

UNDP/GEF Danube Regional Project

**Development of the Sava River Basin
Management Plan - Phase I**

Inception Report

15 May, 2003

ZINKE ENVIRONMENT CONSULTING
*for Central and Eastern Europe,
Vienna*



Table of Contents

	Page
Acronyms & Abbreviations	3
Sava River Basin Map	5
1. Background	6
2. Activities undertaken during the Inception Phase	6
2.1. Inception Meeting and coordination with other projects of technical assistance (Vienna, 7-8 April 2003)	
2.2. Identification and instruction of National Experts (Zagreb, 30 April 2003)	
3. Cooperation with other projects of technical assistance	8
3.1. Dutch technical assistance	
3.2. EU-CARDS	
4. Co-ordination with other GEF Project Components	9
5. Coordination mechanisms for project implementation	12
6. Methodological approach for project implementation	13
6.1. Project concept for Phase I and II	
6.2. Modalities of project execution (Phase I)	
7. Work Plan for project execution	14
7.1. Description of activities	
7.2. Time Input for International and National Experts	
Annexes	17

Acronyms & Abbreviations

AEWS	Accident, Emergency Warning System
B-H	Bosnia i Herzegovina
CARDS	EC assistance programme for the western Balkans 2002-2006
CEE	Central and Eastern Europe
DANUBIS	Danube Information System
DRB	Danube River Basin
DRP	UNDP/GEF Danube Regional Project
EG	Expert Group of the ICPDR
EMIS (EG)	Emission (Expert Group of the ICPDR)
EU	European Union
GEF	Global Environment Facility
GIS	Geographical Information System
HR	Croatia
ICPDR	International Commission for the Protection of the Danube River
MLIM (EG)	Monitoring, Laboratory and Information Management (ICPDR)
PIAC	Principal International Alert Center
RBM (EG)	River Basin Management (Expert Group of the ICPDR)
S-M	Serbia and Montenegro
SLO	Slovenia
TNMN	Trans-National Monitoring Network
ToR	Terms of Reference
UNDP	United Nations Development Programme
WFD	EU Water Framework Directive
WG	Working Group

Sava River Basin Overview Map

Sub-river Basin of the Danube River Basin District (Draft 2)



1. Background

The UNDP-GEF Danube Regional Project supports the development of a pilot plan for the Sava River Basin as a model for river basin management planning in line with the EU Water Framework Directive. In this context, the project shall define concepts for common approaches and methodologies, standards and guidelines to be applied in the regional context, and formulate recommendations for implementation strategies and program of measures likely to be effective in the transboundary context.

In Phase I (April to October 2003), the Project shall carry out a situation analysis, shall examine the availability of information and data, and assess institutional capacities to carry out the development of the Sava River Basin Management Plan. In this context, the requirements of the EU WFD and also other activities of the GEF Project shall be taken into account. The result will be a first situation analysis on the environmental status in the Sava river basin, and a concept and work plan for Phase II of the project, which will be discussed and agreed upon at a regional workshop in October 2003.

At the end of Phase II (2006), a "Roof Report" for the Sava River Basin, taking into account the guidelines laid down in the Strategic Paper for the Development of a River Basin District Management Plan of the ICPDR, shall be available.

2. Activities undertaken during the Inception Phase

In line with the resolution of the ICPDR Steering Committee at its meeting in June 2002 in Prague to use the Sava River Basin as a model for the development of a River Basin Management Plan, the present project concept, the methodology for project implementation and the necessary resources and inputs have been developed ¹⁾.

The project concept and the modalities of implementation of the GEF DRP Project Activity 1.1-9 have been explained and discussed at the 1st meeting of the "Sava Working Group" on 18 October 2002 in Vienna. The proposed approach and related activities are in line with objectives of the Framework Agreement on the Sava River Basin, with special reference to Article 3 (EU Water Framework Directive), Article 5 (Cooperation with ICPDR), and to Article 12, which stipulates the development of the "Sava River Basin Management Plan" (Annex 1).

¹⁾ Resolution from Steering Group Meeting 6 and 7 June 2002 in Prague:

The Steering Group

- welcomes the initiative of the UNDP/GEF Project to support the activities of the ICPDR Expert Groups and to reinforce the implementation of the DRPC;
- welcomes the preparation of a pilot project for the development of the RBM Plan for the Sava River Basin;
- asks the RBM EG to cooperate with the Project with the view to apply and to test the ICPDR strategy for implementing the EU WFD in the Sava River Basin and to provide support for project implementation;
- recommends to establish, with the assistance of the Project, a coordinating body for the preparation of the Sava RBM Plan.

Further, the guidelines of the Work Program, developed in the frame of the Sava Initiative for the Project Sector "Water management", have been fully taken into account with particular attention to Project Fiche No 7 "Development Strategy for River Basin Management Plan in the Sava River Basin" (Annex 2).

To respond to the mandate of the ICPDR, the GEF Project follows the guidelines established by the River Basin Management Group, in particular the Strategic Paper for the "Development of a Danube River Basin District Management Plan" (May 2002) and the guidelines for the preparation of the Roof Reports for the Danube River Basin.

2.1. Inception Meeting and coordination with other projects of technical assistance (Vienna, 7-8 April 2003)

After contracting Alexander Zinke (*Zinke Environment Consulting for Central and Eastern Europe*, Vienna) as international consultant to guide the implementation of the GEF project component, a 2nd meeting of the Sava Working Group was called up, which took place on 7-8 April 2003 in Vienna.

At this meeting, the Terms of Reference (Annex 3), the methodological approach and the Work Plan for the implementation of the GEF project component have been discussed and the Work Plan amended. Particular attention was given to coordinate the GEF activities with the planned program of technical assistance to be provided by the Dutch Government.

It was further foreseen that the results of the EU-CARDS Project entitled "Pilot River Basin Plan" to test the implementation of EU-WFD guidelines in selected catchment areas (HR: Dobra river; B-H: Vrbas river; S-M: Bosut river) should also taken into account in developing the Sava River Basin Management Plan.

The detailed results of this meeting are given in Annex 4.

2.2. Identification and instruction of National Experts (Zagreb, 30 April 2003)

Upon proposal of the Governments from Sava basin countries, each four national experts were identified and all but one already contracted by the GEF DRP office:

- for water management analysis:
 - **Boris Kompare**, Slovenia
 - **Davor Malus**, Croatia
 - **Tarik Kupusovic**, Bosnia i Hercegovina
 - **Borisav S. Milutinovic**, Serbia and Montenegro
- for economy and population data collection:
 - **Anitra Smitran**, Bosnia i Hercegovina
 - **Zeljka Kordej-De Villa**, Croatia
 - **Nives Nared**, Slovenia
 - **Borisav S. Milutinovic**, Serbia and Montenegro.

At the Instruction Meeting in Zagreb on 30 April 2003 (Annex 5) all national experts for water management have received detailed instruction for collection and analysis of data and identification of information gaps. For this purpose specific instructions and guidelines have been prepared by the international consultant.

Detailed guidelines have also been prepared for the collection of demographic and socio-economic data. In this case, national consultants already identified and working under project component 1.1-3, "Applying EU Economic Guidelines for the economic analysis to the DRB" have been requested to collect data on population and social and economic activities in the four Sava Basin countries. The guidelines and instructions for national experts are given in Annexes 6 & 7.

3. Cooperation with other projects of technical assistance

3.1. Dutch technical assistance

The Dutch government is preparing a specific program under the name "Water and Ecosystems" to assist the Sava countries in establishing the new "Sava Commission" and its structures, and to support the implementation of the Sava Action Plan. The Dutch assistance program will concentrate on the following issues:

1. Institutional development (Sava River Basin Commission)
2. Capacity building and exchange of knowledge
3. Inter-sectoral cooperation
4. Development of methods and tools for water management and implementation of the EU WFD, as e.g.:
 - Sava GIS
 - Integrated flood prevention (e.g. levee reconstruction)
 - Protection of floodplains and ecosystem (e.g. eco-network)
 - Improved water quality management.

The Work Plan for this project shall be prepared until the mid May 2003 and shall take into account the work program and the assistance provided by GEF to assure complementarity of measures. It is hoped that in the stage of project implementation both projects will closely cooperate and use the already established "Sava Working Group" as the appropriate mechanism for coordination.

3.2. EU-CARDS

The EU-CARDS project entitled "Pilot River Basin Plan" will assist Croatia, Bosnia i Herzegovina, and Serbia and Montenegro to develop pilot projects in selected catchment areas to test the implementation of the EU WFD, and to develop a

harmonized methodological approach for river basin management in the Sava region. Also Slovenia will receive EU support (ISPA funds) to test the EU guidelines for the implementation of the EU WFD in the Krka river basin.

All four countries will cooperate and exchange experience and information to harmonize the approach for implementing the WFD.

The main activities shall consist of:

- Developing one pilot project (small catchment) in each country to test the guidelines of the EU Water Framework Directive
- Strengthening institutional and legal frame for water management in each country
- Reinforcing mechanisms for regional / transboundary cooperation
- Organizing national and regional workshops and training to disseminate experience and harmonize the methodological approach.

It is expected that the results of the test program and the harmonized approach in implementing the EU WFD will contribute to the development of the Sava River Basin Management Plan.

4. Coordination with other Project Components (Phases I and II)

Project Component 1.1-3 : Apply the EU Guidelines for economic analysis and arrive at the overall economic analysis for the Danube River Basin, with particular attention to:

- Guidelines and templates for the preparation of a report on data assessment, which have been modified and adapted to the requirements of the Sava report,
- Collection and assessment of national economic data for 4 Sava countries, which are carried out by national consultants for project component 1.1-3,
- The assessment of national capacities to produce economic analysis, which will be taken into account to define the work program of Phase II

Project Component 1.2 : Reduction of nutrients and other harmful substances from agricultural point and non-point sources through agricultural policy changes with particular attention to:

- The inventory of agricultural point and non-point sources of pollution in line with the EMIS emission inventory and results from MONERIS (to verify own results),
- Relevant legislation, existing policy programs and actual state of enforcement in the Sava Basin countries with respect to promotion and application of BAP practices (Phase II),
- The inventory on important agrochemicals (nutrients etc.),
- The analysis of main institutional, administrative and funding deficiencies,
- The application of best agricultural practices.

Project Component 1.3 : Development of pilot projects on reduction of nutrients and other harmful substances from agricultural point and non-point sources with focus on:

- Inventory and analysis of existing programs and pilot projects promoting best agricultural practice in the 4 Sava countries,
- Definition and planning of pilot projects in the Sava countries (Serbia, Bosnia i Herzegovina and Croatia).

Project Component 1.4 : Policy development for wetland rehabilitation under the aspect of appropriate land use, with focus on :

- Inventory of protected areas (to be counterchecked by national consultants),
- Results from case studies for selected wetland areas and inappropriate land use (if existing for the Sava river basin).

Project Component 1.5 : Industrial reform and development of policies and legislation for the application of BAT towards reduction of nutrients (N and P) and dangerous substances with focus on:

- Inventory on industrial and mining “hot spots” in the 4 Sava basin countries (to be counterchecked by national consultants),
- Results of cause - effect analysis and identification of significant impact from industrial “hot spots” on water resources and water quality in the 4 Sava basin countries,
- Analysis on policies and existing and future legislation for industrial pollution control, and identification of enforcement mechanisms in the 4 Sava basin countries.

Project Component 1.8 : Recommendations for the reduction of phosphorus in detergents with particular attention to.

- Existing legislation, policies and voluntary commitments,
- Data on import and local production of phosphorus-containing detergents.

Project Component 2.1 : Setting up of Inter-Ministerial Coordinating Mechanisms for national policies, legislation and project implementation, with focus on:

- Existing national structures for coordination of water management and water pollution control with particular attention to the Sava Initiative,
- Proposed structures, including technical, administrative and financial departments to coordinate the development and implementation of river basin management plans (Sava, Danube) as well as the implementation of policies, legislation and investment projects in compliance with the EU WFD.

Project Component 2.2 : Development of operational tools for monitoring, laboratory and information management, with focus on:

- Application of databases for EMIS / MLIM in order to assess environmental stress and impact in Sava basin countries (Phase II),
- Optimization of the TNMN network (program, hardware, software, training) in the Sava countries, in particular in Serbia and Montenegro, Bosnia i Herzegovina and Croatia (Phase II).

Project Component 2.3 : Improvement of procedures and tools for transboundary accident emergency response, with focus on:

- Evaluation of needs for technical and financial (investments) support and prepare implementation schedules for the extension of AEWS in Serbia and Bosnia i Herzegovina, and for reinforcement of operational conditions in the national alert centers (PIACs) in all Sava basin countries.

Project Component 2.4 : Support for reinforcement of the ICPDR Information System, with focus on:

- Defining needs for equipment (hardware and software) and capacity building in relation to WFD implementation in all Sava basin countries,
- Defining needs for financial support for Serbia, Bosnia i Herzegovina and Croatia,
- Development and implementation of linkages between Sava Convention GIS (to be developed with Dutch assistance) and DANUBIS (Phase II),
- Reinforcement of training for efficient use of the Info System in Sava basin countries.

