

Integrated Water Resources Management and Environmental Engineering

EPTISA

Eptisa is an international engineering, architecture and information technology company clearly oriented towards services to the client. Eptisa implements some of the most complex projects in the sector of **Transport, Water, Environment, Energy, Industry and Building**. We apply our technical know-how, creativity, innovation, as well as the latest technologies to ensure a sustainable development of our projects for the benefit of society, people, health and welfare.

Drawing on more than 50 years of experience working closely together with our clients, building trust and continuously improving our services, Eptisa has become a reference in the various sectors where it operates.



Local adaptation and quality of services are the key elements of our strategy. This has allowed us to grow and expand our range of products and services globally in response to the evolution of our clients' needs.

International Activity

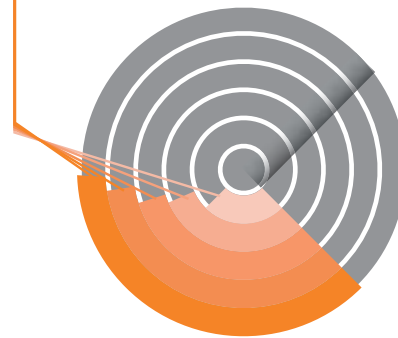
In 2013, 62% of Eptisa's total contracting activity is international.

Our international ongoing projects represent 75% of Eptisa's current backlog.



Distribution by sectors

- 11% COOPERATION FOR DEVELOPMENT
- 17% INFORMATION TECHNOLOGY
- 18% BUILDING, ENERGY AND INDUSTRY
- 26% TRANSPORT
- 28% WATER AND THE ENVIRONMENT



Eptisa closed the financial year 2013 with a gross income of 120 million Euros. Over 2,000 professionals are working with us, half of which are involved in projects outside Spain.



2,000 professionals



1,000 professionals involved in international projects.

Eptisa worldwide

40+

countries



EXPERIENCE

Europe

- Albania
- Belarus
- Bosnia and Herzegovina
- Bulgaria
- Croatia
- Fyrom
- Greece
- Ireland
- Italy
- Kosovo
- Montenegro
- Moldova
- Portugal
- Romania
- Serbia
- Spain
- Turkey
- Ukraine
- United Kingdom

America

- Argentina
- Bolivia
- Brazil
- Canada
- Colombia
- Costa Rica
- Chile
- Dominican Republic
- Ecuador
- El Salvador
- Guatemala
- Haiti
- Honduras
- Nicaragua
- Mexico
- Panama
- Peru
- Uruguay
- USA
- Venezuela

Africa

- Angola
- Algeria
- Congo
- Djibouti
- Egypt
- Equatorial Guinea
- Mauritania
- Morocco
- Mozambique
- Namibia
- Senegal
- South Africa
- Sudan
- Tunisia

Asia

- Armenia
- Azerbaijan
- Bangladesh
- China
- Georgia
- India
- Jordan
- Kazakhstan
- Kyrgyzstan
- Palestine
- Philippines
- Syria
- Uzbekistan
- Vietnam

• Ongoing projects • Completed projects



Water

SPECIALIST IN WATER INFRASTRUCTURE TO IMPROVE PEOPLE'S HEALTH AND ACCESS TO WATER

Eptisa has a broad experience in all phases of the water cycle, from technical support to public entities to improvement of water resources management. We carry out the design and implementation for water infrastructures and water supply and sanitation networks, with an emphasis on water quality, developing turnkey projects for urban and industrial wastewater treatment plants, plans for prevention and mitigation of the natural, social and economic disasters.

Hydrological Planning

- Management water resources
- Sustainable Management for Water Demand
- Feasibility study and planning of water supplies and drainage
- Implementation of Water Framework Directives
- Mathematical modelling: Hydrogeology and hydrological
- Hydro-geological and hydrological studies

Water Quality and Treatment

- Water analysis and treatment
- Drinking Water Treatment Plants
- Treatment Plants
- Waste Water Treatment and reuse
- Sanitation systems
- Desalination
- Etc.

Water Resources Management

- Flood Risk Management & Early Warning System
- River and river-bed management,
- Transboundary cooperation for IWRM
- Water Resources System and Irrigation
- Aquifers Management
- Groundwater Resources
- Quality Management

Water Infrastructures

- Water Supply and Sanitation Networks
- Dams and reservoirs
- Hydro-Electrical Plants
- SCADA System

Solutions for Hydraulic Infrastructures: Operation, Maintenance and Safety

- Automatic Hydrological Information Systems (SAIH)
- Dam safety, Operation and Maintenance
- Auscultation of infrastructures



Capacity Building

Over the past 50 years, Eptisa has successfully developed a large number of studies, surveys and action plans for water resources management according to WFD standards, provided technical assistance services to water bodies in development of River Basin Management Plans and Transboundary Cooperation, implementation of new policies, development of new policies in accordance with the international legislation, water monitoring systems (ecological, chemical, hydro-morphological) and development of training programmes, seminars, workshops and other instruments to allow sustainable development in water management, as well as the dissemination of information to relevant stakeholders and public awareness.

Technical Capacity

Eptisa has successfully developed relevant projects in all fields of the water sector and all phases of the project cycle: Identification, Formulation, Preparation, Implementation and Evaluation. In addition, we are also specialised in training to the project implementation units, capacity building and institutional strengthening of water authorities, utilities and their staff.

Institutional Strengthening & Training

Eptisa is specialised in Capacity Building and Institutional Strengthening for Water Authorities allowing them to develop a sustainable water resources management, in particular in IWRM and harmonisation with standards and legislation with the objective to provide a better and safer environment for the population.

Our range of services includes Institutional Gap Analysis, Recommendations on Institutional restructuring, Development of training programs, Organisation of Workshops and Study Tours for a successful transfer of know-how to the beneficiaries.

This allows our clients to develop a sustainable

knowledge to continue with the activities that had been undertaken with assistance during the project implementation phase.

Experience in Water Legislation and Policy

Eptisa's extensive experience in providing technical assistance to the implementation of water legislation under the WFD combined with training and capacity building of the relevant policy making institutions.

OUR SPECIALISED SERVICES

- Preliminary studies
- Preliminary and Detailed Design of Water Infrastructures
- Environmental Impact Assessments
- Construction Management and Works Supervision
- Technical Assistance in Integrated Technological Solutions
- Auscultation and monitoring

With our continuing effort to maintain up-to-date with the latest advances in **information technology**, EPTISA has reinforced their leadership in the sector by bringing technological added value to our projects, combining experience, innovation and cost-effectiveness. Today EPTISA is one of the most "technically and technologically competitive company" worldwide. Our services in the sector include:

- Automatic Hydrological Information Systems
- SCADA
- GIS
- Hydrological models



Hydrological planning

EPTISA PARTICIPATES IN SOME OF THE MOST IMPORTANT PROJECTS IN HYDROLOGICAL PLANNING OFFERING CONSULTANCY AND ENGINEERING SERVICES, TECHNICAL ASSISTANCE, A WHOLE RANGE OF STUDIES AND PLANNING SUPPORT

Services

- Management water resources
- Sustainable Management for Water Demand
- Feasibility study and planning of water supplies and drainage
- Implementation of Water Framework Directives
- Mathematical modelling: Hydrogeology and hydrological
- Hydro-geological and hydrological studies

Eptisa offers specialist services for the development of **hydrological plans and framework programmes** for water resources management both in Spain and abroad.

Our know-how and management capability combined with the latest information technologies, give us the capacity to handle the biggest project in river basin management.



Our specialised services for Hydrological planning

- Preliminary studies
- Feasibility studies
- Financial and Economic Analysis
- Water Flow Measurements and Analysis
- Master Plans
- River Basin Management Plans
- Environmental Impact Assessment
- Water Information Systems
- Water Quality Control
- Institutional Strengthening and Capacity Building
- Legal Framework Formulation



Training on Water Quality and Quantity Management – Assistance Programme for the Restoration of the Delta of Neretva

Location: Bosnia and Herzegovina

Client: Federal Ministry of Agriculture, Water Management, and Forestry

Contract Value: € 63,500

Start Date: 2002 • **End Date:** 2002



Description:

The objective of this project was to expose the responsible persons at water companies to the internal organization and management of a similar river basin body in Spain. In addition, this experience was enriched by meeting people from the Ministry of Environmental Protection of Spain, and studies its competencies on Water management and relationships with river basin bodies.

Services provided:

- Institutional strengthening
- Legal framework
- Training
- Financing
- Cost/benefit analysis



Technical Data:

Topics studied and discussed were the following:

- Water Quality Management
- River basin planning
- Flow management
- Wastewater
- Surface water and groundwater
- Water Quality management
- Hydraulic Public Domain management
- River basin bodies responsibilities and their relationships with other public and private entities
- Financing of water institutions
- Flood prevention measures.

