GEF PIPELINE ENTRY
PROJECT CONCEPT NOTE

Bosnia – Water Quality Protection Project

Country:	Bosnia and Herzegovina
Project Title:	Water Quality Protection Project
GEF Implementing Agency:	World Bank
GEF Focal Area:	International Waters
GEF Operational Program:	OP8
GEF Grant Amount:	US$ 8.5 million: US$ 4.35 million (for the Neretva River basin) US$ 4.15 million (for the Bosnia River basin – under the Danube/Black Sea Investment Fund)
Co-Financing:	US$ 27.5 million: US$ 12 million (for the Neretva River basin) US$ 15.5 million (for the Bosnia River basin)
Executing Agency:	Vodovods/Ministry of Water Management, Forestry and Agriculture
Est. Implementation Start:	September 2004
Duration:	4 years

A. BACKGROUND

1. Bosnia-Herzegovina (BiH) is the second largest in area and population of the four former republics of Yugoslavia. The current population is estimated at 3.8 million. BiH declared its sovereignty in October 1991 after the referendum on independence from Yugoslavia in February 1992. A peace agreement signed in Dayton, Ohio by all the former Yugoslav republics in November 1995 ended the fighting.

2. Global significance of the BiH water resources. BiH is a mountainous country with sufficient water resources. However, its Adriatic coast line is only 20 km long. There are four major river systems—Bosnia, Vrbas, Drina and Neretva. The Neretva and Bosnia Rivers are the focus of the proposed project. The Neretva is the second largest in terms of flow and drainage area and the only one of the four that discharges to the Adriatic. The other three are tributaries of the Sava which forms the northern boundary of BiH with Croatia and is part of the Danube system. Catchment area of the Bosnia river covers the central part of Bosnia with the area of 10,457 km^2. Altitude of the Bosnia mouth into the Sava river is 79 m above sea level. The source of the Bosnia river is a strong karst spring located underneath the picturesque Igman mountain which is 500 m above sea level. Naturally occurring lakes are few in number and small. There are a number of man-made storage reservoirs which provide water for power, irrigation and water supply. Despite the abundant water resources, water shortages in urban areas are common because of insufficient investment in source development and distribution networks. The main source of water supply for domestic and industrial use is ground water. There are only six functioning wastewater treatment plants which treat about 10 percent of urban wastewater.

3. Global Significance of the Neretva and Bosnia Rivers and Mali Ston Bay. Neretva River, which originates in BiH and flows through Croatia for 20 km before entering the Bay of Mali Ston and the Adriatic, is of great economic importance to both countries. For BiH, it is a source of hydro power, drinking water and water for irrigation. For Croatia, the Bay of Mali Ston at its mouth is an important area for the production of oysters for local consumption and export. The Neretva Delta is a Mediterranean wetland of international importance as evidenced by its designation as a Ramsar Wetlands site. It is also a source of pollutants for the Adriatic and Mediterranean, although of minor significant compared to other hot spots. The Bosnia River originates in BiH and flows to Sava River into the Danube. The majority of the Bosnia from the Miljacka mouth into the Bosna into the Sava, and also of great economic importance to both countries.

4. The Neretva River is important to the economy of BiH and the regional environment. It is the largest river draining the Adriatic karst zone and is one of the most beautiful and picturesque rivers in south eastern Europe. Its estuary, the Neretva Delta, is one of the few remaining Mediterranean wetlands. The Neretva is 225 km long, out of which 203 km is on the territory of B-H and the last 22 km on the territory of the Croatia. The Neretva's source is the Jabuka Mountain spring at elevation 1,227 m. In its upper reaches, the Neretva has carved out impressive canyons. The Neretva leaves its last gorge 30 km from its mouth. The river delta wetland is important both locally and internationally. It comprises an area of 190 sq. km. out of which 70 sq. km. are in BiH and 120 sq. km. are in Croatia. The Delta is one of the Mediterranean wetlands with high ornithological importance and is on the Ramsar list of Wetlands of International Importance. The Government of B-H established the Hutovo Blato Park in 1954 on 30 sq. km. of Delta wetland in an attempt to protect at least a part of the area from development. In 1980, the UNEP included the Neretva Delta in a list of protected Mediterranean areas. Bird Life International has also identified the Delta as an important ornithological area. Despite these measures, about 35 percent of the Delta has been drained and converted to agricultural land. Water from the Neretva River and the Delta enters Mali Ston Bay, a brackish water body that is greatly influence by the volume of flow and quality of the discharge from the Neretva River and the Delta wetlands. The bay is famous for its oysters which are important to the economy of the region. It is considered a part of the Neretva ecosystem for purposes of the project.