Project Component 3.2 : Applied awareness raising through community-based Small Grants Programme, with particular attention to:

- Assuring that SGP projects are identified in all Sava basin countries to support the development of the Sava Basin Management Plan for:
 - demonstration activities and awareness campaigns for sustainable land management and pollution reduction,
 - small scale community based investment projects for rehabilitation of wetlands, best agricultural practices, reduction of use of fertilizers, manure management, improvement of village sewer systems, etc.

Project Component 4.4 : Danube Basin study on pollution trading and corresponding economic instruments for nutrient reduction, with particular attention to (Phase II):

- Identifying general possibilities for establishing pollution trading or corresponding economic instruments for nutrient reduction in Sava countries,
- Reviewing and analyzing relevant legislation in Sava countries,
- Potential and readiness for pollution trading in Sava countries.

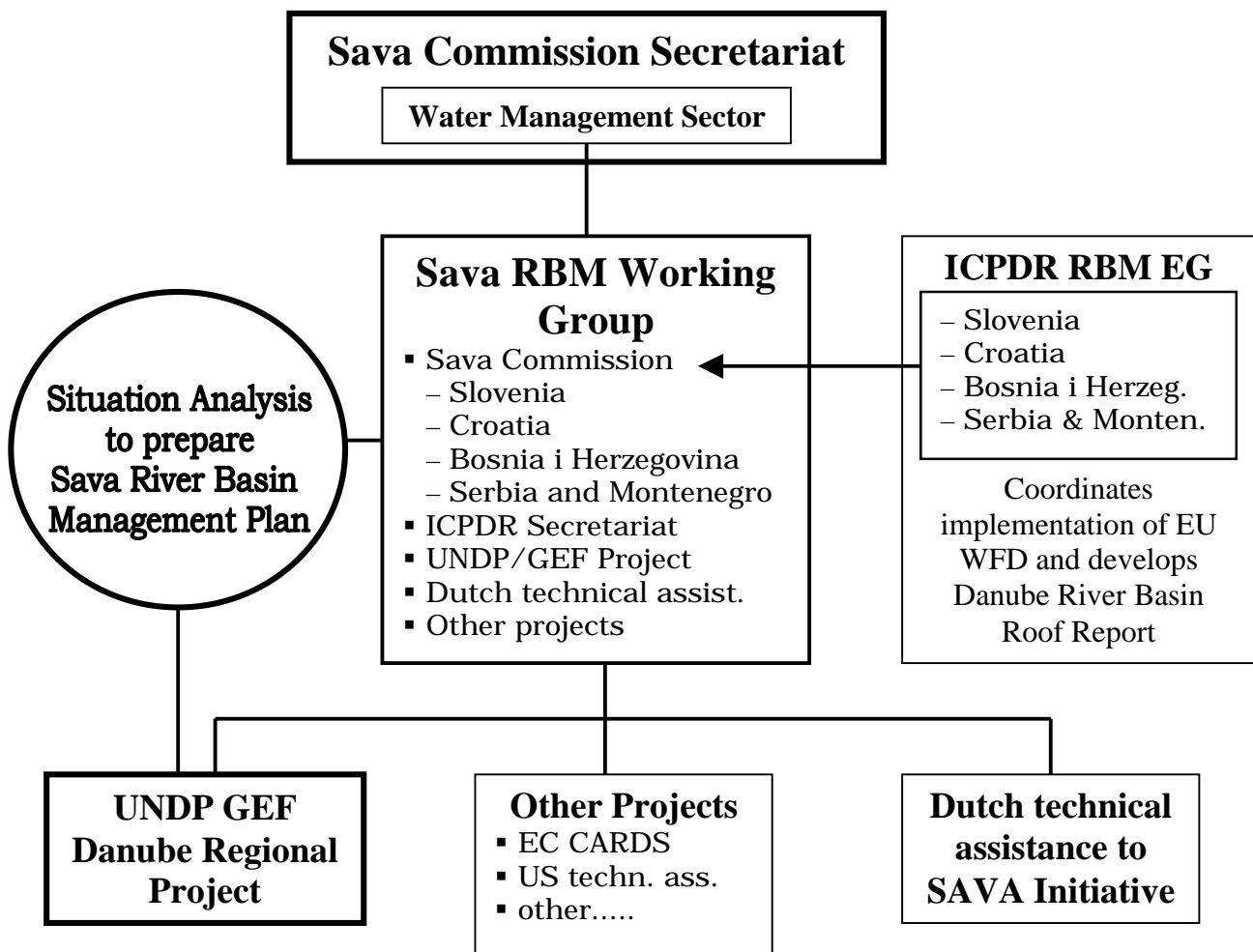
5. Coordination mechanisms for project implementation

In its meeting on 6 and 7 June 2002 in Prague, the ICPDR has also agreed to establish a special Working Group to guide and coordinate the activities of the GEF Project in developing a Sava River Basin Management Plan (see footnote in Chapter 2).

It has been agreed that the four experts from the ICPDR RBM EG from Slovenia, Croatia, Bosnia i Herzegovina and Serbia and Montenegro shall also participate in the Sava River Basin Working Group. This is to assure that the methodologies and guidelines developed by the RBM EG will be taken into account in the frame of the pilot project for the Sava River Basin.

It is further assumed that these experts will participate in existing structures of the Sava Initiative or futures structures of the forthcoming Sava Commission to assure full integration of methodological approach and activities related to the water management sector with those as practiced in the overall Danube Basin under the ICPDR.

This is also to assure that the Sava River Basin Management Plan will be fully compatible with the approach in the Danube River Basin to serve as a pilot project for the further development of the Danube "Roof Report".



6. Methodological approach for project implementation

6.1. Project concept for Phases I and II

Phase I is a preparation phase in which an environmental situation analysis shall be carried out. All data and information, which are necessary for the preparation of a Sava River Basin Management Plan shall be collected and analyzed, taking into account the requirements for implementing the EU WFD. Also, in this frame a gap analysis shall be carried out to define deficiencies in data but also deficiencies in structural, professional and general human capacities.

This material shall first allow preparing a general situation analysis in identifying environmental key issues in the Sava River Basin. Secondly, this material shall help to prepare a realistic concept and work plan to prepare a Sava River Basin Plan in Phase II of the project in a period of three years from 2004 to 2006.

Taking into account the reporting requirements as indicated in the EU WFD, all EU member states and accession countries should prepare until 2006 a thorough analysis of surface and ground water bodies, define pressure and impact on surface and groundwater and carry out an economic analysis.

It can therefore be expected that, with the assistance of GEF and other sources of technical assistance, the analytical part of the River Basin Management Plan at the level of a "Roof Report" could be achieved until 2005.

A carefully carried out pressure and impact analysis allows at an early stage to define "measures" as required by the EU WFD in terms of policies, regulations, investment programs, mechanisms for compliance, etc. This can be achieved with the help of the GEF DRP whose mandate is to assist the ICPDR and its member states in developing policies, regulations and other measures to comply with EU and international standards for pollution reduction and water management.

Also, at this point of time, the ICPDR holds a relative up-to-date and reliable data-base with information on investment projects, in particular for the municipal sector, which shall be enlarged for the industrial and agricultural sectors, including investment programs and development of policies and legal mechanisms.

Therefore, the goal to establish until end 2006 a Sava River Basin Management Plan including proposed measures to respond to transboundary issues seems realistic.

The Sava Plan should then serve as a model for the preparation of the Danube River District Management Plan (Roof Report), which should be finalized until 2010. It could further serve as a model for the preparation of Sub-river Basin Plans, which seems advisable taking into account the size and the diversity and disparity of environmental, social and economic issues in the Danube River Basin.

6.2. Modalities of project execution (Phase I)

The project will be carried out under the guidance and organization of an international consultant. He will define data and information needed for the situation analysis and the definition of environmental key issues, taking into account the GEF project description. Particular attention will be given to issues related to EU directives and to guidelines developed by the ICPDR RBM Expert Group for implementing the EU WFD.

The international consultant prepares formats and guidelines for collection of data and information at the national level, and supervises the work of national consultants. He prepares also the outline and table of content for national reviews or situation analysis and prepares a summary report on key issues related to water management and pollution reduction. Particular attention will be given to the gap analysis.

The international consultant prepares an outline for the Sava River Basin Management Plan, which shall be worked out in Phase II of the Project. He will also prepare the documentation for the regional workshop where the ToR and the work program for Phase II of the project will be discussed and agreed upon. He will then finalize the ToR and the work program for the period of 36 months from 2004 to 2006 for the preparation of the Sava River Basin Management Plan.

During the work in Phase I, two consultation meetings with the Sava RBM Working Group will be organized in Zagreb on 14 July, to present and discuss results of data collection from national level, and on 7 October to present and discuss the results of the national situation analysis and the Work Program for Phase II of the Project.

National consultants have been encouraged and name list have been provided to work closely with other national consultants, who are working with other GEF project components as spelled out in Chapter 4.

7. Work Plan for project execution

7.1. Description of activities

Existing information and data shall be collected and analyzed in the following areas:

1. Reviewing/updating emission inventory
2. Identification and assessment of pressure and impact on water bodies
 - from point sources of pollution
 - from diffuse sources of pollution and land use patterns
 - from hydro-morphological conditions
3. Identification of water bodies in 4 of the 6 WFD categories (river, lake, heavily modified water bodies, artificial water bodies)
4. Typology of water bodies,

5. Reviewing and analyzing causes and effects from human activities on groundwater bodies from point and diffuse sources,
6. Inventory of protected areas for species and habitat protection areas (WFD Annex IV, 1.(v)),
7. Inventory of protected areas for drinking water abstraction (WFD Annex IV, 1. (i)),
8. Inventory of monitoring networks,
9. Identification of measures for policy reforms for nutrient reduction:
 - from agricultural sources
 - through introduction of BAP in animal farming
 - through introduction of organic farming,
 - for integrated land use;
10. Identification of policy measures for pollution reduction at municipal and industrial sites,
11. Public participation (role of NGOs and the private sector),
12. Analysis of population data and information on water usage and consumption,
13. Analysis of Economic activities (agriculture, industry and mining and services).

Task No. 6 will be covered by project component No 1.4-1, "Defining methodology for integrated land use assessment and establishing inventory of protected areas (WFD Annex IV1.(v))"; tasks No 12 and 13 will be covered by national consultants working with project component No 1.1-3, "Applying EU Economic Guidelines for the economic analysis to the DRB".

All other tasks will be covered by national consultants for water management, contracted specially for the Sava project component No 1.1-9.

7.2. Time Input for International and National Experts

Project Component 1.1-9 Activity / Output	Responsible/Participant			Time/ Deadline for Delivery
	National Consul- tants	Intl. Consul- tant	Sava Working Group	
1. Inception Workshop		X	X	7-8 April 2003
2. Instruction and discussion to use guidelines for collection and analysis of data and information	X	X		30 April
3. Inception Report		X		15 May
4. 1st Draft of compilation of data and information for the development of the Sava RBM Plan	X	X		15 June

5. Revision of 1st draft by international consultants		X		4 July
6. Sava WG consultation meeting: Results of information analysis	X	X	X	14 July
7. Preparation of final compilation of national data and information	X			15 August
8. Drafting of national situation analysis	X			1 September
9. Draft Summary Report of findings (situation analysis, key issues)		X		15 September
10. Draft Work Program for Phase II		X		30 September
11. Sava WG Consultation meeting: Situation Analysis & Draft Work Program for Phase II	X	X	X	7 October
12. Finalize documentation for Regional Workshop		X		
13. Regional workshop to discuss approach and work program for Phase II	X	X	X	17 October
14. Final Report		X		31 Oct. 2003

Annexes

- Annex 1 Framework Agreement on the Sava River Basin**
- Annex 2 Interim Action Plan – Project Fiches 6 – 11 “Water Management” including description of support from UNDP/GEF DRP**
- Annex 3 Terms of Reference for the Development of the Sava River Basin Management Plan**
- Annex 4 2nd Sava Working Group Meeting and Inception Workshop**
- Annex 5 Report from Instruction Meeting for National Consultants**
- Annex 6 ToR for National Consultants and templates on water management including hydromorphology and “Competent Authorities”**
- Annex 7 Template Economy**

Annex 1 Sava Basin Framework Agreement

Bosnia and Herzegovina, Republic of Croatia, Republic of Slovenia and Federal Republic of Yugoslavia (hereinafter: Parties),

Recognizing the vital importance of trans-boundary co-operation for the Parties aimed towards sustainable development of the Sava River Basin;

Wishing to establish navigation, maintenance and marking navigable parts of the Sava River and its tributaries, for regulating the international regime of navigation as specified in the Convention on the Regime on the Navigation on the Danube (Belgrade 1948);

Being aware of the need to promote sustainable water management by regulating utilization, protection of the waters and aquatic eco-system and protection against the detrimental effects of the waters in the Sava River Basin, taking into consideration the Convention on Cooperation for the Protection and Sustainable Use of the Danube River (Sofia 1994);

Taking into account the great political, economic and social changes that have taken place in the region of the Sava River Basin;

Confirming our commitment to a sustainable development of the region that should be brought about in co-operation with the countries in the region, and with the view to ensure that this Agreement fits, in a coherent way, in accordance with the European Union integration process;

Desiring to develop mutual co-operation on the basis of principles of equal rights, State sovereignty and territorial integrity, good faith and good neighbourliness;

Aware of the ever increasing importance attached to the protection of the environment and natural resources, as well as the need for enhanced co-operation for an effective protection of the Sava River Basin;

Recognizing the great value of the Sava River Basin and its environment and natural assets, for the economic and social well-being and living standards of the citizens;

Taking into account the benefits for the Parties that could be derived from, and harms that could be avoided or mitigated as a result of, joint activities of the Parties in the framework of the Sava River Basin co-operation;

Having in mind that the Sava River Basin is part of the Danube Basin and that several international law regimes established by multilateral instruments of international water law, international environmental law and European Union legislation are applied to water resources of the Danube River Basin;

Wishing to join their efforts on sustainable management of water resources of the Sava River Basin with the efforts of other countries and international institutions and arrangements present in the Danube Basin;

Acknowledging the important contribution of the Stability Pact for South Eastern Europe and the international community and wishing to continue the cooperation under this Agreement;

Have agreed as follows:

**PART 1
GENERAL PROVISIONS**

**Article 1
Definitions**

For the purposes of this Agreement:

- 1) “Transboundary Impact” means any adverse effect on the river environment resulting from a change in water regime, caused by human activity and stretching out beyond an area under the jurisdiction of a Party, and which change may affect life and property, safety of facilities, and the aquatic ecosystem concerned.
- 2) “The Sava River Basin” is the geographical area extended over the territories of the Parties, determined by the watershed limits of the Sava River and its tributaries, which comprises surface and ground waters, flowing into a common terminus.
- 3) “Water Regime” comprises quantity and quality conditions of the waters of the Sava River Basin in space and time influenced by human activities or natural changes.