During their visit to the Ministry of Environment of Spain, the following issues were discussed:

- Legislative framework
- Implementation and adaptation of EU Water Directives
- Relationships between the Ministry and rest of entities with environmental protection responsibilities



Development of the Model for Hydrological Predictions, Forecasting and Decision-making and Preparation of the Plan, Guidelines, and Training Program for Optimal Management of Reservoirs in the River Basins of Neretva and Trebisnjica

Location: Bosnia and Herzegovina

Client: Ministry of Foreign Trade and Economic Relations of BiH/ Croatian Waters

Contract Value: \$ 590,875

Start Date: 2013 • **End Date:** 2014



Description:

The project contributes to strengthening the integrated management of water resources in BiH in accordance with the EU Water Framework Directive (WFD). In particular, the project focuses on supporting the River Basins Management of Neretva and Trebisnjica in development and implementation of mathematic model for hydrological predictions, operational rules for HPP, forecasting and deciding, and making of the plan, guidelines and training program for optimal management of multi-purpose reservoirs of hydro-power plants.

Services provided:

- Strengthening the integrated water resources management in accordance with the EU WFD;
- Improving the River Basins Management of Neretva and Trebisnjica;
- Development of model for hydrological predictions, forecasting and deciding;
- Hydrological analysis of the area and the establishment of hydro-graphs of high water for different re-turning periods of time;
- Development of a hydrological model for Trebisnjica and hydrological model for lower flow of Neretva downstream from Mostar to the border with the Republic of Croatia;
- Hydrological and Hydraulic analyses;
- Development of a Decision Making Software;
- Analysis of operations of hydro-power systems, operational rules for particular hydro-power structures in extreme cases;
- Reviewing of possibilities of optimised management of the systems in statuses of the exploitation of the system;
- Defining the strategies of system management in conditions of evacuation of high water;
- Management system in low-water conditions and emergency events;
- Project management and backstopping.
- Defining the strategies of system management in conditions of evacuation of high water;
- Management system in low-water conditions and emergency events;
- Project management and backstopping.



Capacity Building in the Water Sector in Bosnia and Herzegovina

Location: Bosnia and Herzegovina

Client: EC Delegation to Bosnia and Herzegovina

Contract Value: € 2,350,200

Start Date: 2014 • **End Date:** 2016



Description:

The overall objective of this Contract is to develop administrative capacity in the field of water management in line with the environmental acquis and international obligations and to improve environmental infrastructure. The purpose of this contract is to 1) Support the transposition and implementation of EU water-related Directives, and 2) Improve the management of water resources of the Sava River basin by developing the country's administrative capacity and so enable the designated authorities to prepare a River Basin Management Plan (RBMP) in line with existing legislation, environmental acquis and international obligations of BiH.

The intervention is divided into the following 5 tasks:

- Assistance in Transposition and Implementation of Water-Related EU Directives;
- Technical Assistance in the Preparation of the Sava River Basin Management Plan;
- Water Tariff Policy Framework;
- Long-Term Capacity Building in the Water Sector;
- Water Information System.

Services provided:

- Provision of the assistance in full transposition and implementation of the water-related EU Directives;
- Preparation of the report on progress towards transposing the Directives;
- Assessment of the overall degree of legislative implementation of the Directives in each Entity;
- Provision of guidance and support to Entity resources engaged in the transposition process;
- Preparation of the Sava RBMPs in line with the requirements of the FBiH and the RS Laws on Waters;
- Preparation of the Water Tariff Policy Framework that will ensure a uniform tariff setting process;
- Preparation of the Long-Term Capacity-building Plan;
- Review of the current Water Information System in each of the two entities, and an Action Plan for enhancement of the existing or the establishment of the new System;
- Project management and backstopping.



Sewerage and Wastewater Strategic Master Plan for the West Morava River Basin

Location: Serbia

Client: Ministry of Agriculture, Forestry and Water Management

Contract Value: € 2,900,000

Start Date: 2010 • **End Date:** 2012



Description:

The main purpose of the project is to assist the Water Directorate of the Ministry of Agriculture, Forestry and Water Management in preparation of a master plan in order to speed up investments in wastewater treatment and sewerage, and protection of ground and surface water. The overall objective of the project is to strengthen the protection of water resources, water quality and public health.

Services provided:

Preparation of the Wastewater and Sewerage Master Plan for the region of the West Morava River Basin:

- Review and assessment of all legislation related to wastewater and sanitation;
- Review of Environmental Impact – Review and assessment of industrial effluents, assessment of domestic sewage discharges to water, assessment of impact from on-site sanitation practices;
- Household Survey in urban and rural areas in order to assess levels of service, common problems, affordability and willingness to pay and types of facilities in use;
- Preparation of Land use, Population and Water Demand Estimates;
- Report on tariff considerations and the impact of water pricing on water consumption;
- Preparation of Master Plan – Prediction of future wastewater and sanitation requirements; Financial feasibility of projects.

Preparation of the tender documentation for construction of Wastewater Treatment Plant of capacity 20,000PE.

- Preparation of WWTP Final design;
- Environmental Impact Assessment;
- Cost Benefit Analysis of the proposed Facility;
- Tender documents in accordance with FIDIC Yellow Book and national legislation.



Improvement of Management of Transboundary Water Resources

Location: FYR of Macedonia

Client: European Agency for Reconstruction

Contract Value: € 1,000,000

Start Date: 2005 • **End Date:** 2007



Description:

The overall objective of this project was to assist the FYROM, main beneficiary country, in entering into joint efforts with Greece to improve cooperation on river basin planning and water management.

The project objective was to improve the quality of the water resources shared by Greece and the FYROM so as to progress towards compliance with the EU Water Framework Directive.

Services provided:

- Joint River Basin Management Plan in line with the requirements of the EU Water Framework Directive
- Inventory of water demands in the river basin (drinking water supply, irrigation, industry, environment, recreation, etc.)
- Identification of operational issues for river management and warnings of emergency events (floods and accidental spillages)
- Inventory of industrial pollution sources in the Vardar River catchments
- Propose measures to improve water quality and management programme
- Transboundary water resources management
- Regular monitoring and information sharing between the two countries on water balance
- Assistance to the Government in international water law and application to transboundary water management and protection
- Training of public officials on the practical implementation of the WFD



Transboundary River Management for the Kura River, Phase 2

Location: Multicountry (Armenia, Azerbaijan, Georgia)

Client: European Commission, represented by the Commission of the European Communities

Contract Value: € 4,034,500

Start Date: 2008 • **End Date:** 2011



Description:

The overall objective of this project was to improve the water quality of the Kura River and improving ecosystem for the population in the area covered by the project, that is the Kura – Aras river basin that belongs to the territory of Armenia, Azerbaijan and Georgia. The project included:

- Develop the capacities of the inspectorates and permit giving authorities, and the monitoring units needed for integrated water resources management in the longer term
- Support the establishment of trans-national organisational monitoring structures and systems of information management needed for integrated water resources management in the longer term
- Contribute to the development of the implementation of the EU Water Initiative and the harmonization of the national legislation of the three partner countries with the EU Water Framework Directive
- Capacity building in the countries to approach the water management in an integrated way and creating important pre-conditions to implement the basic requirements of the EU water policies based
- Relevant institutions in the partner countries will receive methodological assistance, equipment and training in order to achieve the project results

Services provided:

- Assessment and surveys
 - Collection and assessment of existing information
 - Field surveys to obtain new data by direct measurements and observations
- Development of a joint monitoring programme for the Kura River Basin in Georgia, Armenia and Azerbaijan;
- Information and methodological basis for the Inspection, permitting/licensing and monitoring departments towards integrated water resource management (IWRM) approach
- Strengthening the institutional capacity for water management and organise intensive training activities in the beneficiary countries
- Public involvement and PR activities

Technical Data:

Joint Monitoring programme for water quality in the transboundary Kura River Basin.



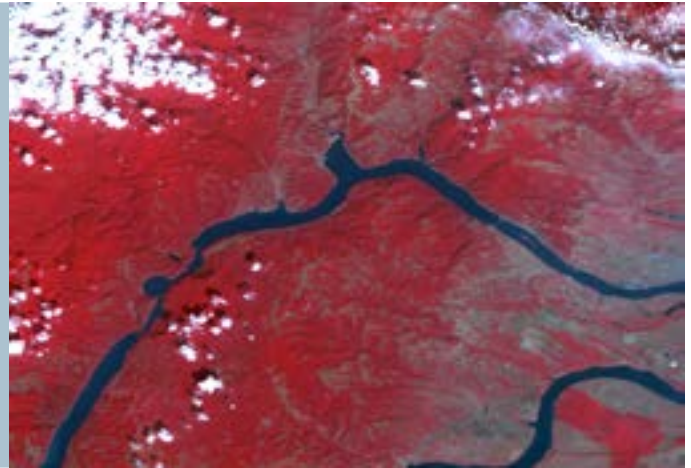
Design and Implementation of Water Management Information System

Location: Republic of Serbia

Client: European Agency for Reconstruction

Contract Value: € 1,999,900

Start Date: 2007 • **End Date:** 2009



Description:

The overall objective of this project was to strengthen the protection of water resources, water quality and public health. More specifically the contract aimed to strengthen the capacity of the Water Directorate to manage water resources, to provide improved access to information and data on water resources.

