

Standard Summary Project Fiche – IPA centralised programmes
(Regional / Horizontal programmes ; centralised National programmes)

1. Basic information

- 1.1 CRIS Number: 2007/19322**
**1.2 Title: Sewerage & Wastewater Strategic Master Plan
for the West Morava River Basin**
1.3 ELARG Statistical code: 03.27
1.4 Location: Serbia

Implementing arrangements:

- 1.5 Contracting Authority (EC): EC Delegation**
1.6 Implementing Agency: N/A
**1.7 Beneficiary (including details of project manager): Water Directorate of the
Ministry of Agriculture, Forestry and Water Management**

Financing:

- 1.8 Overall cost: 3 million**
1.9 EU contribution: 3 million
1.10 Final date for contracting: 3 years after the signature of the Financing Agreement
1.11 Final date for execution of contracts: 5 years after the signature of the Financing Agreement
1.12 Final date for disbursements: 6 years after the signature of the Financing Agreement

2. Overall Objective and Project Purpose

2.1 Overall Objective:

Improve environmental water quality in the West Morava River Basin, which would promote the health of the local population, and provide better conditions for the development of the regional economy.

2.2 Project purpose:

1. Develop a Strategic Wastewater Master Strategy and Implementation Plan based on communal hydro techniques that deals with evacuation and treatment of municipal and industry waste waters on the territory of West Morava
2. Facilitate investment in the Waste water sector and sustainable infrastructural development

2.3 Link with AP/NPAA / EP/ SAA

The **European Partnership** with Serbia and Montenegro including Kosovo (Council Decision 2006/56/EC) notes medium-term priorities in the Environment and Agricultural sector include implementation of the national environment protection strategy, and the water strategy, strengthening administrative capacity of environmental institutions and bodies, implementation of the multi annual plan for financing investment, improvement of the waste water management and reducing of the agricultural pollution.

Under Article 97 (Agriculture and Agro-Industrial Sector) of the **SAA** co-operation is aimed at modernising and restructuring the agriculture and agro-industrial sector, in particular to

reach community sanitary requirements, to improve water management and rural development as well as to develop the forestry sector in Serbia and at supporting the gradual approximation of Serbian legislation and practices to the Community rules and standards.

2.4 Link with MIPD

MIPD supports the development of the full potential and the competitiveness of **Serbia's inland waterway** transport sector for socio-economic development, in particular in the Danube basin. Special attention will be paid to **floods prevention and natural and human actions induced catastrophes**. In addition, it is necessary to **improve infrastructure** in order to promote business related activities and public services and to facilitate economic and cultural links within Europe. The areas of energy, transport, tourism, environment, health, information and communication technology, education, etc. have to be developed as cornerstones of future economic growth. Specific action instruments for flood prevention and management will be incorporated notably with regard to the regional dimension of the problem.

According to MIPD, it is necessary to support to the approximation and implementation of Environmental legislation and related strategies; support to environmental authorities at all levels in terms of project preparation, management, planning, permitting, inspecting, and monitoring; support to local infrastructure investments including environmental information systems, solid waste, regional land fields, water and sewage.

2.5 Link with National Development Plan (where applicable)

N/A

2.6 Link with national/ sectoral investment plans (where applicable)

The main objective of the Water sector in Serbia, in line with the Serbian Government's European Integration Strategy, and in line with the membership in the ICPDR is harmonization with the European Water Framework Directive holding ahead of us the final goal achievement of the good water status.

The Water Master Plan of Serbia the strategic document of the water sector adopted by the Government of Serbia in 2002 is aiming to implement the polluter pays principal and user pays principal. A part of it is contained in the existing Law on Water and more in the Draft Law on Water prepared by the Directorate for Water. The implementation of positive Law on Water has showed difficulty due to the fact of low technical capabilities of the Water Use and Protection Sector and the Permitting Sector.

As stated in the Serbian Poverty Reduction Strategy Paper (PRSP) "The *water sector* strategies of the Governments of the Republic of Serbia appropriately take into account the needs of the poor and address the main challenges the sector is facing. During the implementation of the PRSPs the programs need to become more specific in addressing these challenges and it is expected that the monitoring of the service delivery to the poor, especially in rural and semi-urban areas, will help to further define the programs for the water supply and sanitation sector. Such efforts will contribute towards the attainment of environmental Millennium Development Goals".