**Article 2
Objective of the Agreement**

- 1) The Parties shall cooperate in order to achieve the following goals:
 - a) Establishment of an international regime of navigation on the Sava River and its navigable tributaries;
 - b) Establishment of sustainable water management; and
 - c) Undertaking of measures to prevent or limit hazards, and reduce and eliminate adverse consequences, including those from floods, ice hazards, droughts and incidents involving substances hazardous to water.
- 2) For the purpose of carrying out the goals stated in Paragraph 1 of this Article, the Parties shall cooperate in the process of the creation and realization of joint plans and development programs of the Sava River Basin and harmonization of their legislation with EU legislation.

PART TWO

GENERAL PRINCIPLES OF COOPERATION

Article 3

General Obligation to Cooperate

- 1) The Parties shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit, and good faith in order to attain the goals of the present agreement.
- 2) The Parties shall cooperate on the basis of, and in accordance with, Directive 2000/60/EC of the EU Parliament and Council of October 23, 2000, Establishing a Framework for Community Activities in the Field of Water Policy (hereinafter: EU Water Framework Directive).

Article 4

Exchange of Data and Information

Pursuant to Article 3 of this Agreement, the Parties shall, on a regular basis, exchange information on the water regime of the Sava River Basin, the regime of navigation, legislation, organizational structures, and administrative and technical practices.

Article 5

Cooperation with International Organizations

In realization of this Agreement, the Parties shall especially cooperate with:

- a) The International Commission for Protection of Danube River (hereinafter: ICPDR);
- b) The Danube Commission;
- c) The United Nations Economic Commission for Europe (hereinafter: UN/ECE), and
- d) Institutions of the European Union.

Article 6

Cooperation with National Organizations (Authorities or Bodies)

- 1) The Parties agree to nominate organizations (authorities or bodies) competent for realization of this Agreement on the part of the Sava River Basin within their territories.
- 2) The Parties agree to inform the Chairman of the International Sava River Basin Commission (as established in Article 15 of this Agreement) of the nomination of the organizations (authorities or bodies) stated in paragraph 1 of this Article.

Article 7

Principle of Reasonable and Equitable Utilization of the Waters

- 1) The Parties are entitled, within their territories, to a reasonable and equitable share of the beneficial uses of the Sava River Basin water resources.
- 2) Reasonable and equitable share within the meaning of Paragraph 1 of this Article is to be determined in any particular case in light of the relevant factors according to international law.

Article 8

Transboundary Impact

- 1) The Parties shall agree on how to regulate all issues concerning measures aimed at securing integrity of the water regime in the Sava River Basin and the elimination or reduction of transboundary impacts on the waters of the other parties caused by economic or other activities.
- 2) For that purpose, the Parties shall, by separate protocol, regulate the procedures for the issuance of water law acts (licenses, permits and confirmations) for installations and activities that may have a transboundary impact on the integrity of the water regime.

Article 9

No Harm Rule

The Parties shall, in utilizing waters of the Sava River Basin in their territories, cooperate and take all appropriate measures to prevent causing significant harm to other Party(ies).

PART THREE
AREAS OF CO-OPERATION

Article 10
Regime of Navigation

- 1) Navigation on the Sava River from Sisak to the mouth of the Danube River and on all navigable parts of the Sava tributaries shall be open to merchant vessels of any state.
- 2) The provision in Paragraph 1 of this Article shall not apply to transport between ports within the territory of one Party.
- 3) Merchant vessels shall be free to enter the ports on navigable waterways referred to in paragraph 1 of this Article for the purpose of loading or unloading, re-supply or other related operations, provided they observe the national regulations of the Party in whose territory the port is situated, as well as the rules passed by the International Sava River Basin Commission.
- 4) The Parties shall undertake measures to maintain the waterways within their territories in navigable condition, as well as to undertake measures to improve the conditions of navigation and not to prevent or obstruct navigation.
- 5) The navigation of vessels of war, vessels performing police or administrative functions or in general exercising any other form of public service is not allowed outside of the boundaries of the State whose flag is flying unless otherwise agreed to by the concerned Parties.
- 6) The Parties agree to regulate by a separate Protocol on the Regime of Navigation, all issues regarding navigation, such as:
 - a) Institutional arrangements (rules of navigation, technical rules for vessels, marking of navigable waterways, etc.);
 - b) Expenses relating to the maintenance of navigable waterways and the regime of navigation.
- 7) Determination of the fairway of the Sava River and its navigable tributaries that form the border between Bosnia and Herzegovina and the Republic of Croatia remains exclusively within the jurisdiction of those two states.
- 8) Determination of the fairway of the Sava River and its navigable tributaries that form the border between Bosnia and Herzegovina and the Federal Republic of Yugoslavia remains exclusively within the jurisdiction of those two states.

Article 11

Sustainable Water Management

The Parties agree to cooperate on management of the waters of the Sava River Basin in a sustainable manner, which includes integrated management of surface and ground water resources, in a manner that shall provide for:

- a) Water in sufficient quantity and of appropriate quality for the preservation, protection and improvement of aquatic eco-systems (including flora and fauna and eco-systems of natural ponds and wetlands);
- b) Waters in sufficient quantity and of appropriate quality for navigation and other kinds of use/utilization;
- c) Protection against detrimental effects of water (flooding, excessive groundwater, erosion and ice hazards);
- d) Resolution of conflicts of interest caused by different uses and utilizations; and
- e) Effective control of the water regime.

Article 12

The Sava River Basin Management Plan

- 1) The Parties agree to develop joint and /or integrated Plan on the management of the water resources of the Sava River Basin and to cooperate on its preparatory activities.
- 2) The Sava River Basin Management Plan shall be adopted by the Parties on the proposal of the International Sava River Basin Commission.
- 3) Cooperation stated in Paragraph 1 of this Article shall be coordinated with activities of the ICPDR.
- 4) All issues concerning the preparation and realization of the Sava River Basin Management Plan may be regulated with separate protocols.

Article 13

Extraordinary Impacts on the Water Regime

- 1) The Parties shall establish a coordinated or joint system of measures, activities, warnings and alarms in the Sava River Basin for extraordinary impacts on the water regime, such as sudden and accidental pollution, discharge of artificial accumulations and retentions caused by collapsing or inappropriate handling, flood, ice, drought, water shortage, and obstruction of navigation.
- 2) In realization of the obligation in paragraph 1 of this Article, the Parties shall act in accordance with activities undertaken in the framework of The Convention for Protection and Sustainable Use of Danube River and in the scope of the procedures agreed within the ICPDR.

PART FOUR
MECHANISM OF CO-OPERATION

Article 14
Meeting of the Parties

- 1) The first Meeting of the Parties shall be convened no later than one year after the date of entry into force of this Agreement. Thereafter, an ordinary Meeting of the Parties shall be held at least once every two years, unless otherwise decided by the Parties, or at the written request of any Party.
- 2) At their Meetings, the Parties shall keep under continuous review the implementation of this Agreement on the basis of reports of the International Sava River Basin Commission, and shall:
 - a) Review the work and operations of the International Sava River Basin Commission and make decisions based on its recommendations;
 - b) Consider and adopt proposals for protocols and amendments to this agreement; and
 - c) Consider and undertake any additional action that may be required for the achievement of the purposes of this Agreement.
- 3) All decisions of the Meeting of the Parties shall be made by consensus.

Article 15
International Sava River Basin Commission

- 1) For the implementation of this Agreement, the Parties shall establish the International Sava River Basin Commission (hereinafter: Sava Commission).
- 2) The Sava Commission shall have the international legal capacity necessary for the exercise of its functions.

Article 16
Functions of the Sava Commission

- 1) For the realization of this Agreement, the Sava Commission shall make:
 - a) Decisions aimed to provide conditions for safe navigation;
 - b) Decisions on the conditions for financing construction of navigable waterways and their maintenance;
 - c) Decisions on its own work, budget and procedures; and
 - d) Recommendations on all other issues regarding realization of this Agreement.
- 2) Decisions of the Sava Commission referred to in Paragraph 1 of this Article shall be binding upon all the Parties unless, for the decisions referred to under a) and b), any of the Sava Commission members withdraws his/her vote within 30 days after a decision has been made, or informs the Sava Commission that the decision is subject to the approval of the relevant authority of his/ her State.

Article 17
Financing the Sava Commission

The Sava Commission shall be financed by regular annual contributions of the Parties and from other sources.

Article 18
Secretariat

- 1) The Sava Commission shall establish a Secretariat.
- 2) The Secretariat shall be run by a Secretary who shall have three Deputies.
- 3) The Secretary shall be responsible to the Sava Commission.

Article 19
Seat of the Sava Commission

- 1) The seat of the Sava Commission shall be _____.
- 2) The Sava Commission is authorized to conclude a Seat Agreement with the host country on the exercise of its functions.
- 3) The Parties may agree to change the seat of the Sava Commission.

Article 20
Statute

- 1) The Sava Commission has a Statute, which is a part of this Agreement as Annex I.
- 2) All issues related to the work of the Sava Commission and its Secretariat shall be regulated by Statute.

Article 21
Monitoring Implementation of the Agreement

- 1) The Parties agree to establish a methodology of permanent monitoring of implementation of the Agreement and activities based upon it.
- 2) The implementation monitoring methodology will include timely provision of information to stakeholders and the general public by the authorities responsible for implementation of the Agreement.
- 3) The Parties shall establish an implementation monitoring methodology within two years after the Agreement has entered into force.

PART FIVE
DISPUTE SETTLEMENT

Article 22
General Provisions

- 1) If a dispute arises between two or more Parties about the interpretation or implementation of this Agreement, they shall seek a solution by negotiation.
- 2) If the concerned parties are unable to resolve the dispute through negotiation, upon the request of one of the concerned parties, they may jointly seek good services, mediation or conciliation from a third party, or they may agree to refer the dispute to arbitration in accordance with Annex II of this Agreement, or to the International Court of Justice.
- 3) If, within six months from submitting a request as stated in Paragraph 2 of this Article, the concerned parties are unable to resolve the dispute through negotiation, good services, mediation or conciliation, any Party concerned may request that an independent fact-finding expert committee be established.

Article 23
Fact-Finding Expert Committee

- 1) The Fact Finding Expert Committee (hereinafter: Committee) shall be composed of three experts. Each Party in dispute shall appoint one expert. These two experts shall select by common agreement a third expert who is not a citizen of any concerned Party and who shall be chairman of the Committee.
- 2) If one side in dispute consists of two or more Parties of the Agreement they shall jointly appoint one expert of the Committee.
- 3) If the nominated members of the Committee are unable to decide on the selection of a chairman within three months of the submission of the request for establishing the Committee, each concerned party may request the President of the International Court of Justice to nominate a chairman, who shall not be citizen of any concerned Party.

Article 24
Role of the Fact Finding Expert Committee

- 1) The Committee shall adopt its rules of procedure.
- 2) The concerned Parties are obliged, upon the request of the Committee, to provide all information regarding the dispute and to permit the Committee to enter its territories and to inspect locations, installations and equipment necessary to its work, in accordance with national legislation.
- 3) The Parties and experts of the Committee shall protect the confidentiality of any information they receive in confidence during the work of the Committee.