5. Wastewater pollution of the Neretva River from municipal sources. Urban growth and industrial, agricultural and power development have had a negative impact on the ecology of the Neretva basin, in particular the Delta wetlands. Untreated municipal wastewater from communities along the Neretva (population of the Neretva catchment area is 350, 000 out of which 115,000 is in urban areas along the River) is responsible for about a third of the Neretva and its tributaries being classified as polluted. Industrial wastewater from metal processing industries in the Mostar area, harbor operations in the Delta and intensive farming along the river banks have also contributed to the pollution. Four large reservoirs on tributaries of the Neretva provide water for power generation, water for irrigation and storage capacity for flood control. Some of the storage is allocated for the maintenance of low flows. The impact of these reservoirs on the ecology of the basin will be evaluated under the project.

6. Municipal pollution of the Bosnia River. The Bosnia river basin covers the biggest and the most developed area of the Federation part of BiH. The Bosnia river flow begins in the territory of FbiH and is around 193 km long including the area from Vrelo Bosne (source of the scenic Bosnia River) to the inter-entity boundary line at the mount of the Usora river. The river is the most populated and developed regions in industrial terms are in the vicinity of the river. All

the settlements and industrial facilities, the concentrated polluters discharge directly into the river. The majority has no prior treatment and even in pre-war period, there were few waste water treatment facilities, and they did not meet legal norms. The concentrated polluters are dominant sources of pollution in the Bosnia River Basin; these are population and industries located along the main river and its tributaries – Sarajevo, Ilijas, Visoko, Kakanj, Travnik, Zepce, Maglaj, etc. Analyzing pre-war ratio of pollution generators, it is estimated that municipal waste water accounts for approximately 40% of total pollution, and industrial waste water around 60%. Concentrated pollution sources are, as it has been mentioned, in principle divided into industrial pollution and municipal pollution from population. In order to establish cadastre of polluters i.e. clearly define volume and type of pollution, it is necessary to carry out continuous measurements at waste water outlets into the recipient. This has started with the Neretva Protection Study (paragraph 20). Majority of rivers in BiH, and the Bosnia River particularly, is subject to pollution from large urban centers, city agglomerates with high concentration of population and industry. Due to lack of wastewater treatment facilities which as a rule include envisaged compensation of waste water inflow variations, which is one of preconditions for stabile operation and management of the process at the facility, variation of water quality in the recipient is directly related with variation of water use.

7. Governmental policy and international cooperation on pollution from municipal sources. With the gradual adoption toward international standards in environmental protection, the Government is placing much more emphasis on environmental protection in the nearest future. Discharges into the Adriatic Sea coastal area receives special attention in this work. Currently, United Nations Environmental Program (UNEP) has developed the Strategic Action Program to address pollution from land-based activities in Mediterranean Region (SAP MED), including for BiH wastewater discharges. The proposed project will implement the actions to eliminate regionally prioritized hot spots by improving wastewater discharge schemes through a low cost investment program. The project would complement SAP MED and the regional program for conservation wetland and coastal ecosystems in the Mediterranean region (UNDP), and assist the Government in meeting its international obligations under the Barcelona Mediterranean Convention (1976).