This was accomplished by developing a comprehensive water resource information management system in accordance with the provisions of the EU's Water Framework Directive and the requirements of the International Commission for the Protection of the Danube River (ICPDR).

Services provided:

- Institutional strengthening and capacity building to the Water Directorate and other water resources management institutions
- Development of GIS applications for water management
- Simulation models for river basins
- Support for alignment of Serbian legislation with the EU's Water Framework Directive
- Capacity building in water management, monitoring and reporting
- Water resources management data collection
- Organisation of training programmes for water management authorities
- Design and implementation of integrated water resources management systems
- Design and implementation of basic and advanced decision support systems for water resources management
- Compilation and harmonisation of data on water resources
- Economic and financial analysis



Water Treatment Plants



Eptisa's services cover the entire water treatment cycle including esign, implementation, Operation and Maintenance for water treatment plants

Eptisa is formed by a team of professionals with extensive experience in executing turnkey projects in the sector.

Our range of services includes the complete cycle of a water treatment facility, designing the most appropriate water treatment options and the Operation and Maintenance of facilities.

Eptisa offers tailored solutions to the needs of our clients at every stage of the project:

- EIA and Feasibility Studies
- Characterization and treatability of water
- Preliminary Design and Detailed Design
- Detailed engineering (Construction, development and As Built)
- Construction, installation, and assembling
- Supervision of Works, QA/QC
- Test of material and equipment
- Training and Capacity Building
- Operation and maintenance services

Eptisa is a guarantee for integrated engineering services, which aim to ensure the optimum rentability of investment and operating costs, and quality of the water of the populations.



Services

- Drinking Water Treatment Plants (DWTPs)
- Waste Water Treatment Plants (WWTPs)
- Industrial Wastewater Treatment Plants (IWTPs)
- Wastewater reuse systems (urban and industrial)
- Sea water and brackish water desalination plants
- Pilot and experimental plants



Feasibility Study for Waste Water Treatment Plant (WWTP) in Bihac

Location: Bosnia and Herzegovina

Client: EC Delegation to Bosnia and Herzegovina

Contract Value: € 699,900

Start Date: 2007 • **End Date:** 2008



Description:

The overall objective of this project was the implementation of sewage and wastewater treatment infrastructure in the municipality of Bihac to solve the problems in wastewater collection and treatment and improve the quality of surface waters for the population of Bihac.

Services provided:

- Design and preparation of Master Plan for the wastewater sector in Bihac (design to cover the period of next 20 years);
- Revision and assessment of the present wastewater collection system in the service area of the future WWTP;
- Identification and preparation of prioritised list of investment measures;
- Evaluation of technical administration of the system, manpower, organisation, availability of technical equipment, operation and maintenance concepts;
- Feasibility study for the priority investment measure;
- Preparation of an Implementation Plan and Procurement Strategy for the investment measure
- Preparation of cost estimate for the project
- Preparation of summary of the technical scope of work of investment measure;
- Analysis of the environmental impact of the works undertaken within the project;
- Preparation of the preliminary design of the approved priority investment measure

Technical Data:

Task 1 Master Plan Preparation

- Review and assess the existing situation - Description of the existing systems and facilities, schematic map of facilities, and description, assessment of environmental impact of untreated wastewater, evaluation of sewerage network.
- Execution of Surveys
- Macro Affordability Assessment
- Assessment of the Municipality and the Public Utility of Bihac
- Master Plan for Investment in Wastewater Sector (identification of longer term investment needs)

Task 2 Feasibility Study

- Technical Scope for the Investment Measure
- Cost Estimates, Financial and Economic Analysis
- Environmental Impact Assessment
- Implementation and Procurement Plan

Task 3 Preparation and Preliminary Design

- Preliminary Design - Network construction: hydraulic design of sewer systems and treatment facility
- Works Estimates



Extension and Rehabilitation of the Waste Water Treatment Plant in the Zimnicea agglomeration

Location: Romania, Zimnicea

Client: SC APA SERV SA Alexandria (Teleorman, Romania)

Contract Value: € 4,461,918

Start Date: 2010 • **End Date:** 2013



Description:

The project objective is the Design and construction of a new WWTP in accordance with EU directives for protection of the environment, which will improve the water quality, the level of sludge management and will deliver affordable sewer services.

The project included in the first phase structural and architectural design and permits issue, then the construction phase, demolition of the old building, construction of the new technological objectives, automatization and SCADA for Zimnicea wastewater treatment plant. Other works also included the construction of an administrative building and laboratory, electrical building, guards building, internal roads, external lighting, fences, landscape, etc.

After the completion of construction works, the project included a big training component for the optimum operation parameters of the WWTP. The operational staff of the Client will be instructed on management, operation and maintenance of the new WWTP.

Project terms: 6 months design + 18 months construction works + 12 months defects notification period.

Services provided:

- Technical, structural and architectural design;
- Design (civil, mechanical, electrical, SCADA);
- Permit issue;
- Supply of equipment, installation and start up;
- Civil works, mechanical and electrical installation activities;
- Training of operation staff;
- Overall project management.

Technical Data:

- Capacity of WWTP for 14,800 P.E (Population Equivalent)
- Maximum daily flow 2600 m³/day;
- Construction surface: 9178 m²
- Treatment process: wastewater treatment, sludge thickening, dehydrating and treatment.
 - Pretreatment with raw water pumping station, electromagnetic flow meter, pretreatment building (screening, grit and grease removal compact unit, for 88 l/s)
 - Primary treatment with Longitudinal Primary Settling Tanks – 2 units
 - Biological Treatment with: 2 units of biological tanks (treatment capacity of 44 l/s) for organically substance, nitrogen and phosphorous removal (biological and chemical removal) and 2 secondary settling tanks, treated water flow measurement.
 - Sludge treatment with: mechanical sludge thickening, aerobic sludge stabilization, - 1 unit, buffer sludge tank, mechanical dewatering unit, dewatered sludge storage area (storage time 6 months)



Waste Water Treatment Plants in Agnita and Dumbraveni Towns

Location: Romania

Client: SC APA TARNAVEI MARI SA (Sibiu County)

Contract Value: € 8,627,767

Start Date: 2010 • **End Date:** 2013



Description:

The project objective is the design and construction of two new Waste Water Treatment Plants (WWTPs) in accordance with EU directives for protection of the environment, which will improve the water quality, the level of sludge management and will deliver affordable sewer services.

The project included in the first phase structural and architectural design and permits issue, then the construction phase, involved the construction of a new wastewater treatment plant in Agnita town and another WWTP in Dumbraveni town (technological objectives, automatization and SCADA).

After the completion of construction works, the project included a big training component for the optimum operation parameters of the WWTP. The operational staff of the Client will be instructed on management, operation and maintenance of the new WWTP.

Project terms: 6 months design + 15 months construction works + 3 months for testing + 12 months defects notification period.

Services provided:

- Technical, structural and architectural design;
- Design (civil, mechanical, electrical, SCADA);
- Permit issue;
- Supply of equipment, installation and start up;
- Civil works, mechanical and electrical installation activities;
- Training of operation staff;
- Overall project management.



Technical Data:

- Agnita WWTP: 9 500 PE; Average daily flow 2 564 mc/day
- Dumbraveni WWTP: 7 100 PE; Average daily flow 1 194 mc/day
- Wastewater Treatment for Agnita and Dumbraveni WWTP's
 - Corse and fine Sreens
 - Grit and grease removal tanks
 - Primary settling tanks
 - Biological tanks with RBC Technology
 - Secondary settling tanks
 - Rainwater storage tanks
- Sludge Treatment for Agnita and Dumbraveni WWTP 's
 - Aerobic sludge stabilization in dedicated tanks.
 - Reeds dewatering beds – 8 years storage capacity.



Supervision of Construction of Wastewater Treatment Plant, Water Supply and Sewerage System in Slavonski Brod

Location: Croatia, Slavonski Brod

Client: Hrvatske Vode (Croatian Waters)

Contract Value: € 1,410,500

Start Date: 2010 • **End Date:** 2014



Description:

The Contract consists of the supervision of construction works for a wastewater treatment plant, and a water supply and sewerage system Slavonski Brod, with the following objectives:

- Strengthen social stability and reduce disparities in Croatia through the improvement of water supply and sewerage infrastructures, as well as the treatment of waste water;
- Construction of wastewater treatment plant
- Protection of water resources;
- Implementation of the obligations set in the Stabilisation and Accession Agreement;
- Implementation of the EU Environmental Acquis governing water management.