- 4) The Committee shall adopt by majority vote the report of its findings including an explanation of the findings. If the report is not adopted by unanimous vote, a dissenting opinion may be submitted and shall be included in the report.
- 5) The Committee shall submit the report to the concerned parties within two months of the date on which it was established, unless it finds it necessary to extend this period for not more than next two months.
- 6) Expenses of the Committee shall be borne equally by the concerned parties.

PART SIX
FINAL PROVISIONS

Article 25
Annexes

The annexes to this Agreement shall constitute an integral part thereof.

Article 26
Amendments to the Agreement

- 1) Any Party may propose amendments to this Agreement.
- 2) The text of any proposed amendment shall be submitted in writing to the Secretariat, who shall communicate it to all Parties at least ninety days before the meeting of the Parties at which it is proposed for adoption.
- 3) The Parties shall adopt any proposed amendment by consensus. The Chairman of the Sava Commission shall notify the Depositary of any amendments adopted by the Parties.
- 4) Amendments shall enter into force, *mutatis mutandis*, in accordance with the procedure referred to in Article 28 of this Agreement.

Article 27
Reservation

No reservations may be made to this Agreement.

Article 28
Duration and Entering into Force

- 1) This agreement shall be concluded for an indefinite period of time.
- 2) This Agreement shall be subject to ratification.
- 3) Instruments of ratification shall be lodged as soon as possible with the Depositary identified in Article 33 of this Agreement. The Depositary shall inform the Parties of the date of deposit of each instrument of ratification.
- 4) This Agreement shall enter into force on the thirtieth day after the date of deposit of the fourth instrument of ratification. The Depositary shall notify the Parties of the date of the entry into force of the Agreement.

Article 29

Other Agreements

- 1) Nothing in the present Agreement shall affect the rights or obligations of a Party arising from any agreement that is in force on the date on which this Agreement comes into force.
- 2) For the implementation of this Agreement the Parties may enter into bi- or multi-lateral agreements or arrangements, which shall not be in conflict with this Agreement.
- 3) The Parties shall agree to adapt existing bilateral agreements, if necessary, to avoid contradictions with basic principles of this Agreement.

Article 30

Protocols

- 1) In implementing this Agreement, the Parties shall, in addition to the protocols referred to in other provisions of this Agreement, conclude other protocols for regulating:
 - a) Protection against flood, excessive groundwater, erosion, ice hazards, drought and water shortages;
 - b) Water use/utilization;
 - c) Exploitation of stone, sand, gravel and clay;
 - d) Protection and improvement of water quality and quantity;
 - e) Protection of aquatic eco-systems;
 - f) Prevention of the water pollution caused by navigation, and
 - g) Emergency situations.
- 2) The Parties may agree to conclude other protocols necessary for the implementation of this Agreement.

Article 31

Termination and Withdrawal

- 1) This Agreement may be terminated by mutual agreement of all Parties.
- 2) Any Party to this Agreement may withdraw from this Agreement by giving written notice to the Depository of this Agreement, who shall immediately communicate to the Parties.
- 3) Such notice of withdrawal shall take effect one year after the date of its receipt by the Depository, unless such notice is withdrawn beforehand or the Parties mutually agree otherwise.
- 4) Unless all remaining Parties agree otherwise, a withdrawal as referred to in Paragraph 2 of this Article shall not release the notifying Party from any of its commitments concerning programs, projects, and studies begun under this Agreement.

Article 32
International Borders

Establishing and marking of interstate borders among the Parties shall not be affected by any provision of this Agreement or its implementation.

Article 33
Depositary

- 1) One original of this Agreement shall be deposited by the Government of the Party in whose territory signing of this Agreement shall take place with the Secretary-General of the United Nations. The Secretary-General of the United Nations shall act as Depositary.
- 2) The Depositary shall, upon entry into force of this Agreement, ensure its registration in accordance with Article 102 of the Charter of the United Nations.

Done at _____ on _____ in five originals in the English language, one to be retained by each Party, and one to be deposited with the Depositary.

(followed by signatures)

Sava Interim Action Plan for the “Water Management” Sector

**Project Fiches 6 – 11 from the “Water Management” Sector including
description of support from UNDP/GEF DRP**

PROJECT FICHE

Project No:	Project Sector: Water Management				
Project Name:	Revision and Improvement of the Existing Flood Control Systems				
Nature Project:	New	Rehabilitation	Upgrade	Other	
Location:	Sava River Basin (Slovenia, Croatia, BiH and Serbia and Montenegro)				
Status of Project:	Identification	Planning	Study	Design	Pre-Procurement
Project Objectives:	Joint prevention of floods				
Project Description:	Existing flood control systems for four countries are not adequate, they are not linked. In order to develop and harmonize flood control in Sava River Basin establishment of The Joint Plan for unique harmonized flood control is needed. An adequate revision of existing systems and water forecast in four countries within SRB is the basis for the improvement of the present situation, realization of The Joint Flood Control Plan and manuals for functions of reservoirs and retentions				
Estimated Investment Cost (EURO)	2.000,000EUR				
Expected Benefits:	Mitigation of flood damages and implementation of emergency measures				
Existing Reports and activities:	<i>Title:</i> _____ <i>Author:</i> ICPDR (WM/EG and APC/EG) _____ <i>Date:</i> _____ <i>Source:</i> _____				
Implementation Program (years)	Preparation:	Expropriation:	Construction:	TOTAL: 2 years	
Implementation Authority:	International Sava River Basin Commission				
Implementation Risks and Assumptions:	No				

ELEMENTS OF REGIONAL COOPERATION

Regional dimension	In which way(s) this project is fostering regional cooperation? Improvement flood and pollution management in Sava River Basin
In which way this project can enhance Sava Commission -basic, -functional, -instrumental role/function as here described	X Basic: to trigger political dialogue and confidence – building measures; X Functional: to devise and enhance the operational advantage brought about by political dialogue and confidence building measures; X Instrumental: to link the devised programs in line with EU integration initiatives and the adoption of international convention and standards.
Which instrument/ decision Sava Commission could take in order to: Advance/accompany/c omplement the project	Use all instruments as listed in Article 4 of Statute of International Sava River Basin Commission
Contribution of the countries (completed/planned)	Slovenia, Croatia, Serbia and Montenegro and BiH human resources and location for installation of equipment
International support (received/pledged)	None
International support needed	Technical and financial assistance (Hardware, software and training)
Which areas of cooperation as listed in FASRB will project include	Article 2c
Additional measures to be taken in accordance with WFD if required (e.g. economic analysis)	No

PROJECT FICHE

Project No:	Project Sector: Water management				
Project Name:	Improvement of the monitoring system of water quantity and quality parameters				
Nature Project:	New	Rehabilitation	Upgrade	Other	
Location:	Sava River Basin (BiH and Serbia and Montenegro)				
Status of Project:	Identification	Planning	Study	Design	Pre-Procurement
Project Objectives:	Establishing and operating the Joint Programme for the monitoring of water status within Sava River Basin district				
Project Description:	Existing monitoring, laboratory and information managements in four countries are not linked and harmonized. In order to establish and implement Joint Programme for the monitoring of water status within SRB, existing monitoring systems of water quantity and quality parameters have to be improved and unit in one, harmonized system. This system has to be developed in accordance with the system being developed in the Danube River Basin. To achieve that an adequate hardware and software are necessary.				
Estimated Investment Cost (EURO)	1 000 000 EUR				
Expected Benefits:	Implementation of the Programme of measures for preservation, protection and improvement of aquatic eco-system within Sava River Basin				
Existing Reports and activities:	<i>Title:</i> _____ <i>Author: ICPDR (MLIM/Expert group)</i> _____ <i>Date:</i> _____ <i>Source:</i> _____				
Implementation Program (years)	Preparation: 6 months	Expropriation:	Construction: 12 months	TOTAL:	
Implementation Authority:	International Sava River Basin Commission				
Implementation Risks and Assumptions:	No				

ELEMENTS OF REGIONAL COOPERATION

Regional dimension	In which way(s) this project is fostering regional cooperation? In improving monitoring, laboratory and information management within SRB
In which way this project can enhance Sava Commission -basic, -functional, -instrumental role/function as here described	X Basic: to trigger political dialogue and confidence - building measures; X Functional: to devise and enhance the operational advantage brought about by political dialogue and confidence building measures; X Instrumental: to link the devised programs in line with EU integration initiatives and the adoption of international convention and standards.
Which instrument/ decision Sava Commission could take in order to: Advance/accompany/c omplement the project	Use all instruments as listed in Article 4 of Statute of International Sava River Basin Commission
Contribution of the countries (completed/planned)	Slovenia and Croatia Know How from existing practise, BiH and Serbia and Montenegro human resources and locations for installation and equipment
International support (received/pledged)	None
International support needed	Technical and financial assistance (Hardware, software and training)
Which areas of cooperation as listed in FASRB will project include	Article 2 b
Additional measures to be taken in accordance with WFD if required (e.g. economic analysis)	No
Support from the UNDP-GEF Danube Regional Project	In the frame of the Project Component 2.2: “Development of operational tools for monitoring, laboratory and information management and for emission analysis”, the Danube Regional Project will assist the Danube countries do develop, upgrade and reinforce capacities of tools for emission control and monitoring of water quality. Particular attention will be given to: <ul style="list-style-type: none"> ▪ Harmonization of water quality standards and quality assurance for nutrients and toxic substances; ▪ Further development of databases for EMIS / MLIM in order to assess environmental stress and impacts,

	<ul style="list-style-type: none">▪ Optimization of TNMN and identifying sources and amounts of transboundary pollution for substances on the list of EU and DRPC priority substances▪ Organization of workshops to support strengthening of operational tools for monitoring, laboratory and information management and for emission analysis from point and non-point sources of pollution <p>Planned budget for this project component (2002-2006): 400,000 EURO</p>
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PROJECT FICHE

Project No:	Project Sector: Water Management				
Project Name:	Development Strategy for River Basin Management Plan in Sava River Basin				
Nature Project:	New	Rehabilitation	Upgrade	Other	
Location:	Sava River Basin (Slovenia, Croatia, BiH and Serbia and Montenegro)				
Status of Project:	Identification	Planning	Study	Design	Pre-Procurement
Project Objectives:	Establishing and operating the Joint Strategy for the RBMP within Sava River Basin district				
Project Description:					
Estimated Investment Cost (EURO)					
Expected Benefits:					
Existing Reports and activities:	<i>Title:</i> _____ <i>Author:</i> ICPDR (WM/EG) and GEF _____ <i>Date:</i> _____ <i>Source:</i> _____				
Implementation Program (years)	Preparation:	Expropriation:	Construction:	TOTAL:	
Implementation Authority:	International Sava River Basin Commission				
Implementation Risks and Assumptions:	No				

ELEMENTS OF REGIONAL COOPERATION

Regional dimension	In which way(s) this project is fostering regional cooperation? Establishment of joint water management in Sava River Basin district
In which way this project can enhance Sava Commission -basic, -functional, -instrumental role/function as here described	X Basic: to trigger political dialogue and confidence – building measures; X Functional: to devise and enhance the operational advantage brought about by political dialogue and confidence building measures; X Instrumental: to link the devised programs in line with EU integration initiatives and the adoption of international convention and standards.
Which instrument / decision Sava Commission could take in order to: Advance /accompany /complement the project	Use all instruments as listed in Article 4 of Statute of International Sava River Basin Commission
Contribution of the countries (completed/planned)	
International support (received/pledged)	
International support needed	Technical and financial assistance (Hardware, software and training)
Which areas of co-operation as in FASRB will project include	Article 2c and 12
Additional measures to be taken in accordance with WFD if required	No
Support from the UNDP-GEF Danube Regional Project	The UNDP-GEF Danube Regional Project will support the development of a pilot plan for the Sava River Basin through defining concepts for common approaches methodologies, standards and guidelines and formulating recommendations for implementation strategies and program of measures likely to be effective in the transboundary context. The Project shall carry out a situation analysis, examine availability of information, data and institutional capacities to carry out the development of a pilot plan. In this context, the requirements of the EU WFD and also other activities of the GEF Project shall be taken into account. A “Roof Report” for the Sava River Basin taking into account the guidelines laid down in the Strategic Paper for the Development of a River Basin District Management Plan of the ICPDR shall be available in 2006. Planned budget for Sava (2002-2006): 280,000 EURO

