main results expected are: an adequate level of water treatment and better water quality in the Dubnika River downstream (less organic and nutrient pollution); reduced uncontrollable outflows of untreated wastewater; total population connected to sewerage systems; and reduced leakage and infiltration in the sewer networks. The project will also supply flow measurement and pressure regulation equipment, reduce losses in the water supply network by 65%, and reduce health risks for the population through cleaner water. In terms of jobs, the project is expected to create 520 direct jobs during the implementation phase.

(Source: http://ec.europa.eu/regional_policy/en/projects/bulgaria/controlling-the-water-cycle)

6.2.6. NEW RESEARCH CENTRE AND LABORATORY IN KARDZHALI TO SERVE AS A POLLUTANT EARLY WARNING SYSTEM

TOTAL INVESTMENT
€ 1,977,362
EU INVESTMENT
€ 1,618,157
PROGRAMMING
PERIOD
2007 – 2013
FUND
European Regional Development Fund (2007 – 2013)



The new “Environment and Health” research centre in the Kardzhali-Ecros cross-border region will help strengthen research and innovation, as well as provide access to new research tools to students from Bulgaria and Greece.

The Cross-border research centre “Environment and Health” (RCHE), opened its doors in 2011 in the town of Kardzhali, Bulgaria, as a result of a long-standing culture of cooperation between the Regional Health Inspectorate (RHI) Kardzhali, “Association Public Coalition for Health Kardzhali”, and the Regional Laboratory for Public Health of Eastern Macedonia and Thrace in Alexandroupolis (Greece) on behalf of the Hellenic Center for Disease Control and Prevention (HCDCP). Activities will be implemented in seven Bulgarian and one Greek municipalities.

The project aims to improve the quality of life and health status of the population in the cross-border region through the control of environment components, including monitoring of atmospheric composition and analysis of soil, water, food and other biological material and their impact on public health.

In order to strengthen the regional capacity to deal with health problems and environment protection, a cross-border research centre “Environment and Health” is constructed and equipped with state-of-the-art equipment for research and training purposes in the city of Kardzhali as well as field-ready instrumentation for rapid reaction. This will aid partnering educational and research establishments from both countries to perform pilot studies and train students and staff in practical field experience, such as on-sight and laboratory analysis and research.

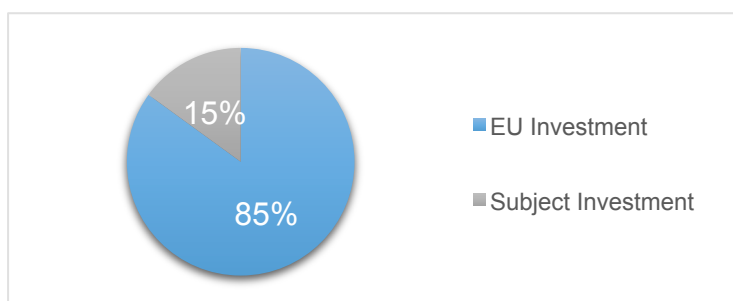
As part of the cross-border research centre “Environment and Health” a network of cooperation is being build between the Bulgarian and Greek authorities in the field of health and social services. This network aims to strengthen the regional research capacity in the area on environmental health issues.

Making use of the network and field equipment, made available to the research centre, the local authorities now have the ability to react in crisis situations and the established early warning system in the case of mass health and safety threats. This cross-border system of monitoring and analysing enables the exchange of real time information on the impact of the environment on human health.

(Source: http://ec.europa.eu/regional_policy/en/projects/bulgaria/new-research-centre-and-laboratory-in-kardzhali-to-serve-as-a-pollutant-early-warning-system)

6.2.7. ARDAFORECAST - A RELIABLE FLOOD WARNING SYSTEM, DEVELOPED FOR THE CROSS-BORDER ARDA RIVER

TOTAL INVESTMENT
€ 82,322,050



EU INVESTMENT

€ 69,973,743

PROGRAMMING PERIOD

2007 – 2013

FUND

European Regional Development Fund (2007 – 2013)

Bulgaria and Greece have come together to create a cross-border early warning system on the Arda River in order to ensure the safety of those living along the most flood-prone rivers in the southeast Balkans.

The “Flood warning system establishment in Arda river basin for minimising the risk in the cross border area” project, or ARDAFORECAST for short, was launched on 20th March 2012. Lead by the National Institute of Meteorology and Hydrology (NIMH), in partnership with EABD in Plovdiv, RD fund in Komotini and DUTH in Xhanti, the project creates a flood warning system in order to monitor critical areas throughout the Arda river drainage basin, and share this information in real time.

The project aims to support the implementation of flood mitigation measures and reduce the adverse consequences of flood events for human health, environment, cultural heritage and economic activity in the region. Additionally, it serves as a basis to promote cross-border cooperation and educate the local population on proper means of reaction and prevention against such hazards.

The activities carried out by the ARDAFORECAST project include the establishment and running of reliable flood forecasting tools for accurate and timely flood forecasts with sufficient lead-time. This has been achieved by improving the density and frequency of the available observation network, installing additional automatic gauging stations, establishing a hydro meteorological information system, development of a GIS database and forecasting models, in order to facilitate real-time data sharing in the cross-border region.

The ARDAFORECAST project includes outreach measures, aimed at to the region’s population in order to prepare and further protect them from the hazards that a flood situation holds. Thus an efficient approach to dissemination of flood forecast information and warning messages to the end users has been established.

Locals have taken part in training and educational activities in cooperation with the local administration, in which a set of warning procedures have been explained. In addition, awareness-raising campaigns have been organised, web-based tools created for information exchange, and access made available for decision makers, stakeholders and the general public to all the necessary data, forecasts and promotional materials.

(Source: http://ec.europa.eu/regional_policy/en/projects/bulgaria/ardaforecast-a-reliable-flood-warning-system-developed-for-the-cross-border-arda-river)