



#### INVESTMENT

GEF-WB Strategic Partnership for Nutrient Reduction in the Danube River and Black Sea **USD 20.27 million**

#### PROJECT DURATION

2005–2011

#### NUTRIENT CHALLENGES

- Very high levels of eutrophication with impacts on the habitats of endangered species and biological diversity generally
- Pollution of water resources, wetlands and coastal ecosystems by untreated urban wastewater, the food industry and agriculture
- Changes in biodiversity and poor microbiology status of surface water

#### EARLY NUTRIENT BMP “WINS”

- Sharing information among stakeholders
- Endorsement of the appropriate regulations and common standards
- Replication of project approaches and results
- Establishment and development of mechanisms for cooperation

## BOSNIA AND HERZEGOVINA Water Quality Protection Project

### Project Summary and Scope

The goal of the project is to further strengthen the capacity of local utilities and to reduce the amount of pollution discharged into the rivers Neretva and Bosna from municipal sources.

**Component 1:** Action plan for the reduction of river pollution in Bosnia and Herzegovina. The action plan will provide the basis for creating a national wastewater strategy for reducing river pollution.

**Component 2:** High-priority investments in four cities:

- Mostar (Neretva River), 100,000 inhabitants  
The first stage of construction in the central town area, consisting of sewage main collectors along the narrow river valley and an effluent treatment unit.
- Zivinice (Spreca River), 45,000 inhabitants  
Sewage collectors and the upgrading of a sewage treatment plant in order to prevent the further deterioration of water quality in Lake Modrac.
- Trnovo (Zeljeznica River), 2,200 inhabitants  
Rehabilitation of the treatment plant.
- Odzak (Bosna River), 10,000 inhabitants  
Sewerage rehabilitation, an outfall pipeline to the river for treated effluent, and a sewage treatment plant.

**Component 3:** Wetlands conservation.

The project targets wetlands of the lower Neretva River, and also potentially the lower river Bosna. A feasibility study will be prepared, in accordance with the rules of wetlands conservation, on low-cost natural wastewater treatment, taking into account climatic, hydrogeological (sensitive karst area) and land management conditions. The study will assist in identifying appropriate investments for low-cost/low-energy treatment for small towns and settlements in the municipalities. Replication is planned in other parts of Bosnia and Herzegovina.



## Best Practices

- **Reduction in discharges of untreated wastewater** to improve environmental conditions due to the reduction in nutrient loads.
- **Development of the Wastewater Improvement Plan** to reduce river pollution, and its endorsement by the government.
- **Development and implementation of affordable standards for municipal wastewater** in line with EU requirements.
- **Wastewater quality monitoring** to reduce the proportion of effluents discharged.
- **Implementation of high-priority, low-cost water capital investment programmes** leading to a reduction in discharges of nitrogen and phosphorous from municipal sources.
- **Wetlands conservation** based on a feasibility study to rehabilitate, construct and maintain the wetlands area to reduce nutrient loading.

## Other Key Successes

- Establishment of a joint Bosnia and Herzegovina/Croatia working group, with coordination from Montenegro and Serbia to implement the plan.
- Dissemination of information in the region for the replication of project activities at other priority sites in the Balkans.
- Improvement of environmental conditions in the country.
- Honouring of international conventions for the protection of the Danube basin and Black Sea.

## Key BMP Indicators

- Completion of the Wastewater Improvement Plan.
- Regional cooperation and replication in the Balkan region.
- Reduction of municipal-based pollution.

## Further information

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## About the Living Water Exchange

The Living Water Exchange, a GEF/UNDP project promoting nutrient reduction best practices in Central and Eastern Europe, will share information and accelerate the replication of the most appropriate nutrient reduction practices developed from GEF and other investments in the region.

For more information, please visit <http://nutrient-bestpractices.iwlearn.org/> or email Chuck Chaitovitz [chuck@gef.org](mailto:chuck@gef.org)