PROJECT FICHE

Project No:	Project Sector: Water Management				
Project Name:	Development of Tools for Information Sharing for the SRB				
Nature Project:	New	Rehabilitation	Upgrade	Other	
Location:	Sava River Basin (Slovenia, Croatia, BiH and Serbia and Montenegro)				
Status of Project:	Identification	Planning	Study	Design	Pre-Procurement
Project Objectives:	to provide support to the implementation of the Framework Directive by ensuring a smooth flow of information between countries to increase post-war remediation and improve international framework for public safety by short-term and long-term activities related to the water management, monitoring, water quality protection and reduction of pollution of the Sava River Basin, as well as flood control.				
Project Description:	<p>The River Basin Management Planning and coordination for establishment warning system within the Sava River Basin needs a specific understanding and links between involved countries. Development of coherent and common information system is the first stage for integrate and harmonize approach to produce a unique management plan for the SRB. Three main levels of information sharing can be identified: Sava river basin level, bilateral / multilateral level and national level.</p> <p>The first step in setting up this project is to conduct a needs assessments for each country and after that, for all community. The identified needs will be grouped thematically and these groups will be used to define needed applications as realistic and reasonable tools for the coordination in SRBD.</p> <p>The results will be Joint Programme and Plan for selection of the transboundary information issues, selection of the best applicable practice and coordination for networking in exchanging information on all levels for short-term and long-term activities related to the warning system, flood control, monitoring, water quality protection and reduction of pollution, and for developing training programmes for water managers in appropriate technique applied to the countries, and actions for educating the public.</p>				
Estimated Investment Cost	1.000.000 €				
Expected Benefits:	a success in shared basin management				
Existing Reports and activities:	<i>Title:</i> _____ <i>Author: ICPDR</i> _____ <i>Date:</i> _____ <i>Source:</i> _____				
Implementation Program (years)	Preparation:	Expropriation:	Construction:	TOTAL: 12 months	
Implementation Authority:	International Sava River Basin Commission				
Implementation Risks and Assumptions:	No				

ELEMENTS OF REGIONAL COOPERATION

Regional dimension	In which way(s) this project is fostering regional cooperation? Improving regional cooperation
In which way this project can enhance Sava Commission -basic, -functional, -instrumental role/function as here described	X Basic: to trigger political dialogue and confidence - building measures; X Functional: to devise and enhance the operational advantage brought about by political dialogue and confidence building measures; X Instrumental: to link the devised programs in line with EU integration initiatives and the adoption of international convention and standards.
Which instrument/ decision Sava Commission could take in order to: Advance/accompany/ complement the project	Use all instruments as listed in article 4 of Statute of International Sava River Basin Commission
Contribution of the countries (completed/planned)	Work of their experts
International support (received/pledged)	None
International support needed	financial assistance and training
Which areas of cooperation as listed in FASRB will project include	Article 2b i 2c
Additional measures to be taken in accordance with WFD if required (e.g. economic analysis)	No
Support from the UNDP-GEF Danube Regional Project	In the frame of the Project Component 2.4: “Support for reinforcement of the ICPDR Information System”, the Danube Regional Project will provide further professional/technical and financial support for the build-up and extension of the DANUBIS to assure adequate administration of the information and reporting obligations under the DRPC. Particular attention will be given to: <ul style="list-style-type: none"> ▪ Further development of the ICPDR Information System and ensure that it is used by its expert groups and other operational bodies ▪ Linking all Contracting Parties of the ICPDR and other participating countries to DANUBIS, which implies the

	<p>development and implementation of national linkages and the establishment of operational units to communicate also in case of accidental emergency situations;</p> <ul style="list-style-type: none"> ▪ Reinforcement of the DANUBIS through the implementation of an interactive web-site to integrate further textual, numerical and digital mapping information and to fulfill all requirements of the work of the nutrient reduction programme , respectively the work of the ICPDR and the GEF Project (communication, monitoring, public information, etc.); ▪ Launching of training at the national level and organization of series of workshops in order to train and assist future users in the best use of the tools made available by the system. <p>Planned budget for this project component (2002-2006): 600,000 EURO</p>
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PROJECT FICHE

Project No:	Project Sector: Water Management				
Project Name:	Establishment of the Joint Warning System for Flood Control and Accidental Pollution				
Nature Project:	New	Rehabilitation	Upgrade	Other	
Location:	Sava River Basin (Slovenia, Croatia, BiH, Serbia and Montenegro)				
Status of Project:	Identification	Planning	Study	Design	Pre-Procurement
Project Objectives:	Prevention of floods and accidental pollution				
Project Description:	Existing warning systems for four countries are not adequate, they are not linked and harmonized. In order to improve and harmonize the system in Sava River Basin establishment of unique harmonized system is needed. This harmonized system has to be harmonized with the system being developed in the Danube River Basin. To achieve that an adequate hardware and software is necessary.				
Estimated Investment Cost (EURO)	500,000 EUR				
Expected Benefits:	Mitigation of flood damages and implementation of emergency measures				
Existing Reports and activities:	<i>Title:</i> _____ <i>Author: ICPDR (APC/EG)</i> _____ <i>Date:</i> _____ <i>Source:</i> _____				
Implementation Program (years)	Preparation: 6 months	Expropriation:	Construction: 6 months	TOTAL:	
Implementation Authority:	International Sava River Basin Commission				
Implementation Risks and Assumptions:	No				

ELEMENTS OF REGIONAL COOPERATION

Regional dimension	In which way(s) this project is fostering regional cooperation? Improvement flood and pollution management in Sava River Basin
In which way this project can enhance Sava Commission -basic, -functional, -instrumental role/function as here described	X Basic: to trigger political dialogue and confidence – building measures; X Functional: to devise and enhance the operational advantage brought about by political dialogue and confidence building measures; X Instrumental: to link the devised programs in line with EU integration initiatives and the adoption of international convention and standards.
Which instrument/ decision Sava Commission could take in order to: Advance/accompany/c omplement the project	Use all instruments as listed in Article 4 of Statute of International Sava River Basin Commission
Contribution of the countries (completed/planned)	Slovenia and Croatia Know How from existing practice, Serbia and Montenegro and BiH human resources and location for installation of equipment
International support (received/pledged)	None
International support needed	Technical and financial assistance (Hardware, software and training)
Which areas of cooperation as listed in FASRB will project include	Article 2c
Additional measures to be taken in accordance with WFD if required (e.g. economic analysis)	No
Support from the UNDP-GEF Danube Regional Project	In the frame of the Project Component 2.3: “Improvement of procedures and tools for accident emergency response with particular attention to transboundary emergency situations”, the Danube Regional Project will support the Danube countries to carry out activities for accident emergency warning and prevention of accident pollution. Particular attention will be given to: <ul style="list-style-type: none"> ▪ Reinforcement of operational conditions in the national AEPWS alert centers (PIACs) and geographical extension in Bosnia-Herzegovina and the FR of Yugoslavia; ▪ Support to completing and prioritisation of the Inventory of old contaminated sites in potentially flooded areas in the Danube River Basin ,

	<ul style="list-style-type: none">▪ Support to upgrade of the ARS Inventory providing the detailed analysis, distribution on sub-basin and industry branches and implementation of the check-lists,▪ Maintenance and calibration of the Danube Basin Alarm Model (DBAM), to predict the propagation of the accidental pollution and evaluate temporal, spatial and magnitude characteristics in the Danube river system and to the Black Sea;▪ Organization of workshops to reinforce cooperation in accidental emergency warning and development of preventive measures. <p>Planned budget for this project component (2002-2006): 300,000 EURO</p>
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PROJECT FICHE

Project No:	Project Sector: Water management				
Project Name:	Implementation of WFD – Testing guidance				
Nature Project:	New	Rehabilitation	Upgrade	Other	
Location:	Sub basins of Sava River Basin in Slovenia, Croatia, BiH and Serbia and Montenegro				
Status of Project:	Identificat ion	Planning	Study	Design	Pre-Procurement
Project Objectives:	Harmonization of methodology for specific issues according WFD for all Sava River Basin				
Project Description:	<p>Four riparian states of the Sava River Basin - Bosnia and Herzegovina, Republic of Croatia, Republic of Slovenia and Federal Republic of Yugoslavia signed Framework agreement on Sava River Basin. According that agreement the Parties shall cooperate in the process of the creation and realization of joint RBM plan in accordance with WFD. To help this activities CARDS regional program 2003 proposed regional project “Implementation of WFD in Sava River Basin”.</p> <p>In order to create joint RBMP and implement WFD Parties have to harmonize methodology for specific issues according WFD.</p> <p>According the EU Strategy for WFD implementation, as results of working groups are following guidance:</p> <ul style="list-style-type: none"> -Guidance on the analyses of pressures and impacts -Guidance on the designation of heavily modified water bodies -Classification and reference condition of rivers and lakes -Guidance for establishing the inter calibration network and inter calibration exercise -Guidance on economic analysis -Guidance on monitoring -Tools on assessment and classification of groundwater -Best practice in river basin planning -Guidance on GIS <p>Scope of this project is to test some of these guidance on 4 pilot areas on the territory of BIH, FRY, Slovenia and Croatia in the Sava river basin. In further development of the project countries will agreed which guidance and how many of them will be tested.</p> <p>Project will include following phases:</p> <ul style="list-style-type: none"> Phase 1. – training people who will work on testing Phase 2. –testing and exchange of experience through workshops Phase 3. –agreement of common methodology for implementation of WFD on Sava River Basin 				
Estimated Investment Cost	2 500 000 EUR				
Expected Benefits:	Improvement of cooperation and harmonized methodology				
Existing Reports and activities:	<p><i>Title:</i> _____</p> <p><i>Author: ICPDR (RBM/Expert group)</i> _____</p> <p><i>Date:</i> _____</p> <p><i>Source:</i> _____</p>				
Implementation Program (years)	Preparation: 1 year	Expropriation:	Construction: 1 year	TOTAL:	2 years
Implementation Authority:	International Sava River Basin Commission				
Implementation Risks and Assumptions:	Human capacity				

ELEMENTS OF REGIONAL COOPERATION

Regional dimension	In which way(s) this project is fostering regional cooperation? Development of common methodology for implementation of WFD in SRB through common trainings, workshops and on the final phase agreement on common methodology for implementation of WFD in SRB
In which way this project can enhance Sava Commission -basic, -functional, -instrumental role/function as here described	<input checked="" type="checkbox"/> Basic: to trigger political dialogue and confidence - building measures; <input checked="" type="checkbox"/> Functional: to devise and enhance the operational advantage brought about by political dialogue and confidence building measures; <input checked="" type="checkbox"/> Instrumental: to link the devised programs in line with EU integration initiatives and the adoption of international convention and standards.
Which instrument/ Decision Sava Commission could take in order to: Advance/accompany/complement the project	Use all instruments as listed in Article 4 of Statute of International Sava River Basin Commission
Contribution of the countries (completed/planned)	Human capacity, logistic
International support (received/pledged)	Pledged – CARDS REGIONAL 2003 , 2 500 000 EURO
International support needed	Technical and financial assistance (consultation, workshops and trainings)
Which areas of cooperation as listed in FASRB will project include	Article 2 point 2.
Additional measures to be taken in accordance with WFD if required (e.g. economic analysis)	No

UNDP-GEF Danube Regional Project

Terms of Reference

for

***" Development of the Sava River Basin
Management Plan"***

(Project Activity 1.1-9)

March, 2003

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OBJECTIVE 1: Creation of Sustainable Ecological Conditions for Land Use and Water Management

Output 1.1: Development and implementation of policy guidelines for river basin and water resources management

Activity: 1.1-9: Identify pilot river basins and apply common approaches, methodologies, standards and guidelines (taking into account relevant activities within the EU WFD implementation strategy)

A Background of the Relevant Project Objectives and Activities

This project will support the development of a pilot plan for the Sava River Basin. The mandate of the UNDP GEF Project in Phase 1 is to “define concepts for common approaches methodologies, standards and guidelines” These guidelines shall permit in the second Phase of the Project, to formulate “recommendations for implementation strategies and program of measures likely to be effective in the transboundary context”.

Phase 1 of the Project shall carry out a situation analysis, examine availability of information, data and institutional capacities to carry out the development of a pilot plan. In this context, the requirements of the EU WFD and also other activities of the GEF Project shall be taken into account.

The result of Phase II should be to provide in 2006 a “Roof Report” for the Sava River Basin taking into account the guidelines laid down in the Strategic Paper for the Development of a River Basin District Management Plan of the ICPDR.

B Description of the Required Services

The international consultant chosen for this *assignment is responsible for carrying out the necessary implementation steps for achieving all the specific outputs in the given time frame (see Annex 1.)* Thus, the consultant must be familiar with the DRP Project Document, the Inception Workshop Report and, in particular, the Project Implementation Plan (PIP.) All documents can be found at www.icpdr.org/undp-drp.

The international consultant will define data and information needed for the development of Sava RBM plan, and in cooperation with national consultants will examine their availability, reliability and compatibility and institutional capacities, in line with Work Plan for Producing the Danube River Basin Management Plan (WP):

1. Emission inventory (hot spots)
2. Identification and assessment of pressure and impacts – WP 3.4 from point and diffuse sources
3. Identification of heavily modified water bodies – WP 3.2
4. Identification and assessment of pressures and impacts – WP 3.4 from hydromorphological pressures
5. Typology of water bodies
6. Review and analyze causes and effects from human activities on groundwater bodies from point and diffuse sources – WP 3.5
7. WP 4.1: Inventory of protected areas for economically significant aquatic species and for species and habitat protection areas – Annex IV, 1. (ii) and (v)
8. WP 4.2: Inventory of protected areas for drinking water abstraction, recreational waters including bathing waters and nutrient-sensitive areas – Annex IV, 1. (i), (iii), (iv)
9. Monitoring Networks

In addition data and information will be analyzed in relation to the PIP of the UNDP/GEF DRP concerning:

1. Nutrient reduction from agricultural point and non-point sources of pollution (agriculture policy reforms, introduction of Best Agriculture Practices for animal farming and concept of organic farming, etc.)
2. Appropriate land use and inventory of protected areas
3. Public participation (role of NGOs and the private sector)

Other data and information related to population, water management (water usage, consumption, water balance, etc.) and to economic activities (agriculture, industries and mining and service industry) should be also reviewed.