8. Transboundary Cooperation. On July 11, 1996, BiH and Croatia signed an agreement to cooperate in the management of transboundary water resources. The agreement established a framework for solving questions regarding water management. Since its ratification, three sub agreements on specific projects have been negotiated are pending signature. In addition, both countries support the Barcelona Convention for the prevention of pollution of the Mediterranean and have signed and ratified all its protocols.

9. The reconstruction and rehabilitation of the wastewater facilities along with development of the BiH part of the Neretva and Bosnia Rivers development, elimination of the untreated from the land-based municipal discharges and rehabilitation of the potentially tourist attractive areas are among the primary priorities of the Government. Rehabilitation and clean-up of the Neretva coastal areas will be substantial factor in reviving tourism business in the region and attraction of new investment in this former relatively developed part of the national economy. Associated services will create new jobs thus will have a positive impact on the poverty reduction.

10. Links with on-going World Bank and International Projects. The project focuses on water quality in two rivers, the Neretva River which discharges in the Adriatic Sea, and the Bosnia River which is part of the Danube system. The project components focusing on the Bosnia River basin are designed to address the priority actions identified under the Black Sea/Danube

Partnership and in particular reduction of nutrient loads from municipal waste waters. The project would also be developed as part of a broader framework for the implementation of priority pollution reduction and river basin investments in the Adriatic Sea, i.e. as part of a proposed Partnership for the Mediterranean Sea with emphasis on the Adriatic, currently under discussions with GEFSec[1]. The proposed project has significant synergies with the Integrated Ecosystem Management of the Neretva and Trebisjnica River Basin project, also presented by the Bank as part of the proposed Adriatic partnership. In this regard, no duplication is foreseen since the Water Quality project focuses on water pollution from a municipal perspective and works strictly with revenue earning utilities. The project is partially blended with the IDA-funded Mostar Water Supply and Sanitation Project (US$12 million), already effective. The Mostar Water Supply and Sanitation Project includes sewage and water conservation components that directly support the proposed GEF operation. The project is also linked to the IDA-funded Solid Waste Management Project, currently under implementation, which is financing clean-up activities benefiting both river basin as well as promoting public awareness and participation. The project will be also linked to similar projects in the region, especially the Albania Water and Ecosystems Management and the Moldova Environmental Infrastructure, both co-funded by GEF.

11. Public Participation. The project is expected to get wide public support considering numerous Social Assessments confirming the public's concern and priority to improve the water pollution problems of the transboundary rivers (Social Assessment for Mostar Water Supply Project (1999) and Solid Waste Management Project (2002)). BiH NGOs are constantly approaching the Bank to seek support on how to work with Government agencies to ensure compliance with present and future international environmental standards. To strengthen this support, Vodoprivredas, with offices in Mostar and Sarajevo in coordination with relevant water utilities will conduct a public consultation process during the project preparation and implementation. The main objectives of the public consultations will be to: (a) provide information to users and other key stakeholders about the improved wastewater systems, the risks associated with poorly managed wastewater treatment, the costs of improvements, and their management responsibilities; and (b) involve the public in the implementation of project support. They will provide general consumer information to the public about the works under the Project and its GEF component; the risks associated with inadequate wastewater services and poor treatment from nutrients; the role of individuals, municipality, ministry of environment, and other institutions, and non-governmental organizations in the wastewater collection and treatment; and basic consumer information. They will also carry out a plan on disseminating basic information about wastewater treatment, including schedule of works, requirements for project development, etc.. This assessment will be published in local newspapers, disseminated, and made available at all Cantonal Ministries, Vodprivedas and relevant utilities.