3. Description of project

3.1 Background and justification:

The territory of Serbia is composed of five sub-river basins of the Danube River basin: the Sava; the Morava; the Tisa; Banat-Eastern Serbia; and the Pannonian Central Danube. Each of these sub-river basins crosses international boundaries (although the Morava sub-river basin only has a limited area within Bulgaria). In consequence, it is estimated that over 90% are transit waters and that only around 8% of all available surface water originates within the territory of Serbia

Groundwater resources provide around 90% of water supply for households and industry and about 70% of the drinking water. However, it is likely that extraction of groundwater exceeds the natural capacity of replenishment of certain aquifers, leading to reduced levels of groundwater, especially in Vojvodina.

At an estimated 170 litres per capita per day, water consumption in Serbia is high in relation to other European countries and at an estimated 250 litres per capita per day is especially high in Belgrade. In large part this is due to inadequate water and sewage charges. In addition, losses are also estimated to be around 30% nationally and one third of municipalities report losses of between 30% and 50%.

A study of the waste water situation in Serbia funded by the European Union through a European Agency for Reconstruction managed project indicates that only around half of the Serbian population is connected to a sewage system. At around 10%, connection rates in rural areas are particularly low. In addition, the condition of these sewerage systems is unknown. Around three-quarters of municipalities reported the need for new wastewater treatment plants. Large-scale industry and mining facilities located outside of urban developments discharge an estimated 730 million cubic meters of wastewater directly into waterways, often with limited or no treatment.

There has been a deterioration of Serbia's environmental infrastructure, with investment levels in water and wastewater, falling below capital maintenance and/or replacement requirements. The budget priorities at both state and local levels have tended towards short term –current- expenditures rather than investments. Due to financial constraints, investment levels have failed to maintain an adequate level of service, resulting in water related environmental problems. Provision of sewerage systems and Wastewater Treatment Plants is inadequate in most areas of the country.

Specific data on wastewater generation in Serbia is unavailable, but the high levels of water consumption inevitably lead to higher levels of wastewater. A study of the waste water situation in Serbia funded by the European Union through a European Agency for Reconstruction managed project found that:

- Approximately 48% of the population is connected to a sewage system and only 16% is connected to a Wastewater Treatment Plant
- Approximately 75% of the total urban population is connected to a public sewage network, while the figure is only 9% for the rural population
- The total sewer connection rate is reported to be between 50% and 75% in 16 municipalities.

- Combined sewer systems are present in 37% of the investigate municipalities
- Municipalities with population less than 25,000 inhabitants are predominately served by combined sewer systems.
- Wastewater treatment plants existed in less than 20 of the surveyed municipalities although a further 7 Wastewater Treatment Plants were under construction and 11 more were planned to be constructed (of which only 2 with biological treatment).

Water pollution is a problem faced in several parts of the country, such as the Morava River Basin, where due to the low flow rates of the rivers, the discharged loads have significant impact on the waters quality. When industry was active, the river was characterised as Class III, IV or even unclassified in many cases (i.e. worst than class IV), and the percentage of samples with values, higher than the set limits (Maximum Allowable Concentrations) was between 30% and 60%. The situation has been improved the last few years due to the decline of the industrial production, but still the Southern Morava is characterised as a Heavily Modified Water Body (HMWB) under the Water Framework Directive (according to the recent ICPDR Roof Report).

The Sewerage & Wastewater Strategic Master Plan for the West Morava River Basin will undertake an analysis for the identification of the priority needs with respect to wastewater collection, treatment and disposal, to review the regulatory framework for consistency with the EU norms and to propose a sustainable institutional development plan and a realistic infrastructure investment strategy. Fulfilment of this objective will enhance the capacity of the Government to attract IFI investment in sewerage and wastewater management at a Regional and finally Republic level, when the Master Plans for the whole Republic will have been completed.