The consultants shall further examine in how far other components of the UND/GEF DRP could be linked or preferably carried out in relation with this project component.

The results shall be presented in form of a situation analysis with particular attention to data, information and institutional capacities. The report shall also identify environmental key issues related to water pollution and water management. Further, the consultant shall provide a detailed work program for Phase II of the project and define the inputs to be expected from the UNDP/GEF project, from the national level and eventually from other sources.

The results in particular the work program for Phase II of the project shall be discussed in the frame of a regional workshop, prepared and conducted by the international consultant.

The international consultant will develop the TOR for national consultants and will assist the DRP staff in process of their selection.

C Duration and Timing

The period foreseen for this activity is March 2003- October 2003.

D Monitoring/Progress Reporting

The consultant is expected to submit an inception report detailing full course of work, time frame as well as special considerations. The report should be submitted within 1 month of signing the contract.

The DRP project staff will then monitor project progress via the review of the outputs submitted.

E Definition of Expected Outputs/Results

The overall output of this assignment will be a situation analysis of the Save River Basin assessing data, information and institutional capacities. The specific outputs will include the following:

Outputs	Time Frame for Delivery
• Inception report	• April 2003
• Draft Work Program for Phase II	• September 2003
• Workshop	• October 2003
• Final report	• October 2003

F Implementation Arrangements

The work will be carried out by an international consultant working with national consultants in each of the four countries and in close cooperation with the Small Working Group of representatives of Sava countries, RBM Expert Group and other bodies of the ICPDR. It is assumed that the project will receive full support from the Sava Basin Initiative and be an integral part of its expert bodies.

A number of other pilot activities are being undertaken in the frame of other UNDP/GEF DRP activities. The consultant is required to coordinate closely with the DRP project staff and then other consultants involved in pilot activities to assure a maximum of synergy in the respective activities.

G Profile of the International Consultant

International consultant with experience in and knowledge of:

- the Danube River Basin and related water protection policy and activities;
- River Basin Management planning, policy and measures in relation to EU water legislation, in particular including the EU WFD;
- Save River Basin;

H Budget

Item	Unit	Number	Amount USD
International Expertise	Month	4	
National Expertise	Month	4	
Workshops	Number	1	
SWG Meetings	Number	3	
Travel			
Total			

2nd Sava Working Group Meeting
and
Inception Workshop for the UNDP/GEF Project Component 1.1-9
“Development of the Pilot RBM Plan for the Sava”
on 7-8 April 2003 at Country Inn hotel, Vienna

Summary and Results of Meeting

1. Opening of the Meeting

Mr Joachim *Bendow*, Executive Secretary of the ICPDR, welcomed all participants and stressed in his *introductory remarks* that the Danube became a European model region for trans-boundary cooperation and for the implementation of the EU WFD. The Sava river basin, as a “copy of the Danube river basin”, will become the ICPDR pilot region for the preparation of a WFD Sub-basin Management Plan

Existing **framework conditions** for the Sava region are:

- the **ICPDR** network and its Expert Groups capacities
- the cooperation among **Sava basin countries**
- the Sava Initiative under the Balkan Stability Pact with new **Dutch government assistance**
- the new **GEF support** in form of the Sava RBM Plan component 1.1-9 and
- the “*Sava Working Group*” as a link between these stakeholders.

Attending participants of the meeting were:

Mr. Ivan ZAVADSKY, UNDP/GEF Project Team
 Mr. Joachim BENDOW, ICPDR Permanent Secretariat
 Ms. Ursula SCHMEDITJE, ICPDR Permanent Secretariat
 Mr. Uros KRAJNC, Slovenia
 Ms. Karmen CERAR, Croatia
 Mr. Danko BIONDIC, Croatia
 Mr. Borislav JAKSIC, Bosnia-Herzegovina
 Mr. Zdravko TUVIC, Serbia and Montenegro
 Mr. Jovan DESPOTOVIC, Serbia and Montenegro
 Mr. Alexander ZINKE, consultant for the GEF component
 Mr. Henk Zingstra, IAC, Netherlands
 Mr. Herman WINKELS, RWS-RIZA, Netherlands
 Mr. Jos VAN GILS, Delft Hydraulics, Netherlands (*only 7 April*)
 Mr. Leonard TERWEIJ, TA@, Netherlands
 Ms. Sabine VAN ROOIJ, Alterra, Netherlands.

The meeting started on 7 April at 11:00 and ended on 8 April at 13:00, completing all agenda points.

Objectives of the meeting were to discuss the planned Sava RBM Plan (Inception Phase of the GEF component), and to assess links and possible cooperation between the ICPDR and the new Dutch assistance for the Sava region.

2. UNDP/GEF Danube Regional Project

Mr Zavadsky presented the GEF-DRP component 1.1-9 “Development of a Sava RBM Plan” (general support to ICPDR, Terms of Reference). Objective is to produce an overview (“Sava River Basin Roof Report”) to better meet the future reporting needs in the 4 riparian countries; expected outputs will be a *Situation Analysis* (to be compiled by national consultants under the guidance of an international consultant) and a *Work Programme for Phase II* (2004-2006) which will be discussed at an *international workshop* in October 2003.

Country comments to the GEF component were very positive (“*Let’s do Phase I and see where problems exist*”, “*We are grateful for being pushed*”).

Mr. Bendow and Mr. Zavadsky stressed that this activity will not replace or speed up the national process to implement the WFD but it will facilitate the work and support the Sava countries. A specific link will be made to the CARDS project (see point 3).

Mr. Zinke presented the Issue List and Draft Work Plan for Phase I (April to October 2003). Objective is to collect and update all available information and assess the gaps to be filled in during Phase II in order to prepare the Sava RBM Plan (Roof Report). Particular use will be made of parallel GEF Project activities presently analysing and updating e.g. emissions, national economies, agriculture or protected area inventories.

Mr. Zavadsky explained that the National Consultants working will soon be contracted by the GEF office but should be suggested by the 4 governments.

Ms Cerar requested to comment the **questionnaires**, being prepared for national consultants work, by the 4 countries (as is being done for the template of the Economies Expert Group).

Ms. Schmedtje informed that certain WFD-relevant information is still under development; for instance for Heavily Modified Water Bodies only data on *potential HMWB* can be prepared.

Ms. Van Rooij requested complementing analysis to be made on the **availability of spatial data** (inventory of meta information about national maps and digital information). Mr. Biondic recommended to include the Ispra JRC in this map review; Mr. Despotovic and Mr. Jaksic informed that aerial films were made for some Serb-Montenegrin areas (e.g. TEN corridors) resp. will be made for entire B-H. It was agreed that this overview can be provided by the Dutch project (see below).

3. New Netherlands project “Water and Ecosystems”

Mr. Zingstra presented the objectives and present status of the Dutch assistance to Sava basin countries. He stressed the Dutch interest and need to involve and cooperate with ICPDR and the GEF project.

The Dutch assistance concentrates on:

1. Institutional development, especially for the (*Interim*) *Sava River Basin Commission*
2. Knowledge exchange
3. Inter-sectoral cooperation
4. Methodological development (incl. WFD), e. g.:
 - Sava GIS
 - integrated flood prevention scheme (e.g. levee reconstruction: see Sava Action Plan)
 - protection of floodplain ecosystem (e.g. gap analysis, eco-network like on Meuse)
 - improved water quality management

The Work Plan for this project will be prepared until the middle of May and will respond to the Sava needs.

Mr. Bendow stated that the **ICPDR offers to provide support for the development of the Sava RBC, but suggests coherence in approach, structures and organizational mechanisms.**

After discussion the following **recommendations** for the Dutch project were agreed:

- Make use of ICPDR and GEF documents and data bases (e.g. via the Secretariat) and link with national and international experts already active within the ICPDR network (e.g. GIS, LISFLOOD) but do not introduce new models or concepts;
- Support ongoing ICPDR activities by filling in the “remaining” information and knowledge gaps (e.g. complement protected area inventories; typology and reference conditions, ecological classification system for surface waters) for Sava RB; maps overview; flood control needs);
- Assure good coordination of activities and contacts by first contacting the ICPDR Secretariat as the DRB region’s focal point; contact the relevant Expert Group to agree on planned approach.

3. EU-CARDS Project “Pilot River Basin Plan” (HR, B-H, S-M)

This 3 years project is presently being prepared for submission at the European Commission, with the objective to support the development of the Sava Sub-basin Management Plan (Roof Report), and to test the implementation of EU-WFD guidelines in selected catchments (HR: Dobra river; B-H: Vrbas river; S-M: Bosut river). A complementing project (Krka river) was submitted by Slovenia under ISPA funding.

4. Future cooperation and coordination

The **Sava Working Group** (Joint Technical WG) will serve as a link between the ICPDR (esp. RBM EG) and the Sava Basin Commission for the development of the Sava RBM Plan.

ICPDR/GEF-DRP: Mr. Zavadsky informed that for Phase II, a new GEF Project Document will be prepared in summer 2003 in consultation with the ICPDR Expert Groups and also the Sava Working Group. In June, the Draft Report of the GEF Sava RBMP component will be sent to the Dutch project coordinator. For September 2003, the Dutch experts will be invited to the Sava Working Group meeting, which will discuss the Draft Work Plan for Phase II, and to the ICPDR workshop on typology and classification of surface waters.

The ICPDR Secretariat will provide contacts to national experts and institutions related to flood protection, GIS and biodiversity protection.

NL Project: The Dutch project will be implemented by involving the national focal persons of ICPDR. In mid May, the Draft Work Plan and list of competent persons of the Dutch project will be sent to ICPDR and UNDP/GEF DRP for comments.

The Dutch experts will suggest the invitation of the ICPDR to the next meeting of the Interim Sava Commission.

A. Zinke, 14 April 2003

Instruction for National Consultants on Water Management for the collection and analysis of data and information

30 April 2003, hotel International, Zagreb

Participants:

Joachim Bendow, ICPDR Executive Secretary
 Alexander Zinke, international consultant
 Boris Kompare, national consultant, Slovenia
 Davor Malus, national consultant, Croatia
 Tarik Kupusovic, national consultant, Bosnia I Hercegovina
 Borisav S. Milutinovic, national consultant, Serbia and Montenegro
 Mojca Luksic, Croatian Waters
 Danko Biondic, national consultant.

1. Opening of the Meeting

Mr Joachim *Bendow*, Executive Secretary of the ICPDR, and Ms Moica *Luksic*, Croatian Waters, welcomed all participants. Mr Bendow thanked Mr *Biondic* for facilitating the organisation of the meeting and for solving some visa problems, as well as all participants for coming to the meeting possible at this short notice.

2. Introduction into Terms of Reference

Mr Bendow introduced the international (Europe-wide) importance of the work of ICPDR and the related valuable contribution of the UNDP/GEF Regional Project with the Sava component no. 1.1-9. He stressed the pilot character of this task with respect to implementation of the EU WFD and preliminary meetings and discussion by the new *Sava Working Group*. He informed about the overall concept for this component, aiming at producing a “*Sava Basin Sub-district Roof Report*” by 2006. Bendow explained the ToR for Phase I (April to October 2003) with special emphasis on the time frame and expected outputs (collection of available data, no production of new basic information).

3. Presentation of Background Documents

Mr Alexander *Zinke*, international consultant, presented the following background information and guiding (*) documents:

- EU Water Framework Directive, Annex I (*) and the related
 - ⇒ ICPDR Outline of Roof Report 2003
 - ⇒ Danube River Basin District, Part A Roof Report accord. Art 3 (8) and Annex I
- ICPDR Outline of Roof Report 2004
- Draft Guidelines for collection of national data and information and identification of gaps (*)
- Template “Types of pressures and impacts caused by changes of hydromorphological conditions in the Sava River Basin”, based on a draft of Mr Moog, Vienna (*)
- Draft Sava River Basin Overview Map (*)
- Danube River Basin District Overview Map
- Latest version of the ICPDR newsletter “Danube Watch”.

Zinke further pointed at an important material from Croatian Waters, to be used by all national consultants:

- Translation of the EU Water Framework Directive in **Croatian** language (including the English text version).