B. RATIONALE FOR THE PROJECT

Project Objectives

12. The overall development objective of the Project is improvement of water quality in the Neretva drainage basin and Bosnia river basin. The global objective of the project is to reduce

[1] The World Bank and GEFSec identified the opportunity to build upon the Strategic Action Plan for the Mediterranean Sea prepared and agreed by the riparian countries under the Barcelona Convention with a framework similar to the Partnership for the Black Sea/Danube river basin. The Bank could take the lead in developing a Partnership for the Mediterranean Sea with emphasis on the Adriatic with GEF and UNEP and could establish an Investment Fund for pollution reduction, river basin management and possibly marine and coastal biodiversity conservation projects. The proposed project could be used as a model for pollution reduction working with municipal utilities.

pollution in the Adriatic Sea and the Danube basin by reducing nutrient loads from municipal wastewaters that are discharged in the Neretva and the Bosnia rivers. The project will implement priority interventions as identified in the Mediterranean Strategic Action Program (SAP) to address pollution from land-based activities (MEDPOL)[2] as well as in the GEF Strategic Partnership on the Danube/Black Sea basin[3]. Both SAPs identify nutrient loads, especially from municipal waste waters, as one of the main cause of pollution and degradation of the Adriatic Sea and the Danube river and their ecosystems. The project would support interventions in hot spots and sensitive areas identified in the SAP, such as Neum-klek, Mostar, Mali Ston and Canyon Delta for the Neretva River, and the high density areas along the Bosnia river[4].

13. In order to achieve this objective the project will support: (a) the development of a water quality management plan to be used as a guide for future water management decisions; (b) the establishment of a Joint Bosnian/Croatian Commission with coordination from Montenegro to implement the plan; and (c) the development and implementation of high priority, low cost water capital investments..

Project Outcomes

14. The expected outcomes of the proposed project would include:

- Reduction of nutrient load into the Neretva and Bosnia rivers (indicators will be finalized at appraisal stage)
- Systematic water quality monitoring and regulation
- Low cost technologies such as wetlands, lagoon and on-site treatment solutions mainstreamed into traditional water treatment
- Knowledge sharing on water pollution issues between two river basin bodies that can be replicated in other countries in the region.

C. PROJECT COMPONENTS AND IMPLEMENTATION SCHEME

Main Project Components

15. The project focuses on two river basin, the Neretva River which discharges in the Adriatic Sea, and the Bosnia River which is part of the Danube system. The proposed project will have six components - an investment component specifically for the Neretva River, an investment component specifically for the Bosnia River, and four components carrying out activities jointly for both river basins. Of the proposed US$ 8 million GEF grant, it is estimated that US$ 4.35 million will benefit the Neretva River basin while US$ 4.15 million will benefit the Bosnia river basin. The details of the components are as follows:

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2 In accordance with the 1996 Protocol for the protection of the Mediterranean sea against pollution from land based source and activities, all riparian countries including BiH agreed to take all appropriate measures to prevent, abate, combat and eliminate pollution of the Mediterranean sea area caused by discharges from rivers. It was agreed to prepare regional SAPs including the MED POL, which was completed in 1999.

3 In May 2001 the GEF Council approved the Strategic Partnership on the Danube/Black Sea Basin in order to accelerate on-the-ground implementation of the Danube basin and Black Sea SAPs.

4 The site selection will be made during project preparation based on the results of feasibility studies.

Component 1: Waste Water Improvement Management Plan Preparation ($.5 million equally shared between the two basins). The main outputs of this component would be:

- An Environmental Analysis and Protective Plan for the targeted areas
- A review and Analysis of Existing Institutional Arrangements
- Preparation of a Proposal for Institutional Changes
- Identification and Evaluation of Alternative Scenarios for Improvement of Water Quality
- Design of a Long Term Water Quality Monitoring Program
- Analysis of the Economic Benefits of Clean Water
- Development of a Nutrient Reduction Plan
- Development of a Financing Plan
- Development and Implementation of a Public Awareness Plan
- Preparation of a Recommended Waste Water Improvement Management Plan for both Basins.

Component 2: Start up of the Waste Water Management Plan including operating costs for 36 months ($ 0.8 million equally shared between the two basins). The main output of this component would be increased capacity of the local water utilities in monitoring water quality

Component 3: Implementation of a high priority, low cost capital investment recommended by the Waste Water Management Plan for the Neretva River($3.5 million). The main output of this component would be low cost improvements in municipal waste water treatment facilities that decrease nutrient discharges in the Neretva river.