3.2 Assessment of project impact, catalytic effect, sustainability and cross border impact (where applicable)

It is generally accepted that the lack of environmental infrastructure, poor environmental management practise and weak enforcement of environmental laws are a hindrance to environmentally sound socio economic development. The project Sewerage & Wastewater Strategic Master Plan for the West Morava River Basin results will improve the status of environmental protection, health and economy. The West Morava River indirectly flows in to the Danube which is transport artery within Trans-European-Network (TEN-T). Sustainable institutional development plan and a realistic infrastructure investment strategy will be developed through project.

3.3 Results and measurable indicators:

Result 1:

Communal and Industrial polluters identified.

Indicator 1:

Beneficiary database of communal and industrial polluters submitted and accepted.

Result 2:

Masterplan for waste water and canalisation prepared, priorities for implementation determind.

Indicator 2:

Completed Master Plan submitted and accepted.

Prioritized measures that are to be implemented, defined and accepted by the Beneficiary.

Result 3:

Links with ICPDR activities aiming for implementation of the WFD and implementation of other EU water related directives, such as Nitrate Directive and Urban Waste Water Treatment Directive in particular.

Indicator 3:

Report to beneficiary submitted and accepted. Report to ICPDR submitted

3.4 Activities:

Activity 1

Measurement of quality and quantity of pollution in specific localities and determination of the existing balance of pollution

Collection and analysis of all the relevant quality and quantity data as well as technical documentation (plans, studies, designs etc.) that is involved in the land use in inhabited areas and evacuation, treatment and disposition of waste waters on the mentioned area.

Defining all the existing canalization schemes in the catchment's area including all the settlements and industrial facilities. Preparation of the matrix for implementation of GIS in the waste water and canalization sector in the West Morava River. A detailed analysis of the existing waste water canalization schemes is needed. The detailed analysis doesn't need to involve Rain canalizations unless in the case of general schemes, only general information about schemes for collecting rain water are needed

Defining the urban areas of all the settlements and the type of canalization schemes (centralized semi centralized individual etc.) for all agglomerations in the catchment area. Defining plans for upgrading and reconstruction of the existing schemes as well as construction of new schemes in settlements where no organized schemes exist.

Concept proposal for waste water treatment plants and individual systems for waste water treatment with parallel analysis for more options including annual cost analysis

Proposal for introduction of a tariff pricing system for waste water as a basis for sustainability assessment of the investments, and future maintenance of the existing and new schemes

Review of existing legislation and recommendations on harmonization with the EU legislations

Preparation of a comprehensive Sewerage and Wastewater Master Plan for the project area, taking into consideration existing facilities and infrastructure, plans, institutional structures, etc. which will cover a planning horizon of 25 years. The Master Plan shall propose projects (with prioritisation), to improve and rehabilitate wastewater collection, treatment and disposal facilities and shall include cost estimates for budgeting purposes.

Development of an implementation plan over a 25 year time horizon and with cost estimates through the medium term (5 years) as well

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| These activities will be carried out through a service contract |
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3.5 Conditionality and sequencing:

- The Water Directorate of the Ministry of Agriculture Forestry and Water Management must facilitate and coordinate the inputs of all actors/stakeholder including municipalities and wastewater treatment bodies in the development of the strategy
- The Water Directorate of the Ministry of Agriculture, Forestry and Water Management must undertake a credible public consultation process
- Water Directorate of the Ministry of Agriculture Forestry and Water Management must commit enough resources and staff necessary for successful implementation of the project
- There needs to be continued coordination with other environment related projects in the area (see section 3.6 below)

3.6 Linked activities

The European Union has been and remains the main donor in the field of Water Management; other projects are supported by the World Bank, Sweden, and Norway. A large number of projects covering several countries have been and or are being undertaken for specific sub-river basins of the Danube River basin, especially for the Sava River basin. These include the Danube Pollution Reduction project and the Danube Regional Project

Ongoing activities

- EC Regional CARDS Project "Pilot River Basin Plan for the Sava River -Croatia, Bosnia and Herzegovina, Serbia and Montenegro" Sava CARDS, started Oct 2004 - Sep 2007 (3 years) and funding by EC - Cards 2003 Regional Programme. The overall objective is to enhance water management cooperation among Sava countries using an integrated water management approach as outlined in the EC Water Framework Directive (WFD) and ICPDR issue papers.
- World Bank Irrigation and Drainage Rehabilitation Project. 25M US\$ IDA credit A four component project dealing with Flood protection and drainage works under component one, Minor irrigation development under component two Capacity and institutional building under component three and Implementation under component four. The Project is at the moment under a proposal for additional funding for flood protection purposes
- An EU funded Twinning project in the Directorate for Water started in 2006 – "Capacity Building of the Directorate for Water, managed by the EAR
- The preparation and development of a Water Management Information System (EAR funded project). The assistance will focus in making the maximum use of the current data, by organizing them under a common database. The planned technical assistance is directly connected to the strengthening of administrative structures and procedures in the framework of the Twinning project. Therefore the Twinning project and the EAR will establish an efficient flow of communication relating to the progress of the technical assistance project e.g. during the Steering Committee sessions.
- The preparation of a sewerage and wastewater strategic Master Plan for the Southern Morava region (EAR funded project). Within the scope of this project tender documents for the construction of a 'model' Waste Water Treatment Plan with capacity 5000 PE will be prepared. The objective is to prioritize the needs of the region with respect to infrastructure needs for water collection and treatment.

- The preparation of Action Plans for the remediation of three heavily polluted areas - hot spots (EAR funded project) identified in the course of this activity that are or have the potential to cause significant pollution to the aquatic environment.

3.7 Lessons learned

During the past few years, there has been a deterioration of Serbia's environmental infrastructure, with investment levels in water and wastewater, falling below capital maintenance and/or replacement requirements. The budget priorities at both, republican and local levels have tended towards short term – current- expenditures rather than *investments*. Due to *financial constraints*, investment levels have failed to maintain an adequate level of service, resulting in water related environmental problems.

Provision of sewerage systems and Wastewater Treatment Plants (WWTPs) is inadequate in most areas of the country. According to the survey conducted in 2004 by the Global Wastewater Study:

- Approximately 48% of the population are connected to a sewage system and only 16% are connected to a WWTP
- Approximately 75% of the total urban population is connected to a public sewage network, while the figure is only 9% for the rural population
- The total sewer connection rate is reported to be between 50% and 75% in 16 municipalities.
- Combined sewer systems are present in 37% of the investigate municipalities
- Municipalities with population less than 25,000 inhabitants are predominately served by combined sewer systems.
- Wastewater treatment plants exist in 20 of the surveyed municipalities. In addition 7 WWTPs were under construction and 11 more were planned to be constructed.

4. Indicative Budget (amounts in million €)

| Activities | TOTAL COST € million | SOURCES OF FUNDING | | | | | | | | | | |
|--------------|-------------------------|--------------------|-----|----|-----|------------------------------|-----|---------|----------|---------|-------|-----|
| | | EU CONTRIBUTION | | | | NATIONAL PUBLIC CONTRIBUTION | | | | PRIVATE | | |
| | | Total | % * | IB | INV | Total | % * | Central | Regional | IFIs | Total | % * |
| Activity 1 | 3 | 3 | 100 | 3 | | | | | | | | |
| contract 1.1 | 3 | 3 | 100 | 3 | | | | | | | | |
| contract 1.2 | | | | | | | | | | | | |
| Activity 2 | | | | | | | | | | | | |
| contract 2.1 | | | | | | | | | | | | |
| contract 2.2 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| TOTAL | € million | | | | | | | | | | | |

* expressed in % of the Total Cost

5. Indicative Implementation Schedule (periods broken down per quarter)

| Contracts | Start of Tendering | Signature of contract | Project Completion |
|--------------|--------------------|-----------------------|--------------------|
| Contract 1.1 | T+Q1 | T+Q2 | T+Q8 |

All projects should in principle be ready for tendering in the 1ST Quarter following the signature of the FA.

6. Cross cutting issues (where applicable)

Development Policy Joint Statement by the Council and the European Commission of 10 November 2000 establishes that a number of Cross-cutting Issues shall be mainstreamed into EC development co-operation and assistance.

Cross-cutting issues will be addressed in the project so as to comply with the best EU standards and practice in that area and in a way which demonstrates how they will be dealt with within the project's framework, its activities and outputs.

Cross-cutting issues will be addressed in a proactive manner, and will present a specific component of projects (at all levels of projects' development, starting from the project identification stage). Synergies between the projects and the objectives of will be identified and developed. Also, the projects' objectives and activities need to be screened in order to ensure they won't impact negatively on gender equality, minorities' inclusion and environment.

Finally, the beneficiary will make sure its objectives, policies and interventions have a positive impact on and are in line with the main principles of gender equality, minorities' inclusion and environment.

6.1 Equal Opportunity

Throughout the duration of the project, steps will be taken to guarantee equal opportunity of access to project activities and benefits.

6.2 Environment

This project will contribute to fulfilment of EU environmental standards in Serbia, which will result in rising of quality of life of citizens and rising of quality of environment. Consistent realization of the EU's legislation and standards in the field of environment protection will result in rising awareness of the citizens of Serbia regarding significance of the environmental protection and sustainable development.

Implementation of the Project will meet the needs of future generations while living within the carrying capacity of the environment. Implementation of the project will provide that the natural resources and man-made resources of the Republic of Serbia are used economically and reasonably with the objective to preserve and enhance the quality of the environment for the present and future generations.

6.3 Minorities

N/A

ANNEX I: Logical framework matrix in standard format

| | | |
|--|---|---|
| LOGFRAME PLANNING MATRIX FOR Project Fiche | Programme name and number | |
| | Contracting period expires 5 years after the signature of the Financing Agreement | Disbursement period: expires 6 years after the signature of the Financing Agreement |
| | Total budget : 3.000.000.00EUR | IPA budget: 3.000.000.00EUR |

| Overall objective | Objectively verifiable indicators | Sources of Verification | |
|--|---|--|--|
| Achievement the environmental objectives (good water status) in the West Morava River Basin, which would help in protecting the health of the local population, and provide better conditions for the development of economy in the region | Fulfilling parts of the WFD | ICPDR reports Progress report | |
| Project purpose | Objectively verifiable indicators | Sources of Verification | Assumptions |
| 1. Harmonization of Serbian legislative with the EU legislative 2. Development of the segment of communal hydro techniques that deals with evacuation and treatment of municipal and industry waist waters on the territory of West Morava 3. Attracting investment in the Waste water sector and sustainable infrastructural development | Existence of a sewerage and wastewater Master plan for Zapadna Morava | Reports produced by Directorate for water Regular monitoring and assessment reports | |
| Results | Objectively verifiable indicators | Sources of Verification | Assumptions |
| Result 1: Comunal and Industrial polluters identified. Result 2: Masterplan for waste water and canalisation prepared, priorities for implementation determind. Result 3: Achived conection with ICPDR activities aiming the implementation of the WFD and implementation of other EU water releted directives, such as Nitrate Directive and Urban Waste Water Treatment Directive in particular. | Beneficiary database of communal and industrial polluters submitted and accepted. Completed Master Plan submitted and accepted. Prioritized measures that are to be implemented, defined and accepted by the Beneficiary. Report to beneficiary submitted and accepted. Report to ICPDR submitted. | Assessment by Serbia desk in the EC and EC Del at end of each programming cycle. | Strong capacities of Water Directorate Coordination with the Ministry for Environment |
| Activities | Means | Costs | Assumptions |
| Activity 1 Measurement of quality and quantity of pollution in specific localities and determination of the existing balance of pollution Activity 2 Collection and analysis of all the relevant quality and quantity data as well as technical documentation (planes, studies, designs etc.) that is involved in the land use in inhabited areas and evacuation , treatment and disposition of waste waters on the mentioned area. Collection and revue of the existing legislative in connection with the mentioned segment containing a suggestion on harmonization with the EU legislative | TA for Water Directorate | 3.000.000.00EUR | Strong capacities of Water Directorate Coordination with the Ministry for Environment |

ANNEX II: amounts (in M€) Contracted and disbursed by quarter for the project

| Contracted | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 |
|-------------------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|
| Contract 1.1 | | 3.0 | | | | | | | |
| Contract 1.2 | | | | | | | | | |
| Contract 1.3 | | | | | | | | | |
| Contract 1.4 | | | | | | | | | |
| | | | | | | | | | |
| Cumulated | | 3.0 | | | | | | | |
| Disbursed | | | | | | | | | |
| Contract 1.1 | | 1800,000 | 180,000 | 180,000 | 180,000 | 180,000 | 180,000 | 300,000 | |
| Contract 1.2 | | | | | | | | | |
| Contract 1.3 | | | | | | | | | |
| Contract 1.4 | | | | | | | | | |
| | | | | | | | | | |
| Cumulated | | 1,800,000 | 1,980,000 | 2,160,000 | 2,340,000 | 2,520,000 | 2,700,000 | 3,000,000 | |

ANNEX III

Description of Institutional Framework

The Ministry of Agriculture, Forestry and Water Management is in charge of implementation and monitoring of this project. The work, mandate and authorisations of the Ministry are regulated by the Law on Ministries (adopted on May 15, 2007 (Official Gazette of Republic of Serbia no. 48/07)) – i.e. Article 9.

The Ministry consists of the following main departments, which have many sub-units:

- Sector for Analytics and Agrarian Policy
- Sector for Rural and Agriculture Development
- Legal Affairs Sector
- Sector for Implementation
- Inspection Surveillance Sector
- Veterinary Directorate
- Forestry Directorate
- Phytosanitary Directorate
- Water Directorate
- Project Centre
- Internal Control and Monitoring Unit

ANNEX IV

Reference to laws, regulations and strategic documents:

Reference list of relevant laws and regulations

Key laws, regulations and strategic documents in the area of Agriculture and Water Management:

General:

- Constitution of the Republic of Serbia
- Law for the Implementation of the Constitution of the Republic of Serbia
- National Strategy for Serbia and Montenegro's Accession to the European Union
- Action Plan for the Implementation of the European Partnership

Agriculture and Water Management:

- Agriculture Strategy
- Poverty Reduction Strategy Paper
- Water Law
- Regulation on Categorization of Rivers
- Water Master Plan
- General Plan on protection from water caused damages 2003-2008

Reference to AP /NPAA / EP / SAA/CARDS

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Reference to MIPD

MIPD supports the development of the full potential and the competitiveness of **Serbia's inland waterway** transport sector for socio-economic development, in particular in the Danube basin. Special attention will be paid to **floods prevention and natural and human actions induced catastrophes**. In addition, it is necessary to **improve infrastructure** in order to promote business related activities and public services and to facilitate economic and cultural links within Europe. The areas of energy, transport, tourism, environment, health, information and communication technology, education, etc. have to be developed as cornerstones of future economic growth. Specific action instruments for flood prevention and management will be incorporated notably with regard to the regional dimension of the problem.

According to MIPD, it is necessary to support to the approximation and implementation of Environmental legislation and related strategies; support to environmental authorities at all levels in terms of project preparation, management, planning, permitting, inspecting, and monitoring; support to local infrastructure investments including environmental information systems, solid waste, regional land fields, water and sewage.

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ANNEX V

Details per EU funded contract (*) where applicable:

Measurement of quality and quantity of pollution in specific localities and determination of the existing balance of pollution

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Defining all the existing canalization schemes in the catchment’s area including all the settlements and industrial facilities. Preparation of the matrix for implementation of GIS in the waste water and canalization sector in the West Morava River. A detailed analysis of the existing waste water canalization schemes is needed. The detailed analysis doesn’t need to involve Rain canalizations unless in the case of general schemes, only general information about schemes for collecting rain water are needed

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Preparation of a comprehensive Sewerage and Wastewater Master Plan for the project area, taking into consideration existing facilities and infrastructure, plans, institutional structures, etc. which will cover a planning horizon of 25 years. The Master Plan shall propose projects (with prioritisation), to improve and rehabilitate wastewater collection, treatment and disposal facilities and shall include cost estimates for budgeting purposes.

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