4. Results from Discussion about Draft Templates

For producing consistent and comparable results from Sava basin countries, the expected quality and detail of requested information was explained and assessed, with the national consultants already indicating the existence and quality of available information. This resulted in few amendments of the draft Guidelines and the following agreements:

- There will be a special travel need for gaining information from some decentralised institutions in BiH (Banja Luka, Mostar).
- Few corrections should be made in the Sava basin map.
- For points 1.1.1. Identification of surface water bodies and 2.1. Pressures from point sources, exceptions can be made going below the indicated minimum values, e.g. in cases where the water bodies or their pressure are of national importance.
- For the category Heavily Modified Water Bodies, some more illustration and examples are needed in order to secure consistent and clear separation from Artificial Water Bodies.
- It was noted that the elements 3.1. (Inventory of protected wetlands), 2.2. (the part on mapping pressures from Diffuse Sources) as well as 8. (Analysis of population data) and 9. (Analysis of economic activities) will be compiled by other national or international consultants.
- For points 5.1.-5.4., it was agreed that national experts should not collect basic information on agricultural policy issues but rather check (i.e. verify, amend, specify, complement) the information already collected and drafted by the GFA-Terra / Avalon experts (for GEF components 1.2 and perhaps also 1.3) for the 4 countries. This should prevent double work of GEF consultants and double "disturbance" of local authorities by GEF consultants. Mr Zinke will contact the GEF Project Team to request this contact.

5. Conclusions

Mr Bendow thanked for the valuable contributions and asked for strong efforts to compile national data by middle of June in order to prepare information for the next Sava WG meeting in early July. Mr Zinke indicated the possibility of another meeting with National Consultants to jointly assess progress of work at the end of May, depending on the needs.

The following documents will be sent in early May to national consultants:

- UNDP/GEF Thematic Maps report 1999 – Inventory of Hydraulic Structures (excerpt for Sava basin countries)
- ICPDR Trans National Monitoring Network sample sites map
- Revised draft of the Sava basin map
- List of contacts of the national consultants for economy (GEF component 1.1-3) and agriculture (1.2 & 1.3).

Vienna, 5 May 2003 (AZ)

UNDP-GEF Danube Regional Project

Terms of Reference for National Consultants

for

***"Development of the Sava River Basin
Management Plan"***

(Project Output 1.1-9)

April 2003

A Background of the Relevant Project Objectives and Activities

The mandate of the UNDP GEF Project in Phase 1 is to “define concepts for common approaches methodologies, standards and guidelines” for the development of a pilot plan for the Sava River Basin. These guidelines shall permit in the second Phase of the Project, to formulate “recommendations for implementation strategies and program of measures likely to be effective in the transboundary context”

In Phase 1 of the Project a situation analysis shall be carried out to examine availability of information, data and to assess the institutional capacities to carry out the development of a pilot plan taking into account the requirements of the EU WFD.

The work will be coordinated by an international consultant supported in each of the four countries by national consultants. Close cooperation will be established with the Sava RBM Expert Group and other expert bodies of the ICPDR.

It is assumed that the project will receive full support from the Sava Basin Initiative and its expert bodies.

B Description of the Required Services

1. The purpose of this assignment is:

- To search, evaluate and examine availability, reliability and compatibility of data and information needed from the national level needed for preparing a Sava River Basin Management Plan in line with the requirements of the EU WFD,
- To identify and assess existing structures, competence and capacities at the national level for the preparation of national contributions to the River Management Plan,
- Drafting of national situation analysis, presenting results of information and data and defining gaps in data availability and capacities to respond to EU WFD requirements (policies, legislation and institutional capacities)

2. The Consultant is entrusted to carry out the following main tasks:

- Provide the required *national* information and data as outlined in the template for carrying out the collection and analysis of data and information;
- Write a “Situation Analysis and Key Issues” on water management and environmental protection, discussing the results obtained and gaps identified;
- Participate at meetings and workshops organized by the UNDP/GEF Sava project.

3. Specific Tasks concerning collection and analysis of existing information and data in the following areas:

14. Reviewing/updating emission inventory
15. Identification and assessment of pressure
 - 15.1. from point sources of pollution
 - 15.2. from diffuse sources of pollution and land use patterns
 - 15.3. from hydromorphology
- 2.4. Identification and assessment of impacts on waters
16. Identification of water bodies in 4 of the 6 WFD categories (river, lake, heavily modified water bodies, artificial water bodies)
17. Typology of water bodies,
18. Reviewing and analyzing causes and effects from human activities on groundwater bodies from point and diffuse sources,
19. *[Inventory of protected areas for species and habitat protection areas (WFD Annex IV, 1.(v))]*
20. Inventory of protected areas for drinking water abstraction (WFD Annex IV, 1. (i))
21. Inventory of Monitoring Networks
22. Identification of measures for policy reforms for nutrient reduction
 - 22.1. from agricultural sources
 - 22.2. through introduction of BAP in animal farming
 - 22.3. through introduction of organic farming,
 - 22.4. for integrated land use;
23. Identification of policy measures for pollution reduction at municipal and industrial sites,
24. Public participation (role of NGOs and the private sector),
25. *[Analysis of population data and information on water usage and consumption]*
26. *Analysis of Economic activities (agriculture, industry and mining and services).]*

Please note: The national experts should be able to cover all subjects concerning water quality, emissions and policy reforms. Task items no. 6, 12 and 13 will be covered by other GEF experts.

4. Duration and timing

For the period from April to September 2003 the GEF Project will recruit national consultants in each participating country for 40 to 70 working days. In October the national consultants will participate in the final workshop to discuss the further arrangements for phase II of the project.

C Expected Outputs/Results

The national consultant will receive guidance and outlines for the collection of data and information as well as for the preparation of the situation analysis.

The results shall be presented in form of a tables and descriptive explanation of analysis.

The results shall be summarized in a national situation analysis.

The specific milestones and outputs from national consultants will include the following:

Activities/Outputs	Time Frame for Delivery
• Instruction and discussion to use guidelines for collection and analysis of data and information	• 30 April 2003
• 1st Draft of compilation of data and information for the development of the Sava RBM Plan	• 15 June 2003
• <i>[Revision of 1st draft by international consultants and discussion at national level]</i>	• <i>July 2003</i>
• Preparation of final compilation of national data and information	• 15 August 2003
• Drafting of national situation analysis	• 1 September 2003
• Participation at regional workshop to discuss approach and work program for Phase II of the Project	• 17 October 2003

Annex 6-2

Guidelines for collection of national data and information and identification of gaps

The national information required refers to the EU WFD with the Annexes VII (see here the pages 1-6) and Annex I (see here page 7).

RBM Plan Elements WFD Annex VII	No. in GEF ToR	Info to be provided by	Comment for data collection in Sava basin countries	Comments
1.1.1. Identification of surface water bodies for 4 categories:	3	National Consultant	<p>Collect information on all relevant water bodies; information should be presented in form of table and on thematic map:</p> <ol style="list-style-type: none"> 1. Rivers of 1st [Save], 2nd and 3rd with minimum of 2,000 km² catchment: <ul style="list-style-type: none"> ▪ river name (national/international/other) ▪ length (natl. territory), ▪ discharge (mean annual at mouth/border) ▪ catchment area km² 2. Lakes: > 0.5 km² <ul style="list-style-type: none"> ▪ name ▪ area, ▪ volume, ▪ catchment size 3. HMWB (if proposed or identified by country) <ul style="list-style-type: none"> ▪ name, ▪ length, ▪ discharge, ▪ cause 4. Artificial Water Bodies <ul style="list-style-type: none"> ▪ name, ▪ length/size, ▪ purpose 	Justify if river is smaller than 2,000 km ² .
1.1.2. Typology of water bodies	4	National Consultant	<p>Describe state of the art</p> <ul style="list-style-type: none"> ▪ system applied (A or B) and types identified ▪ types assigned to particular water bodies ▪ existence of old typologies and their documentation ▪ presentation of typology in form of data base/maps (geologic. maps, other) 	Info available for Croatia (See DANUBIS MLIM-WFD)

RBM Plan Elements WFD Annex VII	No. in GEF ToR	Info to be provided by	Comment for data collection in Sava basin countries	Comments
1.2. Description and mapping of groundwater bodies	5	National Consultant	List and describe Ground Water Bodies <ul style="list-style-type: none"> ▪ name ▪ location ▪ dimension ▪ overview map, if available 	
2. Pressures and Impact on Surface and Groundwater				
2.1. Pressures from point sources of pollution	1, 2.1.	National Consultant	Verify and amend existing emission inventories (BOD, COD) for sites > 10,000 P.E: <ul style="list-style-type: none"> ▪ municipal, ▪ industrial, ▪ agro-industries (animal farms) 	See PRP report 1999, EMIS-Inventory 2000 and/or 2002. Justify if < 10,000 P.E.
2.2. Land use patterns and pressures from diffuse sources of pollution	2.2.	National Consultant / Intl. consultants	<ol style="list-style-type: none"> 1. Investigate if land use maps are available (copy !) 2. Identify sources of information and provide results on diffuse sources of pollution from e.g. agriculture, urban sector, traffic etc. 3. Pressure from diffuse sources: Information from MONERIS for Sava basin will be compiled by another International Expert 	
2.3. Pressures from altered hydro-morphology	2.3.	National Consultant	Describe hydraulic pressures (structures): <ul style="list-style-type: none"> ▪ flood protection ▪ navigation ▪ hydropower use ▪ water abstraction ▪ recreation ▪ other uses 	Use list for water abstractions, flow regulations & morphological alterations (see Annex I)
2.4. Impacts on status of surface and groundwater	2.4.	National Consultant	Provide thematic map and list of known impacts on water bodies: <ul style="list-style-type: none"> ▪ water quality (biological and/or chemical status) of surface water ▪ water quantity (abstraction, missing replenishment) 	
3.1. Inventory of protected	6.	International	List core data set according to IUCN categories	

RBM Plan Elements WFD Annex VII	No. in GEF ToR	Info to be provided by	Comment for data collection in Sava basin countries	Comments
areas for species & habitat protection (Annex IV, 1.(v))		Consultant: WWF-DCP with ECO EG		
3.2. Inventory of protected areas for drinking water abstraction (Article 6 Annex IV, 1.(i) and Article 7)	7.	National Consultant	1. Describe protected areas for drinking water, supplying more than 1,000 m³/day (list and provide map if available): <ul style="list-style-type: none"> ▪ name of area ▪ type of water body (surface/ground) ▪ type of protection ▪ location, ▪ area km² ▪ abstraction m³ ▪ use/no. of population served 2. Describe measure for adapting national legislation in line with EU Drinking Water Directive	
4. Inventory of monitoring networks	8.	National Consultant	List and describe (map) existing national monitoring programs and networks (sample sites)	
5.1. Identification of existing measures of policy reforms for nutrient reduction at agricultural sources	9.1.	National Consultant	List and describe policy reforms and adaptation of national legislation for: <ul style="list-style-type: none"> ▪ application of fertiliser and pesticides ▪ CAP reform/BAP in agriculture ▪ land use planning 	Link to GEF component 1.2 and 1.3
5.2. Identification of existing measures of policy reforms through introduction of BAP in animal farming	9.2.	National Consultant	List and describe policy reforms and adaptation of national legislation for: <ul style="list-style-type: none"> ▪ use of manure handling (collection, application and treatment) ▪ BAP in animal farming ▪ pasture land management 	
5.3. Identification of existing measures for policy reforms through introduction of organic farming	9.3.	National Consultant	List and describe policy reforms and measures to encourage organic farming: <ul style="list-style-type: none"> ▪ economic incentives ▪ marketing ▪ extension services 	

RBM Plan Elements WFD Annex VII	No. in GEF ToR	Info to be provided by	Comment for data collection in Sava basin countries	Comments
5.4. Identification of existing measures for policy reforms for integrated land use	9.4.	National Consultant	List and describe policy reforms and measures for integrated land use: <ul style="list-style-type: none"> ▪ legal and institutional frame ▪ public participation ▪ land use plans existing or under preparation 	Link to GEF component 1.2 and 1.3
6. Identification of existing measures for policy reforms for pollution reduction at municipal and industrial sites	10.	National Consultant	Indicate status of national implementation for: <ul style="list-style-type: none"> ▪ urban wastewater directive ▪ storm water directive ▪ IPPC directive ▪ introduction of BAT for certain industries, ▪ Cleaner Production Centers, ▪ Environmental pollution register under Aarhus Convention 	
7. Public participation (role of NGOs and the private sector)	11.	National Consultant	Describe status of public participation and list: <ol style="list-style-type: none"> 1. Aarhus Focal Points 2. National stakeholders as NGOs, water services, professional associations for e.g. industries, navigation, gravel excavation, farming, etc <ul style="list-style-type: none"> ▪ name, ▪ address + contact person, ▪ national or transboundary activities ▪ potential interest for participation in Sava RBMP 	
8. Analysis of population data and information on water usage and consumption	12.	GEF 1.1-3	See Guidelines for Economic Consultants	
9. Analysis of economic activities (agriculture, industry & mining, services, etc)	13.	GEF 1.1-3	See Guidelines for Economic Consultants	

Annex 6-3

Types of Pressures and Impacts caused by Changes of **Hydromorphological Conditions** in the Sava River Basin

List the most important drivers and pressures that may change the hydromorphological conditions in the Sava River basin. The list has been compiled using the German and Austrian experiences including smaller, partly alpine rivers.