Services provided:

- Assist the Contracting Authority/Employer with the review and approval all necessary certificates, guarantees, insurance policies etc. for commencement of construction works;
- Develop Supervision Procedures Manual; Review Contractors' work programmes and methods, health and safety, QA and environmental plans.
- Carry out co-ordination and administration of contracts; site inspections for quality of the workmanship and health and safety practice;
- Review of the Design of the Works to secure the full compliance with the (FIDIC Yellow Book and Red Book).
- Completion inspection and issue of Taking-Over Certificate; Final inspection and issue Performance Certificate;

Technical Data:

- Wastewater Treatment Plant (80.000 PE): Pumping Station (Inlet pumping station to the wastewater treatment plant, Outfall pumping station to the Sava river operating in case of high water), Mechanical Treatment (2 fine Screening, 2 aerated grit and grease chamber, 2 primary settling tanks), Biological Treatment - new plant (4 SBR-Tanks), Sludge Treatment (2 gravity thickeners for primary sludge, 1 mechanical thickener for excess sludge, 2 Digesters, 1 sludge storage tank, 2 centrifuges for sludge dewatering) and Biogas Treatment and utilization (2 gravity thickeners for primary sludge, 1 mechanical thickener for excess sludge, 2 Digesters).
- Water Supply and Sewerage System (to existing consumers and 4,300 new inhabitants): construction and reconstruction of 9 km of trunk mains, construction of 50 network nodes and construction of one service reservoirs; Construction of new sewerage system in the city of Slavonski Brod, and 3 Municipalities (Klakar, Gornja Vrba and Podcrkavlje) with a length of 36,8 km with 7 storm overflows, 1 retention canal and 8 pumping stations.



Supervision of Construction and Supplies for Sewerage System and Wastewater Treatment Plant in Velipoja Area – Phase III

Location: Albania

Client: EU Delegation to Albania

Contract Value: € 785,500

Start Date: 2013 • **End Date:** 2016



Description:

The overall objective of the project is to improve the living conditions of the population of Albania through alignment with the EU standards of the treated sewerage water discharged into rivers, lakes and the sea. In order to alleviate the existing serious deficiencies in the water supply and sanitation sector, the Government of Albania has decided to improve drastically the water supply and sewage collection and treatment services, mainly in the touristic coastal areas.

Services provided:

- Supervision services for the implementation of one works and three supply contracts related to the construction of over 30 km of gravity pipes, 1.15 km of main transmission pipe, manholes, house connections and 6 pumping stations;
- Supervision of Supplies, including installation of machinery and equipment;
- Monitoring of Defects Notification Period for all works and supply contracts.

Specific activities carried out by Eptisa include:

- Daily supervision and coordination of the implementation of the works and the three supplies contracts;
- Preparation and submission of Quality Assurance & Quality Control Manual;
- Planning and preparation of cash flow forecasts for all contracts;
- Review and approve the Contractors' working/shop drawings;
- Full backstopping support.



Sisak Wastewater Programme - Supervision of Design and Construction

Location: Croatia

Client: Hrvatske Vode (Croatian Waters)

Contract Value: € 1,391,500

Start Date: 2013 • **End Date:** 2017



Description:

The overall objective of this project is to reduce the regional disparities in Croatia, by contributing to social stability through infrastructure construction, as well as the construction of a waste water treatment plant. Moreover, the purpose of this assignment is improved sewerage infrastructure, treatment of waste water and protection of water resources in the City of Sisak and surrounding area of Sisacko-Moslavacka County.

The following Works Contracts will be supervised:

- Supervision services during “Construction of Sewerage System”, includes the construction of a new sewerage system in the city of Sisak;
- Supervision services during “Construction of 2 River Under-Crossings”, includes the construction of two river crossings underneath Kupa river;
- Supervision services during “Construction of Waste Water Treatment Plant”.

Services provided:

- Mobilisation of staff at site at the location agreed with the works contractors or with the Contracting Authority if such works contracts have yet to be signed;
- Preparation of a concise Manual of Supervision Procedures;
- Assisting the Contracting Authority/Employer with the review and approval of all necessary certificates, guarantees, insurance policies etc.;
- Checking the Design-Build Contractor’s major designs, shop and installation drawings to ensure that the Contractor follows the intentions of his design and the performance specifications;
- Reporting for financial control and programme management in line as agreed with the Contracting Authority;
- Supervision of the general implementation activities of the Contractors;
- Review of Health, Safety and Environmental Plan and any proposed deviations or amendments to the HSE Plan;
- Overall Project Management and Backstopping. and health and safety practice;
- Review of the Design of the Works to secure the full compliance with the (FIDIC Yellow Book and Red Book).
- Completion inspection and issue of Taking-Over Certificate; Final inspection and issue Performance Certificate;



Supervision of Construction and Commissioning of the New Waste Water Treatment Plant at TPP Nikola Tesla B

Location: Serbia

Client: Electric Power Industry of Serbia (EPS)

Value: € 785,000

Start Date: 2012 • **End Date:** 2014



Description:

The overall objective of this project is to supervise the works contract with the aim to assist EPS to obtain an integrated permit (under IPPC Law) for further operation of thermal power plants and for their performance of activities after the year 2015. Moreover, the aim of this project is to align emissions and introduce the best available techniques (BAT) for water emission reduction.

Specific objectives of the project:

Provide EPS with the necessary assistance in the coordination, supervision and project and site management of Design-Build contract for construction under FIDIC rules, following the PRAG procurement procedure;

Assistance during procurement process for the main works contract;

Civil Works, clearance of existing buildings;

Design and Construction of a New Wastewater Treatment Plant;

Manufacturing and supply of all the necessary equipment;

Installation of new civil, mechanical and electrical parts, power supply and monitoring system;

Commissioning.

The project will be located in Obrenovac, at Nikola Tesla B Power Plant, in Serbia.

Services provided:

- Technical Assistance throughout tender evaluation procedure;
- Supervision of work activities performed in accordance with FIDIC Conditions of Contract (Plant and Design-Build Conditions, Yellow Book), Physical Planning and Construction Act (Official Gazette 72/09 and 24/11), and other relevant Serbian Legislation;
- Check Contractor's design, drawings and Bills of Quantities;
- Efficient administration of the Project according to FIDIC;
- Daily supervision of construction works;
- Overall quality control;
- Financial control in accordance with contract documents and 'best practice';
- Review of time scheduling and assuring completion of the works contract within estimated budget;
- Review of Contractor's Quality Assurance Plan;
- Supervision of preparation of detailed design;
- Establish and assist in QA/QC procedures through certification of acceptance testing;
- Provide necessary liaison and coordination between all parties involved in project;
- Project Management.



Technical Assistance for Preparation of Investment Project for Wastewater Collection and Treatment in Prilep

Location: FYR of Macedonia

Client: EU Delegation to the FYR of Macedonia

Contract Value: € 800,000

Start Date: 2008 • **End Date:** 2010



Description:

The overall objective of the project is to assist the Ministry of Environment and Physical Planning, the Central Finance and Contracts Department in the Ministry of Finance as well as the PUC “Vodovod i kanalizacija” Prilep in preparation of the design and tender documents for the sewerage network rehabilitation and extension and the construction of Waste Water Treatment Plant (WWTP) on a green field site (design Population 95,000 P.E) for the city of Prilep.

The contract has two specific objectives:

- Preparation of the design and the tender dossiers for works covering the rehabilitation and extension of the sewerage network and construction of a WWTP.
- Preparation of the tender dossier for the construction supervision of works.

Services provided:

- Review of the existing situation, implementation of additional studies, modeling and analysis of alternative solutions;
- Development of the Preparatory Phase Survey and selection of the best option;
- Detailed design for rehabilitation and extension of the sewerage network;
- Outline design for the WWTP;
- Tender dossier for works for rehabilitation and extension of the sewerage network following the FIDIC 1999 edition “Redbook”;
- Tender dossier for works for construction of a WWTP following FIDIC 1999 edition “Yellow book”;
- Preparation of the tender dossier for the construction supervision of the rehabilitation and extension of the sewerage network and construction of a WWTP according to the requirements of PRAG.



Water Resources Management

Eptisa offers specialist services for the development of projects in hydrological plans and framework programmes for water resource management

For management of the Water Resource and Hydrological and Hydrogeological Planning we have the know-how and management capability combined with the latest information technologies, as shown by our experience.