Component 4: Implementation of a high priority, low cost capital Investment recommended by the Waste Water Management Plan for the Bosnia River ($3.3 million). The main output of this component would be low cost improvements in municipal waste water treatment facilities that decrease nutrient discharges in the Bosnia river.

Component 5: Project Management and Monitoring ($200,000 equally shared between the two river basins) will be conducted by Vodoprivedas in coordination with relevant water utilities, and the Ministry of Water Management, Forestry and Agriculture. Implementation will be done with close cooperation with the Croatia Public Water Management enterprise, Hrvatska Vode, which will represent Croatia as well as with relevant authorities in Montenegro. Vodoprivedas managed the first Urgent Works project after the war and the Mostar utility, currently implementing the Mostar water supply project have extensive experience in operation and implementation of the international projects. They have a number of professionals with extensive experience in managing water and sanitation projects, including pre-design and procurement. That will simplify the supervision, procurement, and also Bank coordination. Final implementation arrangements will be determined during the project preparation. Project monitoring will include (i) economic and financial assessment of the nutrient reduction operations and (ii) environmental monitoring.

Component 6: Institutional support and replication ($300,000 equally shared between the two river basins), will provide financing for the dissemination of the project results within BiH and in other countries of the region with the objective of promoting regional cooperation. Details for this activity will be agreed during the project preparation.

Project Processing and Implementation Schedule

16. The project activities focusing on the Bosnia River basin are designed to address the priority actions identified under the Black Sea/Danube Partnership. The project activities focusing on the Neretva River are designed to address priority actions identified in the Mediterranean SAP (MED POL). The project would be processed for funding under the Investment Fund for Nutrient Reduction in the Black sea/Danube basin for the Bosnia River components (US$ 4.15 million GEF grant estimated) and presented to Council for funding for the Neretva River components (US$ 4.35 million estimated).

17. The project is being developed as part of a broader framework for the implementation of priority pollution reduction and river basin investments in the Adriatic Sea, i.e. as part of a proposed Partnership for the Mediterranean Sea with emphasis on the Adriatic, currently under discussions with GEFSec. The proposed project could be used as a model for pollution reduction working with municipal utilities. In this regard, however, it was agreed with GEFSec that project preparation will continue in parallel with the preparation of the proposed Adriatic Partnership and the project approval will not be subject to the finalization of the Partnership. This is to respond to the tight schedule of the proposed Water Quality project and its partial blending with the IDA-funded Water and Sanitation credit which is already effective.

18. The project will require the following timetable:

Activity	Period
1. Consultant Selection	completed
2. Data Collection and Plan Preparation	Underway
3. Public Discussion and Finalization of the Plan	Underway
4. Plan Implementation (including high priority investment)	38 months

Cost and Financing

19. The GEF support for the activities herewith proposed has been estimated at US$ 8.5 million. US$ 4.35 million would finance activitites benefitting the Neretva River basin while aproximately US$ 4.15 million would be directed to the Bosnia river basin. The project is expected to leverage as much as US$ 27.5 million in co-financing (approximately US$ 12 million for the Neretva river basin and US$ 15.5 million for the Bosnia river basin). The Government of BiH would provide about US$2.0 million to the project to finance local costs (shared equally between the two basin).