Table: Drivers and Pressures

<i>Drivers</i>	<i>Pressures</i>	<i>River km - km</i>
Flood Protection	<ul style="list-style-type: none"> • Alteration of the river course (thalweg) and channel form (straightening, curvature, channelling, diversions) • Disruptions of the vertical connectivity • Alteration of morphological features/habitats • Buhnen (groynes) • Disruptions of lateral connectivity • Bank fixation, reinforcements, re-insectioning • Alteration of the bank vegetation and floodplains • Flood defence dams • Others 	
Navigation	<ul style="list-style-type: none"> • Alteration of the river course (thalweg) and channel form • Alteration of morphological features/habitats (embank-ments, deep-cutting, dredging, shipyards and harbours) • Disruptions of longitudinal connectivity • Disruptions of lateral connectivity • Disruptions of the vertical connectivity (silting, colmation) • Alteration of the hydrological/hydraulic characteristics (flow regime/sediment load) • Others 	
Hydropower Use	<ul style="list-style-type: none"> • Barrages, weirs (that cause disruptions of longitudinal connectivity) • Sluices (water gates) • Dams (disruptions of lateral connectivity) • Alteration of the river course (thalweg) and channel form, diversions • Morphologic alterations as described for flood protection measures • Alteration of morphological features/habitats • Disruptions of lateral connectivity 	

	<ul style="list-style-type: none"> • Disruptions of the vertical connectivity (silting, colmation)diversions • Alteration of the hydrological (discharge regime) • Alteration of the hydraulic characteristics (current, sediment load) • water abstraction (residual flow) • hydro-peaking (flushing; intermittent power generation) • others 	
Water Abstraction	<ul style="list-style-type: none"> • Abstraction for hydropower use (see above) • Abstraction for agriculture • Abstraction for drinking water supply • Abstraction for industry • Abstraction for fish farming • Abstraction for navigation (harbours; supplying canals) • Alteration of the river course (thalweg) and channel form • Alteration of morphological features/habitats • disruptions of longitudinal connectivity • Disruptions of lateral connectivity • Disruptions of the vertical connectivity (silting,colmation) • Alteration of the hydrological/hydraulic characteristics (flow regime/sediment load) • Others 	
Recreation	<ul style="list-style-type: none"> • Fishing (facilities; houses; bank alterations) 	
Other river uses Fisheries Gravel extraction Removal of animals Fords Others	<ul style="list-style-type: none"> • Alteration of morphological features/habitats • Others 	

Terms:

Reinforcement: Whole or part of the river (bank, bottom) artificially strengthened for bank protection purposes.

Re-insectioned river (bank): Profile modified but not reinforced, often to accomodate flood flow and access for maintainance machinery.

Annex 6-4*EU Water Framework Directive 2000/60/EC - ANNEX I*

INFORMATION REQUIRED FOR THE LIST OF COMPETENT AUTHORITIES

As required under Article 3(8), the Member States shall provide the following information on all competent authorities within each of its river basin districts as well as the portion of any international river basin district lying within their territory.

- (i) **Name and address of the competent authority** - the official name and address of the authority identified under Article 3(2).
- (ii) **Geographical coverage of the river basin district** - the names of the main rivers within the river basin district together with a precise description of the boundaries of the river basin district. This information should as far as possible be available for introduction into a geographic information system (GIS) and/or the geographic information system of the Commission (GISCO).
- (iii) **Legal status of competent authority** - a description of the legal status of the competent authority and, where relevant, a summary or copy of its statute, founding treaty or equivalent legal document.
- (iv) **Responsibilities** - a description of the legal and administrative responsibilities of each competent authority and of its role within each river basin district.
- (v) **Membership** - where the competent authority acts as a coordinating body for other competent authorities, a list is required of these bodies together with a summary of the institutional relationships established in order to ensure coordination.
- (vi) **International relationships** - where a river basin district covers the territory of more than one Member State or includes the territory of non-Member States, a summary is required of the institutional relationships established in order to ensure coordination.

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Template Socio-economic Indicators of the Sava RB

(based on Annex 1 'List of socio-economic indicators' – Annex to Doc. 137 - prepared by the Economic Expert Subgroup (Econ ESG) of the ICPDR)

The Economic Importance of Water Uses in the Sava RB Countries

Shaded values should be calculated by the National Consultants!

0. Country and area of the Sava River Basin (SRB)		km ²			
Indicator	UNIT	1960	1980	2000	Remarks
1. Population					
1.1.1. Total population	<i>no.</i>				
1.1.2. Population in SRB	<i>no.</i>				
1.1.3. Total number of population of economic active age	<i>no.</i>				
1.1.4. Number of population of economic active age in SRB	<i>no.</i>				
1.1.5. Total number of households	<i>no.</i>				
1.1.6. Number of households in SRB	<i>no.</i>				
1.1.7. Urban population in SRB – distinguished between municipalities with inhabitants between 5,000- 20,000 20,000-50,000 above 50,000	<i>total urban population</i> <i>no. inhab.</i> “ “				
1.1.8. Rural population in SRB	<i>no. of inhabitants</i>				
1.1.9. Population density – distinguished between rural and urban levels in SRB	<i>no./km²</i> <i>total pop.</i>				
1.1.10. Population density –rural (= total – towns)	<i>no./km²</i> <i>rural pop.</i>				
1.2. Employment and unemployment					
1.2.1. Total employed in whole country	%				
1.2.2. Total employed in the SRB	%				
1.2.3. Population employed in the main economic sectors in the SRB - Agriculture - Industry - Service	% % %				
1.2.4. Unemployment rate in SRB	%				

2. Gross Domestic Product (in national currency = natl. curr.)					
2.1.1. Overall GDP for whole country	<i>natl.curr</i>				
2.1.2. Overall GDP for the SRB	<i>natl.curr</i>				
2.1.3. GDP per capita in the SRB	<i>natl.curr/cap.</i>				
2.1.4. GDP per employee in the SRB	<i>natl.curr/empl.</i>				
2.1.5. Official exchange rate (national currency to DM, Ecu/Euro)	<i>natl.curr</i>				
2.2. Monthly net average income					
2.2.1. Per capita in the whole country	<i>natl.curr/cap.</i>				
2.2.2. Per capita in the SRB	<i>natl.curr/cap.</i>				
2.2.3. Per household in whole country	<i>natl.curr/hous.</i>				
2.2.4. Per household in the SRB	<i>natl.curr/hous.</i>				

3. Characteristics of water services

Indicator	UNIT	1960	1980	2000	Remarks
3.1. Total water abstraction in the SRB					
3.1.1. From surface water	<i>m³/day</i>				
3.1.2. From groundwater	<i>m³/day</i>				
3.2. Total drinking water production in SRB					
3.2.1. From surface water	<i>m³/day</i>				
3.2.2. From groundwater	<i>m³/day</i>				
3.3. Drinking water supply in the SRB					
3.3.1. Number of water supply companies/entities in the SRB	<i>no.</i>				
3.3.2. Total public water supply in SRB	<i>m³/day</i>				
3.3.3. From surface water	<i>%</i>				
3.3.3. From groundwater	<i>%</i>				
3.3.4. Total population connected to <i>public</i> water supply in the SRB	<i>%</i>				
3.3.5. Population connected to public water supply in <i>urban</i> areas in the SRB:	<i>no.</i>				
- 5,000 – 20,000 inhabitants	<i>%</i>				
- 20,000 – 50,000 inhabitants	<i>%</i>				
- over 50,000 inhabitants	<i>%</i>				
3.3.6. Population connected to public water supply in <i>rural</i> areas in the SRB	<i>no.</i>				
3.3.7. Total public water supply to the <i>household sector</i> in the SRB - water quality standard	<i>m³/day</i>				
- good	<i>%</i>				
- medium	<i>%</i>				
- low	<i>%</i>				
3.3.8. Total public water supply to the <i>industry</i> in the SRB	<i>m³/day</i>				
3.3.9. Total public water supply to <i>agriculture</i> in the SRB	<i>m³/day</i>				
3.4. Self supply in the SRB					
3.4.1. Total water from self supply	<i>m³/day</i>				
3.4.2. From surface water	<i>%</i>				

	%				
3.4.3. From ground water	%				
3.4.4. Population with self supply (in % of total volume of self supply)	%				
3.4.5. Industry with self supply (in % of total volume of self supply)	%				
3.4.6. Agriculture with self supply (in % of total volume of self supply)	%				
3.5. Water consumption in the SRB (only for water supply - not for selfsupply)					
3.5.1. Total water consumption – in urban areas in the SRB (please distinguish between municipalities as above)	<i>m³/day</i>				
- 5,000 – 20,000 inhabitants	%				
- 20,000 – 50,000 inhabitants	%				
- over 50,000 inhabitants	%				
3.5.2. Total water consumption – in rural areas in the SRB (< 5,000 inhabitants)	<i>m³/day</i>				
3.5.3. Total water consumption – in urban areas in the SRB per capita	<i>m³/day/cap.</i>				
3.5.4. Total water consumption – in rural areas in the SRB per capita	<i>m³/day/cap.</i>				
3.5.5. Leakage rate - ratio between supplied and consumed (billed) waters	<i>m³/day</i>				

Indicator	UNIT	1960	1980	2000	Remarks
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4. Wastewater treatment in the SRB					
4.1.1. Population connected to public sewerage system	%				
4.1.2. Population connected to public sewerage system in <i>urban</i> areas	%				
- 5,000 – 20,000 inhabitants	%				
- 20,000 – 50,000 inhabitants	%				
- over 50,000 inhabitants	%				
4.1.3. Population connected to public sewerage system in <i>rural</i> areas	%				
4.2. Treatment plants in the SRB					
4.2.1. Population connected to treatment plants	%				
4.2.2. Population connected to treatment plants in <i>urban</i> areas	%				
- 5,000 – 20,000 inhabitants	%				
- 20,000 – 50,000 inhabitants	%				
- over 50,000 inhabitants	%				
4.2.3. Population connected to treatment plants in <i>rural</i> areas	%				
4.2.4. Total number of plants and capacity	<i>no. & m³</i>				
4.2.5. Number and capacity of mechanical treatment plants	<i>no. & m³</i>				
4.2.6. Number and capacity of biological treatment plants	<i>no. & m³</i>				
4.2.7. Number and capacity of chemical treatment plants	<i>no. & m³</i>				
4.3. Public collected/treated wastewater in the SRB					

4.3.1. Public collected wastewater	m^3/day				
4.3.2. Public treated wastewater	m^3/day				
4.3.3. Public collected wastewater from households in <i>urban</i> areas	m^3/day				
- 5,000 – 20,000 inhabitants	%				
- 20,000 – 50,000 inhabitants	%				
- over 50,000 inhabitants	%				
4.3.4. Public collected wastewater from households in <i>rural</i> areas	m^3/day				
4.3.5. Public collected wastewater from households in <i>urban</i> areas per capita	$m^3/day/cap.$				
- 5,000 – 20,000 inhabitants	%				
- 20,000 – 50,000 inhabitants	%				
- over 50,000 inhabitants	%				
4.3.6. Public collected wastewater from households in rural areas per capita	$m^3/day/cap.$				
4.3.7. Public <i>treated</i> wastewater from households in <i>urban</i> areas	m^3/day				
- 5,000 – 20,000 inhabitants	%				
- 20,000 – 50,000 inhabitants	%				
- over 50,000 inhabitants	%				
4.3.8. Public treated wastewater from households in <i>rural</i> areas	m^3/day				
4.3.9. Public treated wastewater from households in urban areas per capita	$m^3/day/cap.$				
4.3.10. Public treated wastewater from households in rural areas per capita	$m^3/day/cap.$				
4.3.11. Public collected wastewater from <i>industry</i>	m^3/day				
4.3.12. Public treated wastewater from industry	m^3/day				
4.3.13. Public collected wastewater from <i>agriculture</i> (animal farms)	m^3/day				
4.3.14. Public treated wastewater from agriculture (animal farms)	m^3/day				

Indicator	UNIT	1960	1980	2000	Remarks
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5. Irrigation water supply in the SRB					
5.1. Number of irrigation water companies	<i>no.</i>				
5.2. Total area irrigated	km^2				
5.3. Farms connected to public irrigation water supply	<i>no.</i>				
5.4. Total irrigation water supply	m^3/day				
5.5. From surface water	%				
5.6. From groundwater	%				
5.7. Farms with self supply	<i>no.</i>				
5.8. Total irrigated area with self supply	km^2				
5.9. From surface water	%				
5.10. From groundwater	%				

6. Other services in the SRB (storage of raw water – impoundment)					
Indicator	UNIT	2000			Remarks
6.1. Storage capacity for multipurpose and for special ones (total capacity in the SRB; distinguished between multipurpose and specific purposes if possible)	Irrigation Drinking Recreation Flood retention Hydropower Aqua culture Multi-purpose				
Indicator	UNIT	1960	1980	2000	Remarks
6.2. Number of water reservoirs	<i>no.</i>				
6.3. Volume of water reservoirs	<i>mio. m³</i>				
6.4. Manageable volume of water reservoirs	<i>%</i>				
6.5. Deposit volume of water reservoirs	<i>%</i>				

The difference between the work to be carried out under the UNDP/GEF project component 1.1-3 'Applying EU Guidelines for the Economic Analysis to the DRB' and this component 1.1-9 is to indicate here all requested and available relevant figures.