Services

- Flood Risk Management & Early Warning System
- River and river-bed management,
- Transboundary cooperation for IWRM
- Water Resources System and Irrigation
- Aquifers Management
- Groundwater Resources
- Quality Management

The main services provided by Eptisa in **Flood Risk Management** range from:

- Identification, analysis and evaluation of risks in flood prone areas
- Definition of policies, procedures and practices to improve flood risk management
- Provide a technological solution to pre-empt flooding
- Early Flood Warning System
- Provide a technical solution to monitor flood risks
- Provide training for an optimal use of the technology
- Promote a sustainable socio and economic development for local communities
- Plan for Emergency Preparedness, Flood Disaster Prevention and Response

Our specialised services for Water Resources Management

- Studies for Water demand
- Environmental Impact Assessment
- Implementation of Water Legal Framework Directives
- Water and Groundwater Quality Management Systems
- Irrigation and Drainage Water System
- Preliminary and Detailed Design
- Procurement
- Water Facilities Planning
- Flood Risk Management
- Development of Automatic Information Systems
- Institutional Strengthening and Capacity Building
- Assistance to Public Water Utilities and Water Management Bodies

Automatic Hydrological Information System

- Optimization of water resources management
- Flood forecasting, prevention and monitoring
- Enhancement of hydrological and hydro-meteorological databases
- Aquifers' evolution
- Monitoring of leisure zones
- Water Storage, Dam safety



Programme for the Prevention, Preparedness and Response to Man-Made and Natural Disasters in the ENPI East Region

Location: Multicountry (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine)

Client: Commission/AIDCO

Contract Value: € 5,988,000

Start Date: 2010 • **End Date:** 2015



Description:

The overall objective of this project was to contribute to the peace, stability, security and prosperity of the Eastern Partner Countries and to protect the environment, the population, the cultural heritage, the resources and the infrastructures of the region by strengthening the countries' resilience, preparedness and response to man-made and natural disasters.

The programme focused on natural and man-made disasters with special emphasis on the ones identified as priorities in the ENPI East region.

Services provided:

- Facilitation of conceptual and operational cooperation thanks to the creation of the Electronic Regional Risk Atlas among partner countries as well as between Eastern partner countries and the EU
- Civil Protection Operational Manual was drafted, which integrated the specific interests of the Partners following the development of risk maps and the application of GIS tailored to the needs of the region;
- Civil protection capacity building programme: the aim was to support the strengthening of stakeholder capacity at regional level and contribute to the reinforcement of civil protection systems in the Partner Countries;
- Communication strategy: Information collection, productions and dissemination of relevant material, organisation of a regional public awareness campaign, including ad-hoc activities for the different stakeholders, and facilitation of information exchange.



Technical Data:

Creation of the Electronic Regional Risk Atlas using GIS (i.e.: Seismic risks; Hydro-geological events (such as floods/flash floods/droughts); Forest and ground fires; Urban/industrial disasters (e.g. explosions, fires, chemical accidents or toxic gas leakage, obsolete pesticides, etc.), road accidents; and Disasters caused by extreme meteorological conditions (which may or not be related to climate change).



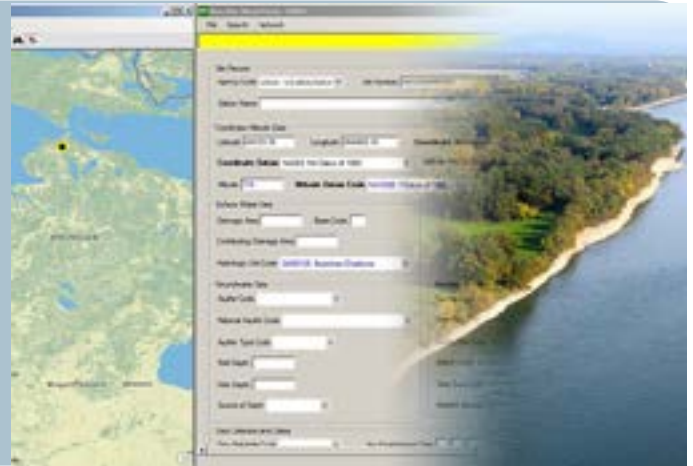
Design and Implementation of Water Management Information System

Location: Serbia

Client: European Agency for Reconstruction

Value: € 1,999,900

Start Date: 2007 • **End Date:** 2009



Description:

The overall objective of this project is to strengthen the protection of water resources, water quality and public health. More specifically, the contract aims to strengthen the capacity of the Water Directorate to manage water resources, to provide improved access to information and data on water resources.

This is being accomplished by developing a comprehensive water resource information management system in accordance with the provisions of the EU's Water Framework Directive and the requirements of the International Commission for the Protection of the Danube River (ICPDR).

Services provided:

- Institutional strengthening and capacity building to the Water Directorate and other water resources management institutions;
- Development of GIS applications for water management;
- Simulation models for river basins;
- Support for alignment of Serbian legislation with the EU's Water Framework Directive
- Capacity building in water management, monitoring and reporting;
- Water resources management data collection;
- Organisation of training programmes for water management authorities;
- Design and implementation of integrated water resources management systems;
- Design and implementation of basic and advanced decision support systems for water resources management;
- Compilation and harmonisation of data on water resources;
- Economic and financial analysis;
- Project management and backstopping.



Study of Flood Prone Areas (Phase 1)

Location: Serbia

Client: EU Delegation to the Republic of Serbia

Contract Value: € 1,999,500

Start Date: 2010 • **End Date:** 2012



Description:

The overall objective of this project is contribution to the harmonisation with the European Flood Directive and Water Framework Directive (WFD), and introduction of the “living with floods” principle in Serbia. This objective is in line with the Serbian Government’s European Integration Strategy and in line with the membership of the International Commission for the Protection of the Danube River (ICPDR) and International Sava River Basin Commission (ISRBC). More specifically, the objective of this project is to prepare flood hazard and flood risk maps, to be incorporated in Flood Risk Management plans for the project area.

Project area:

The flood prone areas on the left and right side of the Danube River between Belgrade municipality Zemun (km 1175) and the upstream end of the Iron Gate gorge (km 1040), including the flood prone parts of the Belgrade city along the Danube, and the flood prone areas on the larger rivers in the Velika Morava river basin.

Services provided:

- Harmonisation with the EU Flood Directive and WFD, and introduction of the “living with floods” principle in Serbia;
- Drafting methodology for flood mapping;
- Harmonisation of requirements, data and methods: preparation and submission of the inventory study on available data and on data management;
- DTM adjustment to requirements of flood mapping in the project area;
- Survey of river cross sections;
- Gathering data risk assessment;
- Hydrodynamic modeling;
- Preparation of flood hazard and flood risk maps to be incorporated in flood risk management plans;
- Development of layers of flood risk receptors;
- Incorporation of risk information into regional and/or local spatial plans (pilot case);
- Incorporation of GIS flood maps into WMIS;
- Development of concept of flood maps’ use;
- Dissemination of results and capacity building including training;
- Project management and backstopping.



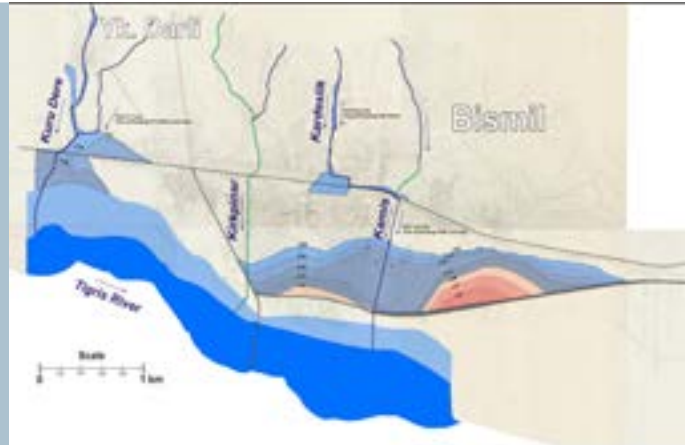
Technical Assistance to Mitigating Flood Risk in Flooded Areas in the GAP Region

Location: Turkey

Client: GAP Regional Development
Administration Reconstruction

Contract Value: € 2,198,900

Start Date: 2008 • End Date: 2010



Description:

The overall objective of this project was to prevent flooding and its effects in the long-term through local institutional capacity building in the GAP Region. The technical assistance team supports the GAP RDA under two components:

- Component 1 grant scheme implementation capacities: Assisting the GAP RDA with the implementation of the two grant schemes; 12.8 MEURO Physical Planning and Investment Component and 2.2 MEURO Social Support Component. It covers six provinces in Southeastern Anatolia, namely Diyarbakır, Batman, Mardin, Şanlıurfa, Şırnak and Siirt:
 - Grant Implementation
 - Grant Scheme Monitoring
 - Grant Scheme Evaluation
 - Grant Scheme Dissemination
- Component 2 flood mitigation capacities: Capacity building activities for all stakeholders (and GAP staff, in relation to sustainable flood risk management, disaster management, and including pilot activity). It covers nine provinces, namely Adıyaman, Kilis, Gaziantep, Batman, Diyarbakır, Mardin, Siirt, Şanlıurfa and Şırnak:
 - Flood Mitigation Capacity Building
 - Stakeholder Participation
 - Sustainability

Services provided:

- Preparation of a risk assessment for the selected grant projects
- Review of the grant scheme manual
- Preparation of a training curriculum
- Training of the grant beneficiaries
- Preparation of a monitoring framework, a monitoring manual, a monitoring database
- Training on monitoring, and delivery of monitoring
- Establishment of a grant scheme evaluation framework
- Preparation of a project website and information brochures
- Organisation of a dissemination event
- Needs analysis for flood mitigation capacity building
- Preparation of an action plan for training
- Application of the new flood risk directive on one pilot project
- Capacity building activities for flood mitigation
- Preparation of awareness campaigns
- Preparation of a sustainability plan / project exit strategy for flood mitigation capacity building



Development of the National Mapping Flood Zones in the River Basin of the Cantabrian Sea

Location: Spain, Cantabria

Client: Cantabrian Sea Authorities

Contract Value: € 2,761,485.68

Start Date: 2011 • **End Date:** 2013



Description:

The overall objective of the project is to develop the Spanish mapping of flood zones in the Cantabrian sea basin. The technical assistance team supports the Cantabrian Sea Authority under two components:

- Component 1 - Preliminary assessment of flood risk: Identification of stages most sensitive to flooding, identify all existing studies proposing the implementation of hazard and risk maps in the most sensitive sections.
- Component 2 - Development of hazard maps and flood risk maps: defining all the following elements:
 - Public Water Domain;
 - Preferential Flow Zone;
 - Floodplain zoning
 - Areas susceptible to floods and fast high density debris flows

Services provided:

Preliminary assessment of flood risk:

- Data collection
- Selection of river sections to study
- Calculation of the areas to be mapped
- Simplified flow modelling
- Proposed river sections which produce the flood maps.
- Public participation process

Development of hazard maps and flood risk maps:

- Mapping generation
- LIDAR Technology works
- Survey bathymetry works
- Historical and geomorphologic studies
- Hydrological studies
- Hydraulic one-dimensional modelling
- Hydraulic two-dimensional modelling
- Hazard and flood risk mapping
- GIS system information software



Technical Data:

The project covers 2.120 km of river beds and 147.000 ha

Technologies used: LIDAR Technology & GIS system information software



Consultancy and Technical Assistance for the Monitoring and Control Implementation Works of the Automatic Hydrological Information System on the Guadiana River Basin

Location: Spain

Client: Ministry of Environment and Rural and Marine Affairs

Contract Value: € 3,396,800.10

Start Date: 1999 • **End Date:** 2009



Description:

The objective of the project was to design and install a system to monitor and control water resources in the Guadiana River Basin. This system called SAIH is an essential tool allowing water planning and flood prevention / flood risk mitigation. It receives real time data through a network of measurement stations and antennas across the basin & controls the water flow. This involved a strong collaboration with the Guadiana River Basin Authority for the provision of consultancy services and technical supervision for the installation of network checkpoints in the river basin.

The information is treated through specific software showing the information of each checkpoint and sending data of importance to elaborate hydrological models (a telecommunications network - PETRA Standards). The system also provides an ample and accessible source of information to create a historical register or data base allowing an improved hydrological planning and a better Water Resources Management. It provides an early warning system for flood risk management / prevention with the use of GIS technologies connected to the emergency public services coordination of emergency response.

Eptisa was also mandated by the Guadiana River Basin Authority to operate the Automatic Hydrologic Information System.

Services provided:

- Technical supervision for the design and installation of the Automatic Hydrologic Information System
 - Identification of the adequate Automatic Hydrologic Information System
 - Basic infrastructure for the Automatic Hydrologic Information System
 - Technical studies for installation support
 - Control and monitoring of the installation
 - Installation of network checkpoints in the river basin
 - Mathematical models for hydrological and hydraulic management
 - GIS, Arc/View application
- AWIS operation

Technical Data:

- Basin surface: 60.361 Km²; Population: 1.681.235 inhabitants; Annual medium flow: 6.168 Hm³
- Applied technologies: GIS, Arc /View; Access database; Excel; Mathematical models for Hydrological and Hydraulic Management



Water Infrastructures



Eptisa is specialist in design, construction management and works supervision for all types of water infrastructures

Eptisa offers engineering services for the design, Operation and Maintenance, and safety of water infrastructures.

Eptisa has extensive experience in **Water Supply & Sanitation Engineering, as well as in Water Treatment Projects**, in particular in **preparation of detailed design, cost estimates and construction supervision** for all types of water infrastructures. Our services also include the implementation of GIS systems for water supply and sanitation and the development of SCADA systems to ensure monitoring and control of water distribution.

We work on the design, quality control and works assistance of water supply and sewerage networks, carrying out activities from regulation, channelling, distribution and sanitation in order to guarantee the best services to the community.

Services

- Water Supply and Sanitation Networks
- Dams and reservoirs
- Hydro-Electrical Plants
- SCADA System

Our experience in the sector for projects financed by IFIs, national and local budgets has been the main drive to expand **internationally** in association with the large concessionaries and construction companies, in countries like **Portugal, Georgia, Serbia, Romania, Vietnam, Uzbekistan, Kyrgyzstan, Azerbaijan**, etc.



Our specialized services for Water Infrastructures

- Feasibility Studies
- Financial and Economic Analysis
- Environmental Impact Assessment
- Project Identification
- Investment Programming
- Preliminary and Detailed Design
- Construction Management
- Institutional Strengthening to Authorities & Training
- Project Management
- Works Supervision under FIDIC rules
- Turn-key projects



Consultancy Services for Water Supply SCADA System in Bursa

Location: Turkey

Client: BUSKI (Bursa Municipality)

Contract Value: € 658,945

Start Date: 2007 • **End Date:** 2009



Description:

The project covers a large geographical area within the city of Bursa and its objectives were:

- To Supervise the implementation of a SCADA system to create a computer-based centralised management system;
- To monitor and control potable water production, purification, collection and distribution stations/networks, of which the operation and maintenance is the responsibility of BURSKI.

The project consists of 5 sub projects:

- Waster water treatment plant works;
- Storm & Wastewater drainage works;
- Water supply works
- Consultancy and supervisory services
- Other works

Services provided:

- Supervision of the Project's execution (FIDIC Yellow book)
- Review and approval of the Detail Engineering prepared by the SCADA Contractor
- Assistance to the Beneficiary during the development and installation of SCADA System
- FAT and SAT test of the whole equipment and of the SCADA System (software and hardware)
- Revision and approval of the communication system for the diverse types of remote stations
- Supervision of the design and implementation of the Control Centre
- Final acceptance of the system in operation

Technical Data:

Supervision for the installation of around 150 remote stations, including renewal of equipment in 11 Pumping stations, 9 wells and 2 cells of high voltage (7.2KV)



Surkhandarya Water Supply and Sanitation Project - Project Implementation Assistance

Location: Uzbekistan, Surkhandarya Oblast
Client: Project Management Unit of Uzbek Communal Services Agency
Contract Value: US\$ 501,246
Start Date: 2010 • **End Date:** 2014



Description:

The main objective of the project is to improve the quality of life and health conditions in the two oblasts (of about 340.000 inhabitants), through the improvement of basic potable water supplies:

- Assisting the central and local governments, and the utility agencies in the refurbishment and construction of the potable water supplies;
- Improving the institutional, technical and financial capability of local governments and Vodokanals in the facilities planning, implementation, and operation and maintenance;
- Promoting greater community participation in the management of urban infrastructure services.

Component 1. Strengthening Sector Strategy and Management - to promote the economic use of water resources and improve water supply and wastewater sector planning and management

Component 2. Water Supply Development in Surkhandarya oblast - to develop safe, affordable, and reliable piped water supply systems

Component 3. Sanitation and Hygiene - to develop improved sanitation practices and positive hygiene behaviour amongst school children to prevent disease and ensure maximum health benefits from the improved infrastructure services. Safe drinking water will be provided to all schools in the project area as part of the water supply component.

Component 4. Capacity Development for Service Delivery - to improve management capacity and efficiency, foster professionalism amongst the vodokanals, and develop a better customer-orientation to improve services in the long term.

Component 5. Project Implementation Assistance – to provide project management support to the project management unit (PMU) and project implementation unit (PIU) to implement the Project.