20. The proposed GEF project is partially blended with the IDA-financed Mostar Water Supply and Sanitation project (US$ 14.5 million), under implementation, of which about US$ 8 million are in support to pollution reduction and the GEF intervention in the Neretva river basin. The IDA Mostar project focuses on water conservation as a mean to reduce both costs and environmental pollution. Network physical losses are as high as 80% in Mostar and the project finances rehabilitation works and technical assistance to reduce network leakages and increase system efficiency[5]. In addition, to minimize the risk of compromised water quality and endanger

[5] The project will achieve water conservation by (a) reducing network leakage through a combination of reducing pressure, identifying and fixing leaks (including cutting off illegal connections) and replacing or rehabilitating pipes and house connections; (b) improving the hydraulic efficiency of pipe networks; and (c) improving maintenance to increase the life of the assets.

public health, the project is providing basic physical protection of four water supply sources that currently lack basic protection from animal or human intrusion. The project finances also investments in the sewer system repair and maintenance. This will remove overflows of sewage on the streets, sewage dumped directly into the Neretva river contaminating water source for downstream users and avoid the likelihood of human and animal contact and potential diseases as a result.

21. The GEF project is also expected to leverage co-financing from a new IDA project for water supply and sanitation currently in the Bank pipeline for approval in FY05 (UA$ 14 million). The proposed project would upgrade water and sanitation services in 3 selected utilities to improve water quality, public health and strengthen institutional capacity. One or two of the selected utilities would be linked to areas discharging wastewater into the Bosnia River. These utilities, with external assistance, would design a self identified, strategic plan to become commercial orientated utilities. The project would also serve as 'damage control' to rectify the mistakes of pushing different modes/extremes of privatization, voucher schemes and widely divergent donor advice provided to the utilities over the past 5 years. Utilities will be identified during the next preparation mission, scheduled for August, 2003.

22. Discussions are well advanced with bilateral donors, specifically the Government of Italy and Government of Norway to provide an additional US $3.5 million (estimated at US$ 3 million for Neretva river and US$ 0.5 million for Bosnia river). The Government of Italy has already committed approximately $1.47 million equivalent for water conservation and reduction of water losses under the 'Rades project'. The Government of Norway has provided financing under the 'Biejlo Polje' project, to provide water to the City of Mostar by gravity which has greatly reduced energy costs associated with pumping and immediately reduced operating costs of the utility. Talks with these two donors are well advanced and close to commitment for additional bilateral funding for the GEF project. Donors' support and co-financing opportunities will be pursued during preparation and confirmed prior to CEO endorsement.

23. Incremental reasoning. GEF support will finance activities related to (a) development of a water quality management plan to be used as a guide for future water management decisions; (b) capacity building and institutional strengthening to implement the plan; (c) low cost investments for the reduction of nutrient loads. The project is partially blended with the IDA Mostar Water and Wastewater Project. A detailed incremental cost analysis will be carried out during project preparation.

D. GEF ELIGIBILITY AND COUNTRY COMMITMENT

24. GEF Eligibility. The proposed project will contribute to the protection of the globally important surface waters and help BiH to integrate its activities into the Action Plan of the Barcelona Convention. The activities proposed for the project are directly linked to the "Strategic Action Plan for the Protection and Rehabilitation of the Mediterranean Sea" (MDSAP) under the Barcelona Convention, formulated with the assistance of the GEF. Barcelona Convention identified municipal wastewater pollution as the most serious problem facing region. By improving wastewater treatment schemes through an integrated investment program and changes in consumer practices, the Project would also complement the regional surface water programs and assist the Government in meeting its international obligations under the Barcelona Convention and support the UNDP and other international programs. The project will also support priority investments for the reduction of nutrient loads from municipal waste in Danube River basin, helping the country meet its obligations under the Danube Convention.

25. Country Driveness. In 1998, during the early preparation of the Mostar Water Supply and Sanitation Project, the Mostar authorities were extremely keen to have an environmental investment scheme for the protection of the Neretva River. Due to the need to first address water supply issues, limited amounts of IDA funds and high costs associated with a Neretva protection project, the task team assured the authorities that the World Bank would continue in a technical assistance capacity, but one that was delinked from the Mostar Water project.

26. In addition, the Government is committed to reduce untreated wastewater discharges into surface waters and specifically into the Mediterranean Sea. BiH is a member of the Barcelona Convention on Mediterranean Sea Protection. As it was mentioned, the project is expected to get wide public supports considering BiH's effort to comply with present and future international environmental standards. and to demonstrate the Government's and BiH population commitment to environmental protection.

27. In response to the strong insistence of the Mostar City Government, Mostar Water and Sewerage Utility (MWSU) and Mostar/Sarajevo Vodoprivedas and the Ministry of Water Resources, Forestry and Agriculture to help address the water quality problems, a US$350,000 United State Trade Development Authority (USTDA) grant was obtained for the Neretva River protection study. A Steering Committee, composed of MWSU specialists, members of the Mostar Infrastructure Department and urban planners from the City Council, was established in October 2000 to manage the Neretva Protection Study. Over the past two years, numerous working seminars have been held with the Steering Committee, Vodoprivedas, utilities and sector specialists and local consultants. The Draft Preliminary Projections and Basic Criteria Technical Memorandum were submitted to the local counterparts in March, 2003. Also during this period, Vodopriveda Sarajevo sought to be included in the proposed GEF project to target the Bosnia River. Due to multiple Government requests to include the Bosnia River, the potential GEF was expanded to include both the Neretva and Bosnia projects.

28. Rapid Land Use and Demographic Study During the startup of the Neretva Protection study, it became apparent that demographic data needed to be updated, because much of the statistical data were lost in the war. As a result, a Rapid Land Use and Demographic Study was undertaken to update the land use, demographic and socio-economic data required for continuation of the sewage scheme work program. This study has now been completed. The study was carried out by local independent consultants, under direction of the City of Mostar and funded by supervision budget for the Mostar water supply project, due to insistence from the local authorities to obtain an accurate demographic picture for a proposed GEF investment. The study consisted of three components, demographics, land use and socio-economic conditions. It confirmed that statistical data must be updated due to the changes since the war, which include very poor economic conditions with high unemployment and low levels of income, and that it will take more than 5 years to reach the same level of knowledge and information as pre-war levels. The study included water supply and sanitation information on the Mostar water supply system. The final version was endorsed by the Infrastructure Department of the City Council.

29. Project sustainability. The project sustainability in reduction of surface water pollution is assured by the national commitment to international environmental standards in water and wastewater operations. The implementing agencies will be the Vodovods, revenue earning utilities whose sustainability is enhanced by increasing the efficiency of the system and reducing the costs of its operations through technical improvements, low cost investments and most importantly, by improved cost recovery mechanisms and tariff setting principles and procedures in the water supply and wastewater sector. The Bank project provides the institutional capacity

for financial improvements and institutional strengthening by strengthening the institutional capacity of the sector and utilities. The GEF project builds on the foundation already set up through the Bank project to ensure project sustainability.

30. Project replicability. The main objective of the proposed measures will be elimination of the pollution of the Mediterranean Sea with direct pollution of the coastal rivers and seashore. The proposed works will implement inexpensive and sustainable methods that will initiate the clean-up works of the polluted areas that will have a great potential for replication in other countries of the Mediterranean region. The project includes a component to support the dissemination of the Project approach and results aimed at enhancing the possibilities of replicating them in other countries in the region. Further coordination with the Barcelona Convention Committee is foreseen during project preparation to facilitate the replication of the project.

31. Stakeholder Involvement. As stated in paragraph related to Country driveness, the entire concept started due to the persistence of the local authorities to address the problems related to water pollution and degradation of the Bosnian transboundary rivers. Since 1998, in response to the insistence of the Mostar City Government, MWSU and Mostar/Sarajevo Vodoprivedas and the Ministry of Water Resources sought to highlight the water quality problems that set the stage for a GEF program. In addition, in all meetings (bi-yearly Vodovod Association meetings, Business Plan meetings, project related meetings), all stressed the priority to address the pollution problems related to the transbourdnary rivers of the country.

32. Social Assessments highlighted the public's top priority to improve the water pollution problems of the transboundary rivers (Social Assessment for Mostar Water Supply Project (1999) and Solid Waste Management Project (2002)). BiH NGOs are constantly approaching the Bank to seek support to work with Government agencies to ensure compliance with present and future international environmental standards. A number of NGOs are involved with the Solid Waste Management project in the regions to assist with public education of both solid waste and wastewater pollution problems. A stakeholder involvement plan will be developed during project preparation and be part of the project document submitted for GEF and Bank's approval.

33. Monitoring and Evaluation - Advisory Committee for the Project**.** The Government recommended the establishment of an Advisory Committee for the Project. This committee will monitor progress and provide guidance to the implementing agencies. The committee will be made up of representatives from government and non-government organizations from both countries. From B-H the Ministry of Agriculture and Water Management, the relevant cantonal Ministries, the public energy enterprise (owner and operator of the dams and power plants in the drainage basin) Hutovo Blato Park (Neretva Delta Wetlands) and NGOs will be represented. From Croatia, representatives will be sought from Hravske Vode, the Ministry of Physical Planning and Development, the Oceanographic Institute, the State Hydrometeroloogical Institute, the Hydro geological Institute, the Croatian Ornitholoical Society and the Croatian Museum of Nature will be represented. Bird Life International and the UNEP Mediterranean Action Plan will be invited to represent the international community. A M&E plan will be developed during project preparation and be part of the project document submitted for GEF and Bank's approval.

E. PROJECT PREPARATION ARRANGEMENTS

34. A USTDA grant was approved in 2000 to undertake the Neretva River Study and Rapid Land Use and Demographic Study. The following work is largely underway but some activities will need to be carried out for project preparation:

a) Comprehensive Cadastre of Polluters: (i) prepare a comprehensive survey to determine the existing status of municipal and industrial wastewater discharges; and identify specific threats and possible remediation actions.

b) Legal and regulatory Review: (i) review the institutional, legal and regulatory framework for conservation management of the selected project sites; (ii) provide recommendations for improvements.

c) Social Development Assessment: (i) analysis of their socio-economic needs; (ii) identification of socio economic aspects of the threats to biodiversity, e.g. the impacts of tourism, local industry, the consumptive use of natural resources (forestry, grazing, hydro-technical works); and (iii) identification of mechanisms for the involvement of key stakeholders in overall project preparation/implementation and management of the protected areas.

d) Institutional Assessment for Training and Capacity Building Needs: (i) assess the structure, staffing and training needs of Government (national and local level) institutions directly involved in reduction of the municipal pollution and project implementation; and (ii) prepare a phased strategic plan and training program which will address the needs of project implementation, and provide the skills that would allow for replication of project activities at other priority sites.

e) Awareness and Education: (i) identify conservation awareness and education needs and opportunities afforded by the project's sites through surveys of key stakeholders, focus groups discussion, and stakeholder workshops; (ii) prepare a public environmental awareness program; (iii) prepare an environmental education program, all of which will support project implementation and objectives (will be carried out during implementation).

f) Economic Analysis: (i) identify eligible incremental costs that would be financed by GEF; (ii) review and analyze opportunities for financial sustainability of activities; and (iii) conduct an economic and financial analysis of the project sites.

g) Investment Program: (i) prepare detailed cost estimates and procurement specifications for all project activities; (ii) prepare a financing and investment plan needed to implement the project; and (iii) identify alternative sources of cofinancing to support other portions and "non incremental" aspects of the project.

h) Regional Collaboration Program: This activity: (i) identifies opportunities to establish mechanisms for collaboration and information exchange among organization involved with conservation of karst ecosystems in adjacent countries and internationally, and with partner institutions in other countries; and (ii) design a NGO small grants program (ongoing).

Timetable of Project Preparation

Project Preparation Components	Completion Date
Comprehensive Cadaster of Polluters	08/2003
Legal and regulatory Review	08/2003
Social Development Assessment	10/2003
Institutional Assessment for Training and Capacity Building Needs	08/2003
Awareness and Education	On going
Economic Analysis	09/2003
Investment Program	10/2003
Regional Collaboration Program	Ongoing