Services provided:

- Project management and monitoring
- Bid-document preparation and process management
- Bid evaluations
- Financial management and accounting
- Social, environment, and resettlement management and monitoring
- Capacity Building
- Institutional Strengthening

Technical Data:

NP	Name of system and subprojects	Water Supply Source	Length of pipelines km	Quantity of wells units	Quantity of pump station units
6	Rural areas of Djablungan rayon ("Sarkhat" water pipeline)	Local borehole water intake	68.5	4	1
6	Sharkh rayon	Local borehole water intake	25.0	4	1
7	Kumkangin rayon and rural areas	Local borehole water intake	30.5	4	1
8	Sarasin rayon and rural areas	Local borehole water intake	52.5	4	1
9	City of	Local borehole water intake (Ayos.)	65.0	29	4



Regional Master Plan for Drinking Water Supply and Sanitation

Location: Haiti

Client: National Directorate of Drinking Water and Sanitation - DINEPA

Contract Value: € 2,475,170

Start Date: 2012 • **End Date:** 2013



Description:

The objective of the works is to give every OREPAs (Regional Office Drinking Water and Sanitation) a development scheme in a short, medium and long term. Thus, this means successively:

- Collection and formatting of information on the three levels required for the establishment of these schemes:
 - Analysis and description of existing water resources
 - Characterizations and state of existing water resources
 - Socio-economic surveys related to water and sanitation
- Quantification and prioritization of plan investments in water infrastructures and sanitation in a short, medium and long term
- National inventory of the resource and water infrastructures
- Feasibility studies for nine towns considering as priority

Services provided:

- Collection of existing data and analysis
- Socio-economic surveys
- National inventory
- Formatting of data and analysis
- Diagnostics of the current situation
- Categorization and implementation of master plans and final reports of master plans
- Feasibility studies



Technical Data:

Master plans for 63 towns of the departments of the West, South, Southeast, Grand Anse and Nippes and feasibility studies for the cities of Jérémie, Miragoâne, Aquin, Arcahaie, Cabaret, Thomasseau, Kenschoff, Port Salut and Anse of Hainault.



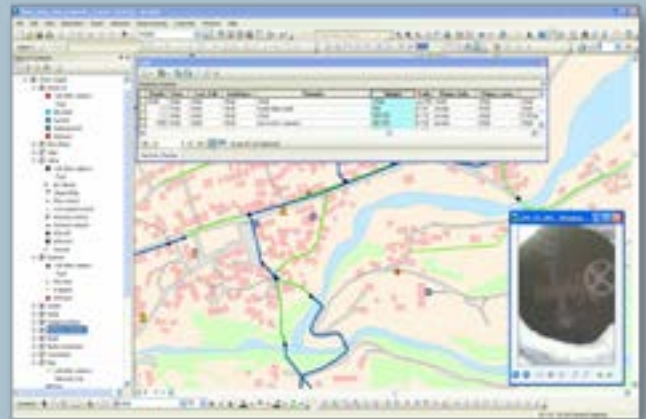
Geospatial Urban Water Supply and Sanitation Utility Management System

Location: Georgia (Kutaisi, Zugdidi, Poti, Mameuli, Anaklia and Mestia)

Client: United Water Supply Company of Georgia

Contract Value: € 727,900

Start Date: 2010 • **End Date:** 2011



Description:

The objective of the project was to design, develop and implement a Web Based Geographic Information System in the towns of Kutaisi, Zugdidi, Poti, Mameuli, Anaklia and Mestia. The aim is to further plan and develop Water Supply and Sanitation infrastructures by collecting Water and Sanitation Asset data. The results of the projects were:

- Creation of geo-referenced cadastral maps for project cities with Water and Sanitation Supply thematic layers
- Design, development and implementation of a database for water supply and sanitation (WSS) assets including the condition and layout superimposed as thematic layer
- Creation of a database of consumers
- Development a web – based WSS utility management system on a Geographic Information System (GIS) domain at the service of the utility's headquarters for decision making.

Services provided:

- Development of GIS Software
- Creation of base maps and geo-databases for Water Supply and Sanitation networks
- Creation of Consumer database linked to the system
- Development of a web based Water Supply and Sanitation Utility Management System
- Training and capacity building to the Water Agency and technical staff involved.
- Liaison with the client
- Preparation of progress and final report
- Project management and backstopping



Technical Data:

- Creation of base maps for integration of the spatial layers including:
 - Existing cadastre maps will be updated with new satellite images and will serve as a basis for creating base maps (field survey will be conducted in order to collect all required information)
 - Water Supply and Sewerage asset inventory
- Creation of a geo-database for Water Supply and Sewerage assets with spatial and alphanumeric information
- Development of consumer database which was then linked to the GIS
- Development of a web-based Water Supply and Sanitation Utility Management System with different user profiles set up:
 - Water Agency: A centralized GIS server will be installed in the agency
 - Users in other cities: users will have access to data from the own municipality



Design and Supervision Consultancy for Improvement of Water Supply and Sewerage System under Component 3 in Osh and Jalal-Abad

Location: Kyrgyzstan

Client: State Directorate for Reconstruction and Development of Osh and Jalal-Abad (SDRD)

Contract Value: US\$ 2,106,506.50

Start Date: 2012 • **End Date:** 2014



Description:

The main goal of the project is to improve water supply and sanitation in the cities of Osh and Jalal-Abad and in Bazar-Korgon. The objectives of the project are:

- Rehabilitation of water supply intake works
- Rehabilitation or construction of transmission lines from intake to the treatment plants and reservoir
- Rehabilitation or construction of sewerage treatment plants and main sewer lines

Services provided:

- Feasibility studies
- Collection of baseline data, conducting site investigations and analysis of collected data
- Surveys including topographical, hydrological, hydro-geological and geo-technical
- Design options and preparation of cost options for rehabilitation or new build;
- Preliminary designs for approval by Owner and the Client
- Resettlement Action Plan (RAP) and Environmental Management Plan (EMP)
- Detailed designs, cost estimates, development contract packages, work schedules and required safeguards documentation, for approval by the Owner and the Client
- Supervision of the construction of the civil, mechanical and electrical works related to the improvement and protection of water sources, transmission lines, water treatment plants, WWTPs, and main sewer lines

Technical Data:

- Rehabilitation of new intake to include site security, flood protection and rehabilitation and/or completion of works for the intake structure; Construction of a new transmission line to the current WTP of approximate length 7.2 Km to connect to the new transmission line to the reservoir; Assessment of the condition of the current WTP for rehabilitation and compare with a new build WTP to be constructed, as a comparison for approval of most cost effective solution; Rehabilitation of the current and unused pumping station to connect between the new Transmission line and the existing transmission line
- Rehabilitation of the 6,000 cubic metre reservoir to include installation of a bacteriological treatment facility to meet potable water drinking standards. Analysis of the geo-technical situation of the reservoir site to investigate the risk of potential landslide; Drilling Deep Tube Wells to provide a system of water-supply including reservoirs, water treatment facilities, electro-mechanical systems and sanitary protection zone
- Construction of a water transmission pipeline, approximately 7.5 Km in length, and connection to the existing water distribution network; Construction of 4.5 km long sewer line to the city network; Drilling of two new tube wells, construction of an additional 3,000 cubic metre water reservoir; Rehabilitation of the 4.0 km long transmission pipe line from the existing water reservoir to the main network



Construction Supervision for wastewater, drainage and solid waste management project - Phase II Dong Hoi City Sub-Project - Components 1, 2 and 3

Location: Vietnam, Dong Hoi City

Client: Dong Hoi City Environmental Sanitation Project Management Unit

Contract Value: US\$ 2,023,050.70

Start Date: 2011 • **End Date:** 2014



Description:

The Phase II project is a wastewater, drainage and solid waste management project serving the population of Dong Hoi. The project comprises construction of sewers, interceptors, pump stations, river dredging works, a wastewater treatment plant and upgrade of an existing solid waste landfill.

Services provided:

- Construction supervision of day-to-day operations of the contractors (quality, compliance)
- Inspection of works: compliance with specification, review of detailed design and working drawings; contractors' work programs, equipment quality, staff qualifications, safety permits,; monitor the contractors' environmental mitigation measures
- Maintain full records of quantities of work carried out, measurements made, calculations for payment of invoices and progress payments; maintain electronic system for tracking work quantities; monitor variations and prepare reports on cost overruns and actions needed
- Close coordination with the local authorities in the works supervision and advice on dealing with design changes, additional quantities of work, claims, extension of time, etc.
- Supervise commissioning of the sewer network, pump stations, wastewater treatment plant and associated facilities; prepare inspections report, handing over certificate for works; monitor during the construction and defects liability period
- Assistance in billing and preparation of payment certificates
- Liaise with World Bank, support and advise client during the construction and liability period

Technical Data:

- Population equivalent: 112,000
- Interceptor construction along the banks of the Nhat Le River with 8400 m of HDPE sewer pipe, 5200 m of tertiary sewerage pipe, 5 Pump Stations, 242,000 m³ of river dredging, 17,000 sq m of masonry river embankment protection construction and upgrade of an existing solid waste landfill
- Proposed Wastewater Treatment Plant is a 10,000 m³/d aerated lagoon system with facultative and maturation ponds for polishing, wetland for nutrient removal and reed bed sludge dewatering. Pretreatment by screening and grit removal; wastewater effluent will be conducted to facultative lagoons and end in a maturation pond and in a surface flow wetland for nutrient removal. After operation of the plant for several years, sludge will be removed from the lagoon bottoms and wasted during dry seasons. The sludge will be pumped to a reed bed-based dewatering system.



Capljina Water Supply System – Financial and Operational Performance Improvement Programme and Public Service Agreement

Location: Bosnia and Herzegovina

Client: PUC “Komunalno” Capljina

Contract Value: € 206,000

Start Date: 2012 • **End Date:** 2013



Description:

The overall objectives of Eptisa's assignment are:

- Assist the Capljina Municipality and the PUC “Komunalno” with preparation of a detailed Financial and Operational Performance Improvement Programme - FOPIP;
- Prepare a Public Service Agreement (“PSA”) between the Capljina Municipality and the PUC that would specify the rights and responsibilities of its parties
- Assistance with Restructuring of the PUC which shall undertake the following, inter alia:
- Make recommendations on the most appropriate form of legal incorporation for the PUC in the short, medium and long term;
- Advise on and assist with drafting any legal acts or statutes necessary for the restructuring of the PUC;
- Assist the PUC in developing a rolling 5-year Corporate Development Plan (“CDP”) that includes financial projections, a capital budget and required tariff changes.

Services provided:

- Eptisa identified priority areas for potential improvement in the quality of water related services, and the financial and operational performance of the PUC. The focus of improved performance should be: (i) quality of services; (ii) unaccounted for water production; and (iii) cost control and increasing revenue. Eptisa will define detailed performance indicators for the PUC.
- In developing the FOPIP, Eptisa will review the current state of affairs in the PUC and propose the measures for the improvement of financial and functional aspects in the following areas:
- Organisational structure and efficiency;
- Management information and accounting systems;
- Rationalization of staff resources;
- Revenue collection and administration;
- Tariff Policy;
- Financial management;
- Unaccounted for water;
- Consumer relations.



Capljina Water Supply Project - Contract Supervision for Works

Location: Bosnia and Herzegovina

Client: Municipality of Capljina

Value: € 270,350

Start Date: 2014 • **End Date:** 2016



Description:

The overall objective of this assignment is to ensure that the Project is successfully implemented within the planned time schedule, within the budget and to an acceptable quality. EPTISA will endeavour to assist to achieve these objectives by rendering support to the Public Utility Company (PUC), Municipality, Contractors and Sub-contractors in the implementation of the Project as the Contract Supervisor. Furthermore, EPTISA will contribute to the smooth, economic and lawful manner of the Project implementation. It will perform the role of “the Engineer” in accordance with FIDIC Conditions of Contract. In addition, this Project will support an improvement of actual living conditions and realisation of environment protection measures, in accordance with local laws and European Legislation.

Services provided:

- Supervision of the contractors to carry out works in an effective and timely manner in accordance with the Contract terms and conditions;
- Provision of timely recommendations and reporting to the Employer on the contract administration process;
- Quantity surveying, Time schedule control, Issuing of orders and Issuing of Payment Certificates;
- Supervision of Works, including final inspection and issuing of Performance Certificate;
- Reporting.



Support for the Ministry of Environment and Spatial Planning (MESP) in Water Management and Monitoring of Water Resources

Location: Kosovo*

Client: EU Office in Kosovo

Value: € 1,190,000

Start Date: 2012 • **End Date:** 2015



Description:

The overall objective is to improve the state of the environment in accordance with the EU environmental acquis, and the EU best practice for providing better health and living conditions to the citizens of Kosovo. The specific objective is to strengthen the capacity of the Government of Kosovo and specifically, the Ministry of Environment and Spatial Planning (MESP), in prioritising, planning, and implementing the improvements to the water resources protection and the water management practises.

The purposes of this contract are to:

- Support the MESP and its Water Department, in development of a unified Kosovo Water Strategy, a Kosovo-wide Water Action and Investment Plan to guide planning, identification, prioritisation, and implementation of investments in the water resources sector;
- Broaden and deepen the approximation of Kosovo's practices and standards in the water resources sector with those of the EU Water Framework Directive;
- Consolidate the technical, institutional, and administrative capacity of the Water Department of the MESP and its line agencies to meet the monitoring and reporting standards of the WFD by improving the network for surface and groundwater monitoring and sampling;
- Effectively integrate the Water Action and Investment Plan into the evolving expenditure frameworks and management structure presiding over the sector.

Services provided:

- Support the MESP in developing the Kosovo Water Strategy 2013–2033;
- Development of the Water Action & Investment Plan;
- Further support to water resources management information system;
- Training and capacity building activities;
- Public awareness activities related to protection of water resources;
- Promoting private sector participation in water and wastewater services;
- Project management and backstopping.

* EPTISA takes a neutral position vis a vis the political issues within the region of the Western Balkans. The designation is without prejudice to the positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.



Development of National Water Tariff Study

Location: FYR of Macedonia

Client: Central Financing and Contracting Department (CFCD)

Contract Value: € 785,000

Start Date: 2013 • **End Date:** 2014



Description:

The overall objective of the project is to establish an economic instrument for implementation of the first steps in application of the “polluter pays” principle in the water sector related to further development of financially sustainable water investment projects.

The purpose of the project is to prepare a National Water Tariff Study for development of an economic instrument for balanced water price system and management of financially sustainable water investment projects.

Services provided:

- Preparation and implementation of a stakeholders’ involvement plan;
- Analysis of the existing situation at national and local level, covering legislative, institutional framework, existing tariff methodology and its application, performance of water companies, analysis of social, economic and financial conditions, etc.;
- Development of an economic instrument for effective and affordable cost recovery in the water sector at national and local level;
- Formulation of a water tariff methodology and a structure of the water tariff, including pilot examination of the proposed methodology and tariff on municipal level;
- Development of an action plan for implementation of the economic instrument;
- Project management and backstopping.



Municipal Infrastructure Support Programme Phase 1, 2 and 3

Location: Serbia

Client: European Agency for Reconstruction/
EU Delegation to the Republic of Serbia

Value: € 23,039,880

Start Date: 2008 • **End Date:** 2016



Description:

The overall objective of the Municipal Infrastructure Support Programme (MISP) for the Republic of Serbia, initiated by the European Commission in early 2008, is on the one hand to provide technical support to all Serbian municipalities in the planning and implementation of municipal infrastructure projects, mainly related to water supply, wastewater treatment, and the collection and disposal of municipal solid waste, and, on the other, to provide legal, managerial and technical support to the Public Utility Companies in charge for the delivery of municipal infrastructure services.

All together, the three phases of MISP represent a technical assistance of more than €23 million, reflecting the European Union's solid commitment to assist Serbia in the improvement of its municipal infrastructure services, in the enhancement of the human capacities of its local governments, and in the improvement of its people's living standards.

Services provided:

- Assistance to the authorities in preparation and prioritisation of municipal and socio-economic infrastructures;
- Preparation of procurement strategies, assisting in tender procedures, providing clarifications, taking part in tender evaluations, contract awards, reporting based on EU standards;
- Preparation of feasibility studies for environmental infrastructure (WWTPs, landfills and water supply networks);
- Works Supervision in compliance with FIDIC and the Serbian Construction Law of two regional landfills;
- Monitoring of works for sludge line, a Wastewater Treatment Plant and a Water Treatment Plant;
- Assign professional team of supervisors;
- Revision of the training needs analysis prepared by previous MISP projects and preparation of appropriate training activities;
- Provide technical, contractual and financial administration of the three Works Contracts in accordance with PRAG Conditions of Contract and applicable Serbian Laws and Regulations.



Water and Sanitation Project in Republika Srpska – Supervision Services

Location: Bosnia & Herzegovina

Client: PMU at the Ministry of Finance of the Republika Srpska

Contract Value: € 2,017,300

Start Date: 2014 • **End Date:** 2016



Description:

The overall objective of the Water and Sanitation Project in Republika Srpska is aimed at supporting the improvement of the existing living conditions of population, providing adequate hygienic conditions related to water supply and wastewater removal, and implementing environmental protection measures in accordance with the imminent obligations arising from the accession to the EU and harmonization with the EU legislation, in this specific case with the Framework Water Directive, Drinking Water Directive and Urban Wastewater Directive.

Overall Project and Supervision services will include a number of municipalities throughout Republika Srpska. The Programme will be headquartered in Banja Luka during the entire duration of the Project. EPTISA will supervise the design, construction, testing and commissioning in a variety of disciplines ranging from technical to financial and environmental, and where appropriate, recommending changes where deficiencies are detected.

Services provided:

- Preparation of Overall Work Programme;
- Support to PMU in the establishment of project database;
- Cooperation with local authorities and pertinent water management bodies;
- Act as an “Engineer” according to FIDIC Conditions of Contract;
- Approval of the Contractor’s design for the design and build contracts;
- Approval of the materials, equipment and workmanship;
- Observing the issued building permits, relevant standards and legislative requirements.



Together for a better future



eptisa

MADRID

Emilio Muñoz 35-37
28037 Madrid, Spain

CONTACT

8, Dubljanska St.
11000 Belgrade (Republic of Serbia)
Tel: +381 11 2400 222 / 211 / 233
Fax: +381 11 2400 111 (or +34 91 182 02 22)
e-mail: eptisasee@eptisa.com
www.eptisasee.com

Follow us on:

