

PROJECT DOCUMENT
(Phase 1)

**Strengthening the Implementation
Capacities for Nutrient Reduction
and Transboundary Cooperation in
the Danube River Basin**

JUNE 2001

UNITED NATIONS DEVELOPMENT PROGRAMME

Project of the Governments of Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Moldova, Romania, Slovakia, Slovenia, Federal Republic of Yugoslavia, Ukraine

PROJECT DOCUMENT

Project Number: RER/01/G32/A/1G/31
Project Title: Strengthening the Implementation Capacities for Nutrient Reduction and Transboundary Cooperation in the Danube River Basin
Project Short Title: Danube Regional Project – Phase 1
Estimated Start Date: November 2001
Duration: 2 years
Implementing Agency: UNDP
Executing Agency: UNOPS (in cooperation with ICPDR)
ACC/UNDP Sector and Sub-sector: 0400 Natural Resources
0410 Water Resources Planning and Development

<u>UNDP Financing:</u>	
UNDP/GEF:	US\$5,000,000
Subtotal:	US\$5,000,000
<u>Parallel Financing:</u>	
ICPDR	US\$6,600,000
TOTAL:	US\$11,600,000

GEF Focal Area: International Waters
GEF Programming Framework: GEF Operational Strategy for International Waters/
Waterbody-Based Operational Programme (#8)

Brief Description:

The long-term development objective of the proposed Regional Project is to contribute to sustainable human development in the DRB and the wider Black Sea area through reinforcing the capacities of the participating countries in developing effective mechanisms for regional cooperation and coordination in order to ensure protection of international waters, sustainable management of natural resources and biodiversity.

In this context, the proposed GEF Regional Project, being subdivided into two Phases, should support the ICPDR, its structures and the participating countries in order to ensure an integrated and coherent implementation of the Strategic Action Plan 1994 (revised SAP 1999), the ICPDR Joint Action Programme and the related investment programmes in line with the objectives of the DRPC.

The overall objective of the Danube Regional Project is to complement the activities of the ICPDR required to provide a regional approach and global significance to the development of national policies and legislation and the definition of priority actions for nutrient reduction and pollution control with particular attention to achieving sustainable transboundary ecological effects within the DRB and the Black Sea area.

The Danube Regional Project, in its Phases 1 and 2, shall facilitate implementation of the Danube River Protection Convention in providing a framework for coordination, dissemination and replication of successful demonstration that will be developed through investment projects (World Bank-GEF Partnership Investment Facility for Nutrient Reduction, EBRD, EU programmes for accession countries etc.).

The specific objective of Phase 1, September 2001 – August 2003, is to prepare and initiate basin-wide capacity-building activities, which will be consolidated in the second phase of the Project. This second Phase will be implemented from September 2003 – August 2006, building up on the results archived in the first Phase. During the first Phase, altogether 20 project components with 80 activities will be carried out and thus establishing a solid base for the implementation of Phase 2.

On Behalf of:	Signature	Date	Name/Title
UNDP/GEF	_____	_____	_____
UNOPS	_____	_____	_____
ICPDR	_____	_____	_____

The Governments of :	Signature	Date	Name/Title
Bosnia & Herzegovina	_____	_____	_____
Bulgaria	_____	_____	_____
Croatia	_____	_____	_____
Czech Republic	_____	_____	_____
Hungary	_____	_____	_____
Moldova	_____	_____	_____
Romania	_____	_____	_____
Slovakia	_____	_____	_____
Slovenia	_____	_____	_____
Ukraine	_____	_____	_____
Federal Republic of Yugoslavia	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

UN official exchange rate at date of signature: US\$1 = €__

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A. Project Brief

(Revision August 2001)

PROJECT BRIEF

1. IDENTIFIERS

Project Number	RER/01/G32
Project Name	Strengthening the Implementation Capacities for Nutrient Reduction and Transboundary Cooperation in the Danube River Basin (Phase 1)
Duration	2 years (September 2001 – August 2003)
Implementing Agency	UNDP
Executing Agency	UNOPS in cooperation with ICPDR
Requesting Countries	Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Bosnia & Herzegovina, Yugoslavia, Bulgaria, Romania, Moldova, Ukraine
Eligibility	Eligible under para. 9(b) of GEF Instrument
Participating Countries	Germany and Austria
GEF Focal Area	International Waters
GEF Programming Framework	GEF Operational Strategy for International Waters / Waterbody-Based Operational Programme (#8)

2. SUMMARY

The long-term development objective of the proposed Regional Project is to contribute to sustainable human development in the DRB through reinforcing the capacities of the participating countries in developing effective mechanisms for regional cooperation and coordination in order to ensure protection of international waters, sustainable management of natural resources and biodiversity.

In this context, the proposed GEF Regional Project, being subdivided into two Phases, should support the ICPDR, its structures and the participating countries in order to ensure an integrated and coherent implementation of the Strategic Action Plan 1994 (SAP 1994), the ICPDR Joint Action Programme and the related investment programmes in line with the objectives of the DRPC.

The overall objective of the Danube Regional Project is to complement the activities of the ICPDR required to provide a regional approach and global significance to the development of national policies and legislation and the definition of priority actions for nutrient reduction and pollution control with particular attention to achieving sustainable transboundary ecological effects within the DRB and the Black Sea area.

The Danube Regional Project, in its Phases 1 and 2, shall facilitate implementation of the Danube River Protection Convention in providing a framework for coordination, dissemination and replication of successful demonstration that will be developed through investment projects (World Bank-GEF Partnership Investment Facility for Nutrient Reduction, EBRD, EU programmes for accession countries etc.).

The specific objective of Phase 1, September 2001 – August 2003, is to prepare and initiate basin-wide capacity-building activities, which will be consolidated in the second phase of the Project. This second Phase will be implemented from September 2003 – August 2006, building up on the results archived in the first Phase. During the first Phase, altogether 20 project components with 80 activities will be carried out and thus establishing a solid base for the implementation of Phase 2.

Taking into account the basic orientations of the Danube/Black Sea Basin Strategic Partnership, the following project components can be designed to respond to the overall development objective:

- (1) Creation of sustainable ecological conditions for land use and water management;
- (2) Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the Danube River Basin;
- (3) Strengthening of public involvement in environmental decision making and reinforcement of community actions for pollution reduction and protection of ecosystems;
- (4) Reinforcement of monitoring, evaluation and information systems to control transboundary pollution, and to reduce nutrients and harmful substances.

3. COSTS AND FINANCING (USD)

GEF	- Project	4,629,630 USD
	[administrative cost]	370,370 USD
	- PDF	350,000 USD
	<i>Subtotal GEF</i>	5,350,000 USD
Co-Financing	Government / ICPDR	6,600,000 USD
	<i>Subtotal Co-financing</i>	6,600,000 USD
Total Project Cost		11,950,000 USD

4. ASSOCIATED FINANCING

- Government	186,000,000 USD
- UNDP	1,069,000 USD
- Bilateral, EU and NGO	166,375,000 USD
Total Baseline Costs:	353,431,000 USD

5. GEF OPERATIONAL FOCAL POINT ENDORSEMENTS (ANNEX 13)

Czech Republic	15 September, 2000
Slovakia	31 August, 2000
Hungary	30 August, 2000
Slovenia	29 August, 2000
Croatia	29 August, 2000
Bosnia & Herzegovina	1 September, 2000
Federal Republic of Yugoslavia	13 September, 2000
Bulgaria	1 September, 2000
Romania	30 August, 2000
Moldova	30 August, 2000
Ukraine	7 September, 2000
ICPDR President	13 September, 2000

6. IMPLEMENTING AGENCY CONTACT

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List of Abbreviations

AEPWS/EG	Accident Emergency Prevention and Warning System Expert Group
APR	Annual Project/Programme Report
AQC	Analytical Quality Control
BAT	Best Available Technology
BEP	Best Environmental Practices
BOD	Biological Oxygen Demand
COD	Chemical Oxygen Demand
DBAM	Danube Basin Alarm Model
DEF	Danube Environmental Forum
DEPA	Danish Environmental Protection Agency
DANUBIS	Danube Information System
DPRP	Danube Pollution Reduction Programme
DRB	Danube River Basin
DRBM/EG	Danube River Basin Management Expert Group
DRP	Danube Regional Project
DRPC	Danube River Protection Convention
DWQM	Danube Water Quality Model
€	Euro
Ad-hoc ECO/EG	Ad-hoc Ecology Expert Group
EMIS/EG	Emission Expert Group
EPDRB	Environmental Programme for the Danube River Basin
GEF	Global Environment Facility
GDP	Gross Domestic Product
GPA	Global Programme of Action
IAA	Inter-Agency Agreement
ICPDR	International Commission for the Protection of the Danube River
ICPBS	International Commission for the Protection of the Black Sea
IFI	International Financing Institution
IW	International Waters
JAP	Joint Action Programme
MLIM/EG	Monitoring Laboratory and Information Management Expert Group
MONERIS	Modeling Nutrient Emission in River System
M&E	Monitoring and Evaluation
MSP	Medium Sized Project
NGOs	Non Government Organizations
PIR	Project Implementation Review
PRP	Pollution Reduction Programme
REC	Regional Environmental Center
S/EG	Strategic Expert Group
SAP	Strategic Action Plan
SIA	Significant Impact Area
STAP	Scientific and Technical Advisory Panel
TAR	Transboundary Analysis Report
UNDP	United Nations Development Programme
UNIDO-TEST	United Nations Industrial Development Office - Transfer of Environmentally Sound Technology to Reduce Transboundary Pollution in the Danube River Basin
UNOPS	United Nations Office for Project Services
USAID	United State Agency for International Development
USD	United States Dollar
WPPCM	Water Pollution Prevention and Control Model

I Background Information

I-1 Context of the Proposed Danube Regional Project

In the frame of the Environmental Programme for the Danube River Basin (EPDRB) international support was provided to facilitate the development and the implementation of the Danube River Protection Convention (DRPC). Since 1992 the European Community has supported, in particular through its Phare and Tacis programmes and the UNDP/GEF, in particular through its Pollution Reduction Programme (June 1997 to June 1999), the efforts of the Danube countries and of the Interim Commission for the Protection of the Danube River to develop the necessary mechanisms for effective implementation of the Convention. These mechanisms relate in particular to the development of a regional Strategic Action Plan (SAP) based on national contributions, the elaboration of a Transboundary Analysis to define causes and effects of transboundary pollution within the Danube River Basin and on the Black Sea. In the frame of the Danube Pollution Reduction Programme, based on the results of the Transboundary Analysis, an investment portfolio has been developed with particular attention to nutrient reduction. All the measures, projects and programmes proposed to reduce emissions from both point and non-point sources of pollution will improve water quality, considering a reduction of 50 % in Chemical Oxygen Demand (COD) emissions and 70 % in Biological Oxygen Demand (BOD) emissions and other toxic elements and thus reduce transboundary effects within the Danube River Basin. Once implemented, these measures will further substantially contribute to reducing nutrient transport (Phosphorus by 27 % and Nitrogen by 14 %) to the Black Sea to improve, over time, environmental status indicators of Black Sea ecosystems of the western shelf.

Since 1992/1993, donor investments in the frame of the Environmental Programme for the Danube River Basin (EPDRB) have been in the order of 27.2 million USD for the Phare and Tacis Programmes (ending October 2000) and of 12.4 million USD for the UNDP/GEF assistance.

The International Commission for the Protection of the Danube River Basin (ICPDR) has recently developed a first Joint Action Programme (JAP) for the years 2001 - 2005, which was adopted at the ICPDR Plenary Session in November 2000. The JAP will deal i.a. with pollution from point and non-point sources, wetland and floodplain restoration, priority substances, water quality standards, prevention of accidental pollution, floods and river basin management.

In order to ensure efficient implementation of the Common Platform for Development of National Policies and Actions for Pollution Reduction under the DRPC (Common Platform), the Pollution Reduction Programme and the JAP and to reinforce the appropriate development and application of policies, strategies and legislation for transboundary pollution reduction at the national level, a new phase of GEF assistance shall complement the activities of the ICPDR and the Black Sea PIU.

The new GEF assistance is planned within the frame of the Danube/Black Sea Basin Strategic Partnership (Annex 9) for the Danube and the Black Sea Basin. The Danube-Black Sea programme is composed of three complementary parts:

- (i) a series of country-related investment projects executed through the World Bank-GEF Partnership Investment Facility for Nutrient Reduction with GEF financial support;
- (ii) two Regional Projects for the Danube River Basin and the Black Sea respectively which are subdivided into two Phases (September 2001- August 2003 and September 2003- August 2006);
- (iii) other GEF and donor interventions in the basin targeting reduction of nutrients and toxic pollutants.

The GEF regional Danube/Black Sea basin Strategic Partnership shall provide assistance to the ICPDR and the Black Sea PIU to reinforce their activities in terms of policy/legislative reforms and enforcement of environmental regulations (with particular attention to the reduction of nutrients and toxic substances). The regional projects, in their respective sphere of intervention and jointly, shall also assure a coherent and coordinated approach and global significance of policy and legislative measures introduced at the national level of the participating countries. Further, the GEF regional

components of the Danube/Black Sea Basin Strategic Partnership shall facilitate project implementation in providing a framework for dissemination and replication of successful demonstration that will be developed through the implementation of investment projects through the World Bank-GEF Partnership Investment Facility for Nutrient Reduction.

In this context, the proposed Danube Regional Project (DRP), with is split in two implementation Phases, has to be seen as an integral part of the Danube/Black Sea Basin Strategic Partnership and a logical continuation of the GEF support for capacity building provided for a period of five years to the countries of the DRB.

During the 1st Phase of the Project (September 2001 – August 2003) all but one of the project components and activities will be introduced and will have a logical follow-up in the 2nd Project Phase (September 2003 – August 2006) securing efficient achieving of final results. For the reason of continuity and utmost utilization of available expertise, the Danube Regional Project has to take into account and build on the existing mechanisms and structures, including:

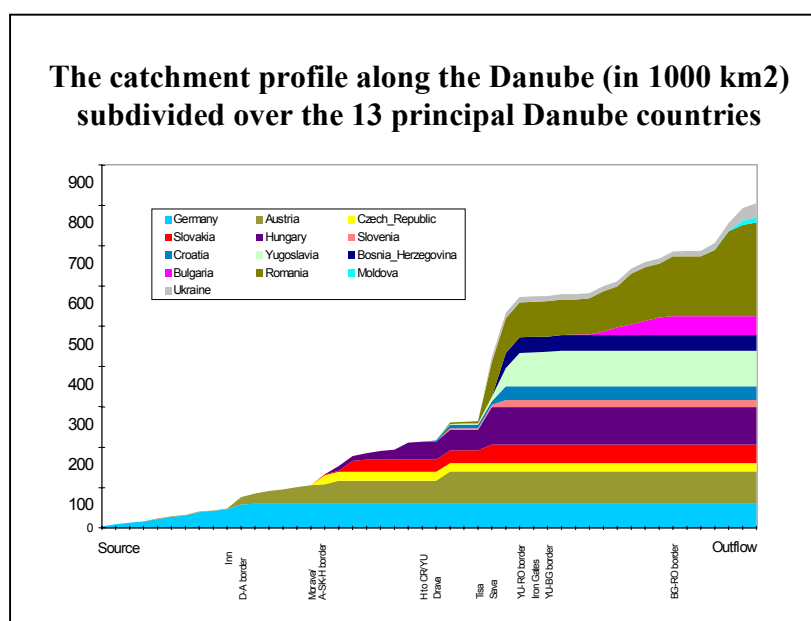
- ⇒ the Common Platform (revised SAP), focusing on policies and strategies for water quality control and pollution reduction with particular attention to transboundary issues and reduction of nutrient transport to the Black Sea; regional policies and strategies have to be coordinated with the development of national policies and legislation and implemented through national investment programmes;
- ⇒ the Transboundary Analysis Report (TAR) identifies causes and effects of pollution with particular attention to transboundary issues and nutrient transport to the Black Sea; the TAR defines priorities for control and management strategies at the regional and national levels;
- ⇒ The Danube Pollution Reduction Programme (DPRP), is the actual investment programme of the ICPDR. It is the operational basis for the promotion and monitoring of pollution reduction measures in the DRB. A total of 421 projects for 5.66 billion USD, primarily addressing hot spots have been identified for municipal, industrial and agricultural projects which, once implemented, would decrease phosphorus and nitrogen loads to the Danube and downstream to the Black Sea by 27 and 14 % respectively;
- ⇒ the ICPDR, its Permanent Secretariat and its Expert Groups are responsible for the implementation of the DRPC with particular attention to emission control (EMIS/EG), monitoring of water quality (MLIM/EG), warning and prevention of accidental pollution (AEPWS/EG), river basin management and implementation of EU Water Framework Directive (RMB/EG), ecological status (Ad-hoc ECO/EG) and strategic/administrative issues (S/EG). The Danube Regional Project shall make use of these structures and instruments to pursue its objectives and organize its activities;
- ⇒ the Joint Action Programme 2001-2005, prepared by the EMIS EG has been approved by the ICPDR at the Plenary Session in November 2000. The projects and strategic measures contained in the Joint Action Programme are in most cases coherent with the projects in the Five Year Nutrient Reduction Action Plan, where the total amount of investment for point sources reduction is 4.4 billion € out of which 3.54 billion € are earmarked as national contributions.

I-2 The Danube River Basin

The Danube River is with a length of 2 780 km the second largest river in Europe and drains an area of 817 000 square km. This includes: all of Hungary, nearly all parts of Austria, Romania, Slovenia, Slovakia and FR Yugoslavia, significant parts of Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Moldova and small parts of Germany and Ukraine.

The Danube River discharges into the Black Sea through a delta, which is the second largest natural wetland in Europe. The catchment profile along the Danube is presented in the attached figure.

The Basin, with a total of about 817 000 km² is characterized by an aquatic ecosystem with numerous important wetlands and floodplains. It is of high environmental as well as economic and social value. It supports drinking water supply, agriculture, industry, fishing, tourism and recreation, power generation, navigation, etc. A large number of dams, dikes, navigation locks and other hydraulic structures have been built throughout the region. (Annex 7 - Maps: Major Hydraulic Structures in the Danube River Basin).



Utilizing water resources for important economic activities and the release of waste water without adequate treatment has resulted in changes in the hydrological systems. Problems of water quality and quantity have been created, including significant environmental damage, with resulting impairment of public health and quality of life.

Central and eastern European countries in particular, during the period of centralized planning system, failed to develop adequate environmental protection policies and subsequent measures to fully respond to water pollution and degradation of river ecosystems. The economic situation of the countries in transition, most of which are considered as accession countries to the European Union, does not allow them to fully respond to the needs for environmental protection and the implementation of pollution control measures.

Appropriate water management concerns must be better integrated into municipal, industrial and agricultural policies and legislation to assure sustainable human development and promotion of economic activities. The Danube/Black Sea Basin Strategic Partnership shall in particular assist the countries in transition to respond to the regional and global environmental concerns with particular attention to nutrient reduction and elimination of other toxic substances in the water bodies.

I-3 Political, Demographic and Economic Issues

The present population of the Danube River Basin is about 83 million inhabitants (16 % of the population in Europe). Nearly 57 % of this population lives in increasingly growing urban areas. The share of the population connected to public water supply varies from 29% in Moldova to 98 % in Germany, yielding an average of 74%. The share of population branched to public sewer system varies from 14% in Moldova to 89% in Germany – an average of 52%. Based on the national projection figures, the population of the Danube River Basin can be expected to remain at its present level by the year 2020.

The analysis of economic disparities shows a clear trend of a west – east decline of the GDP from the upstream

countries such as Germany and Austria, with about 25,000 USD per capita and year (in 1997), to the downstream countries among which Ukraine accounts for less than 1,000 USD per capita and year.

The middle and downstream Danube countries in transition are facing serious economic and financial problems in responding to the objectives of the Danube River Protection Convention and implementing measures for pollution reduction and for environmental protection as required for the accession to the European Union. This analysis also shows the need to assist the countries in transition and makes evident the responsibilities of the international community to respond to the regional and global concerns of environmental protection.

In general terms, the 13 DRB countries can be categorized and characterized as follows:

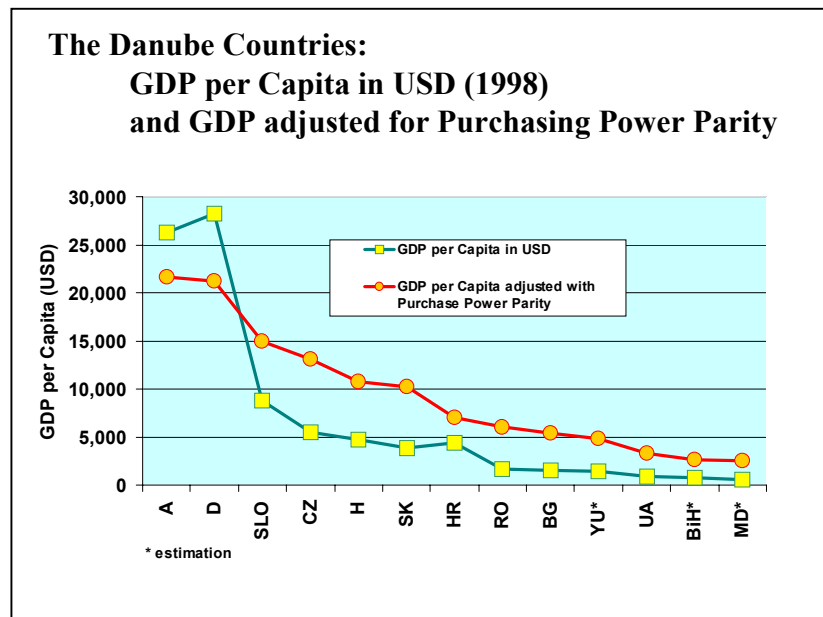
(i) Germany and Austria

These two countries are members of the European Union and are located at the upper part of the DRB. Compared to all other DRB countries, Germany and Austria have significantly higher economic development levels, represented by a per capita income of about 25 000 USD per annum. In terms of pollution reduction (COD, BOD, N and P) they have achieved high standards of emission reduction and water pollution control. From 1990 to 1999 both countries have invested important amounts for the installation of third stages and for the upgrading of municipal waste water treatment plants.

In 1997 and 1998 (2 years) Germany invested more than 2.4 billion USD for pollution reduction measures to respond to EU Water Directives and in particular to Nitrate Directive. Current investment in the water sector in the German part of the Danube River Basin is at the level of about 1.5 billion USD per year of which 1.2 billion USD is spent for communal waste water treatment facilities (including 3rd stage for nutrient removal). From 1993 to 1999 Austria invested about 9 billion ATS (780 million USD) per year for municipal waste water treatment including nutrient removal facilities.

Concerning the ongoing projects indicated in the Nutrient Reduction Plan, further investments of 234 million USD for Germany and 264 million USD for Austria are foreseen for the period from 2000 to 2005.

Austria and Germany together hold around 17% of territory and 21 % of the population of the Danube watershed. In terms of water flow of the Danube to the Black Sea Austria alone contributes to more



than 20%. Based on the DWQM, Germany and Austria contribute to nutrient load reaching the Black Sea by 26.2% of Nitrogen and 15.3% of Phosphorus. Apart from the waste water purification programme, Austria is implementing a large programme for environmentally friendly agriculture named ÖPUL. Essentially it is aiming at extensive agricultural practices and reduction of nutrients load. Since 1995 this programme is running comprising around 90% of Austria's agricultural area and backed yearly by financial means in the order of 9 Billion ATS (650 million €). In spite of these efforts in the agricultural sector neither country has yet met the European emission standards (EU Nitrate Directive). However, one must bear in mind that changes in agricultural practices and land management will – due to delay in runoff - take five or more years before producing obvious effects in terms of nutrient reduction.

(ii) Czech Republic, Slovakia, Hungary, Slovenia and Croatia

These countries are located in the central part of the DRB. They have to a great extent overcome the former central state planning systems and have reached medium economic development levels reflected in their annual GDP of between USD 4,000 and USD 9,000 per capita. The economic transition process has caused significant reduction of industrial and agricultural production, thus temporarily reducing production-related pollution loads. This has created an opportunity to establish and integrate environmental objectives into industrial and agricultural policies and legislation in line with EU guidelines. All these countries are interested in joining the EU as soon as possible; Hungary, the Czech Republic and Slovenia are obviously the priority candidates. In the process of fulfilling the basic accession criteria, these countries as well as Slovakia will receive special financial and technical support from the European Commission (ISPA funds) to help them develop an infrastructure and meet environmental standards. The present Regional Project shall in its two Phases assist these countries to develop adequate policies and legislation for emission control with particular attention to nutrient reduction.

(iii) FR Yugoslavia and Bosnia and Herzegovina

These two countries, also located in the central Danube River Basin, are still in the critical phase, struggling to overcome the aftermath of the war. In the forthcoming period, their main task will be to re-organize their political, legal, administrative and socio-economic structures in order to comply with the requirements of the commencing process of economic liberalization and privatization as well as of international normalization. With annual per-capita GDP of USD 1,100 (BiH) and USD 1,500 (Yugoslavia), both countries are presently well below their pre-war levels.

(iv) Romania, Bulgaria, Moldova and Ukraine

These countries are located in the lower Danube River Basin. Romania, Bulgaria and Ukraine are also Black Sea countries and contribute substantially to the degradation of the Black Sea ecosystems. These countries are both polluters and victims of pollution to the Black Sea. All four countries face serious economic problems and are in a difficult phase of political and social transition. Whereas environmental concerns are of high importance, the financial means for investments are very limited. Particularly critical is also the fact, that their legal and administrative framework is still to a certain extent determined by the former central planning structures and therefore not yet in compliance with the requirements of the commencing process of economic liberalization and privatization. This is particularly true for the two former Soviet Union countries Moldova and Ukraine and to a lesser extent for the two potential EU-Accession countries Bulgaria and Romania. The lower economic status of the four downstream Danube River countries is clearly documented by per capita GDP between USD 900 and 1,500 per annum.

It is obvious from this broad description of the DRB countries that there is a clear distinction in terms of political, administrative and economic capability from the wealthy countries in the upper DRB, the mid-income countries in the central DRB, down to the poorer countries in the lower part of the DRB.

I-4 Accidental Pollution in the Danube and the Tisza and Siret Sub-River Basins

Since the DRPC entered into force, first concerns about contamination of ground and surface waters were raised during the NATO intervention against Yugoslavia from March to June 1999. The bombing and destruction of petrochemical plants and refineries led to contamination of channels and tributaries emptying into the Danube River. Sampling and analysis have shown high levels of contamination with heavy metals, in particular mercury, oil and petroleum products, volatile organic substances, PCBs, PAHs, etc. However, one must bear in mind that the accumulation of toxic substances is not the effect of the recent bombing of industrial installations only but also the result of years of inefficient treatment and careless handling of wastes from industrial and mining activities.

In the beginning of the year 2000 two accidents occurred with disastrous environmental effects in the upper Tisza Sub-River Basin where mining activities are carried out. Waste water containing cyanide and heavy metals was accidentally discharged into receiving waters. Ecosystems were affected and large fish kills of several hundred tons were reported. Drinking water supply for urban centers at the riverbanks and fishing activities had to be suspended. Important economic losses were reported in tourism and fisheries. The effects of the cyanide wave were reported over a stretch of 900 to 1000 km from the Tisza River to the Danube and dangerous cyanide concentrations were still measured even downstream of the Iron Gate dam.

In January 2001 a new pollution accident was reported from the upper Siret Sub-River Basin where waste water containing cyanide was leaking from a chemical factory. This accident caused tons of killed fish and transboundary pollution and dozens of people, in particular children, got hospitalized from eating contaminated fish.

There are actually serious concerns over the possible accumulation of toxic substances in the sediments and biota of the Iron Gate reservoirs. Preventive management programmes have to be developed and implemented in order to gradually clean up the sediments and assure the rehabilitation of ecosystems in the central and lower part of the Danube River basin.

I-5 Institutional and Legal Mechanisms and Investment Programmes for Nutrient Reduction in the Danube Countries

In the frame of the present project preparation (PDF-Block B activities), specific subjects concerning the institutional, legal and policy frame as well as national investment programmes for nutrient reduction have been studied and analysed.

(i) Inter –ministerial coordination mechanisms

In the frame of the PDF-Block B activities, inter-ministerial mechanism at the national level and concepts of cooperation for pollution reduction, in particular nutrient reduction, have been analyzed. The diversity of views and proposals for the implementation of EU Directives in the frame of the accession process create an encouraging environment for the countries to create new inter-ministerial mechanism or improve the existing structures with nutrient reduction and control responsibilities. Based on the finding of the national contributions, the Danube countries can be classified in three groups.

The first group is made up of EU member countries, Germany and Austria, in which the existing national inter-ministerial structures allow an effective performance of nutrient reduction and control tasks. In Germany, the inter-ministerial cooperation takes place on both federal and state levels, covering legislative procedures, implementation of EU-directives, and development of minimum requirements for point sources for municipalities as well as for industrial branches. In Austria, the recently restructured Ministry of Agriculture, Forestry, Environment and Water Management provides the necessary structure to adequately implement nutrient control and reduction measures.

The second group, made up of the Czech Republic, Hungary, Romania and Bulgaria includes countries where specific mechanisms or inter-ministerial structures for nutrient reduction do not yet exist. However, there are several relevant national inter-ministerial bodies with responsibilities for water pollution abatement and environmental protection. Most of these structures also deal with diffuse sources of pollution, the implementation of pollution reduction measures or approval of new investments in the water sector.

Finally, in the remaining Danube countries, the nutrient reduction and control issues do not yet represent a high priority for the policy makers.

All countries have developed proposals for the improvement/creation of inter-ministerial mechanisms capable of responding to nutrient reduction concerns. These proposals refer to both legal and institutional frameworks and include:

- (i) the implementation of nutrient-related legislation based on EU Directives and ratified International Conventions,
- (ii) the development of instruments for diffuse pollution characterization and control,
- (iii) the elaboration of rules for good farming practices and good practices in drinking water protection zones,
- (iv) the application of an integrated approach to the management of water resources on the river basin level.

The Danube countries believe that cooperation between governments, local communities and Non-Governmental Organizations (NGOs) in relation to the nutrient reduction is very important. Nutrient reduction issues are included directly or indirectly in the mandate and the responsibilities of the local authorities, farm enterprises, industrial plants and environmental NGOs. In the frame of river basin organizations the majority of the countries sets good examples of cooperation between the government, inter-ministerial bodies, local communities and NGOs.

The activities of the PDF-Block B investigation have raised awareness and provided important legitimacy to the concept of inter-ministerial mechanism for nutrient reduction and helped move it into the mainstream of policy debate for its implementation. The forthcoming Danube Regional Project with its two Phases will reinforce national initiatives and contribute towards the setting up of adequate nutrient reduction mechanisms at the national and regional levels.

(ii) Policies and legislation relating to nutrient control and reduction

After a critical period of transition, all DRB countries have in the meantime developed a comprehensive hierarchic system of short, medium and long-term environmental policy objectives, strategies and principles which usually reflect the key country-specific environmental problems and the sector priorities on national and regional levels.

Despite the diversity of problems, interests and priorities across the DRB, the Danube countries share certain values and principles relating to the environment, conservation of natural resources and nutrient control and reduction. The most essential and commonly accepted principles are:

- the precautionary principle;
- best available technology (BAT) - best environmental practice (BEP);
- control of pollution at the source;
- the "polluter pays" principle and the related "user pays" principle;
- the principle of integrated approach (e.g. River Basin Management approach);
- the principle of shared responsibilities, respectively the principle of subsidiarity;
- the implementation of EU Directive 76/464/EEC on pollution caused by certain dangerous substances.

None of the DRB countries currently has an explicitly formulated nutrient reduction programme. Measures and activities with relevance to nutrient reduction are usually sub-components of or are substantially incorporated in other programmes.

While Germany and Austria have legislation in compliance with "highest environmental standards" on nutrients (e.g. EU Nitrate Directive), they have not yet fully implemented / enforced these legislation.

The adequacy of the legal framework for sound environmental management of water resources of the other countries has to be viewed against the political, economic, administrative and social changes that have taken place in the particular DRB countries during the previous years of transition.

Thus, the relevant legislation is in most DRB countries currently undergoing substantial reform and modernization. Given the complexity of the task, the reform can be expected to take several years before the relevant legislation has reached an acceptable level of compliance with the international requirements.

Except for the two EC member states, Germany and Austria, all other DRB countries consider the harmonization of national environment and water-related legislation with EU legislation as the most essential prerequisite for long-term sustainable nutrient control and reduction in their countries. In the Czech Republic, Hungary and Bulgaria, this harmonization is incorporated in an ongoing programme and considered as a short-term task.

In Romania, Slovakia and Slovenia, the harmonization of relevant national laws with EU legislation or standards is expected to be achieved in the short, respectively medium term. For the final implementation of the Urban Waste Water Treatment Directive, an adjustment period of approximately 10 to 20 years is considered to be necessary.

In other countries - Moldova, Ukraine and the war-impacted countries Croatia, Bosnia-Herzegovina and Yugoslavia - the status of the water sector legislation is still unsatisfactory.

From the point of view of nutrients, the most essential issue is the substantial transposition of:

- the new Council Directive 2000/60 of 22 December 2000 concerning water policy which aims at a good status for all surface and groundwater within (often transboundary) river basin districts (RBD). By December 2015, river basin management plans must be prepared for each RBD; already by December 2012, all polluting discharges must be controlled under a combined approach of best available techniques and emission limit values, as well as by best environmental practice for diffuse pollution;
- the Council Directive 91/271/EEC of May 1991 concerning urban waste-water treatment;
- the Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources.

Regarding the particular issue of control, respectively the out-phasing of phosphate-containing detergents, the current situation in the particular DRB countries indicates that there is a substantial potential for phosphorus reduction in most DRB countries, which should be followed up on.

(iii) Nutrient reduction programmes 2000 – 2005 and related investments

Within the frame of further development of Five Nutrient Reduction Action Plan, both structural/investment and legal/policy reforms projects that address nutrient reduction will be introduced.

(a) Point Source Projects and anticipated nutrient reduction

Within the elaboration of the PDF-B project all 13 DRB countries have provided a draft national lists of priority projects that are supposed to be ready for implementation in the coming 5-year period and can be considered as a reasonable basis for the elaboration of comprehensive Nutrient Reduction Action Plans as part of the ICPDR Joint Action Programme.

According to the available data, the total investment required for the 245 priority point source projects for all 13 DRB countries amounts to about 4,404 million €.

The structure of the identified investment requirements by sector is as follows (2001 – 2005):

	Municipal	Industrial	Agricultural	Wetlands	Total
No of Projects	157	44	21	23	245
Million €	3,702	267	113	323	4,404
(%)-Structure	84%	6%	3%	7%	100

The structure of the identified investment requirements by countries is as follows:

	GER	A	CZ	SK	HUN	SLO	CRO	B&H	YUG	BUL	RO	MOL	UA	TOT
No of Proj.	11	4	12	20	24	24	11	12	40	21	25	31	10	245
Mill. €	231	264	147	118	687	384	433	176	785	125	493	493	67	4,404
(%)	5	6	3	3	16	9	10	4	18	3	11	11	1	100

The anticipated composition of the funding of the identified priority projects across the DRB countries is as follows:

Funding component	Million €	(%) – Structure
National funding contribution	1,716	39 (%)
International loans:	1,163	26 (%)
International grants:	663	15 (%)
Not secured funding components:	862	20 (%)
Total:	4,404	100 (%)

According to the available data provided by the national reports, total pollution reduction as a result of the implementation of the proposed priority point source projects including waste water from urban areas, which are not connected to WWTP, is anticipated to be in the following ranges:

	Municipal	Industrial	Agricultural	Wetlands	Total
No of Projects	157	44	21	23	245
N (t/y)	33 300	3 400	6 700	15 100	58 500
P (t/y)	5 500	3 700	1 100	1 800	12 100
BOD (t/y)	221 000	39 700	9 500	5 900	276 100
COD (t/y)	398 900	78 700	15 000	32 400	525 000

(b) Nutrient reduction from agricultural non point sources of pollution

Based on the available data, the assessment of the anticipated nutrients reduction from agricultural non point sources of pollution shows values ranging between 10 and 25 % for nitrogen and between 3 and 25 % for phosphorus.

To ensure significant nutrient loads reduction from diffuse sources of pollution, the Danube countries have identified measures that primarily address:

- (i) policy and legislation-related actions: the improvement of national policies and legislation regarding the utilization of fertilizers and livestock waste and approximation of national legislation to relevant EU legislation and standards;
- (ii) institutional strengthening and capacity building: the elaboration and enforcement of guidance on the application of the agro-environmental schemes and best environmental practice;
- (iii) raising public awareness and strengthening public participation in nutrient reduction initiatives: the development of pilot projects for the implementation of alternative methods.

The estimates of the nitrogen and phosphorus reduction for point sources and non point sources as presented in the national contributions are summarized below:

Country	Nutrient loads (DWQM 1994/98)		Anticipated national emission reductions				Expected national load reduction	
			Point Sources		Non Point Sources*			
	N (t/y)	P (t/y)	N (%)	P (%)	N (%)	P (%)	N (t/y)	P (t/y)
Germany	68,000	3,700	6.0	2.0	10.0	3.0	10,891	185
Austria	77,000	3,800	5.1	10.6	10.0	3.0	11,650	518
Czech Republic	15,000	1,100	7.3	5.6	10.0	3.0	2,591	95
Slovakia	30,000	1,700	8.6	8.6	15.0	10.0	7,074	318
Hungary	31,000	3,800	21.6	40.1	15.0	10.0	11,358	1,902
Slovenia	20,000	1,300	26.2	62.6	15.0	10.0	8,233	944
Croatia	23,000	2,200	6.6	10.9	15.0	10.0	4,959	459
Bosnia-Herzegovina	36,000	2,200	13.1	38.8	10.0	10.0	8,300	1,073
Yugoslavia	72,000	7,000	9.4	69.5	10.0	10.0	13,993	5,563
Bulgaria	23,000	4,000	11.7	15.0	10.0	10.0	4,983	999
Romania	121,000	12,700	9.8	12.5	10.0	10.0	23,960	2,861
Moldova	8,000	1,400	86.3	64.6	5.0	5.0	7,298	975
Ukraine	28,000	4,000	1.7	1.6	10.0	5.0	3,286	265
Total	552,000	48,900	10.3	23.8	10.9	8.2	118,576	16,156

* Percentage for expected reduction of nutrient emissions from non-point sources for groups of countries has been estimated, based on available information and data for expected emission reduction following the implementation of new policies and legislation in line with EU Directives.

The results in the table indicate that with the implementation of structural (projects) and non-structural measures (policies and legislation), the total annual nutrient reduction will be about 119,000 tons for nitrogen (22%) and 16,000 tons for phosphorus (33%). It can be further assumed that about half of the nitrogen reduction will come from the rehabilitation of point sources (waste water treatment) and the other part from nutrient reduction from diffuse sources, in particular from change of agricultural practices.

The GEF Regional Project with its two Phases will provide the necessary support to the ICPDR and the participating countries to realize these goals and to contribute essentially to achieving the goal of holding the Nitrogen and Phosphorus loads to the Black Sea at the 1997 level respectively further reducing them to meet the objectives of the Memorandum of Understanding between the ICPDR and ICPBS.

I-6 Mechanisms for Regional Cooperation for the Protection of Water and Ecological Resources in the Danube River Basin

(i) The Danube River Protection Convention

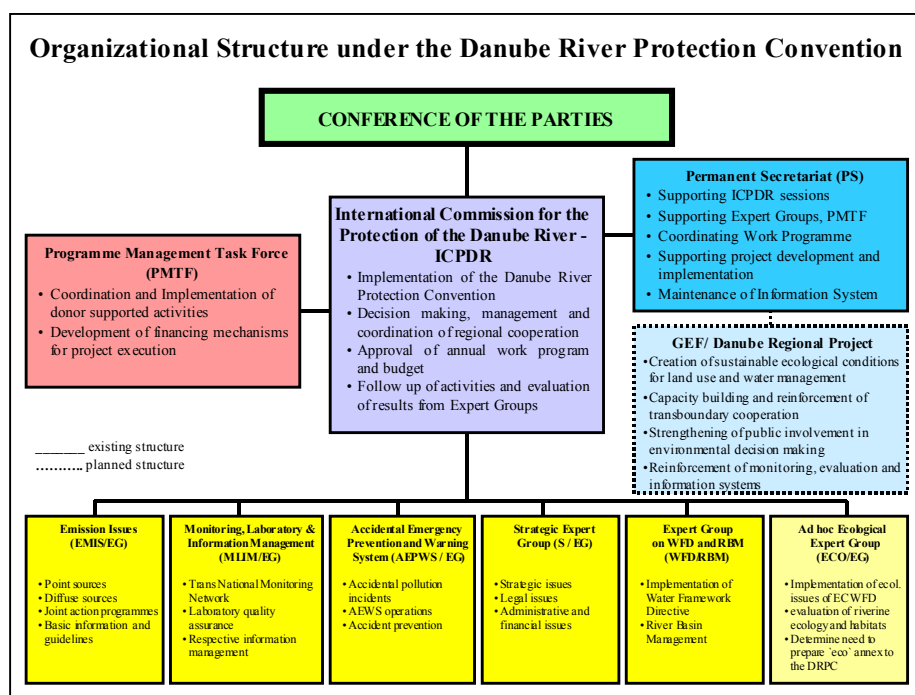
The Danube River Protection Convention is a legally binding instrument, which provides a substantial framework and a legal basis for cooperation between the contracting parties, including enforcement. The main objective is the protection and sustainable use of ground and surface waters and ecological resources, directed at basin-wide and sub-basin-wide cooperation with transboundary relevance. Joint activities and actions are focused on coordination and enhancement of policies and strategies, while the implementation of measures lies mainly with the executive tools at the national level. The Strategic Action Plan provides guidance concerning policies and strategies in developing and supporting the implementation measures for pollution reduction and sustainable management of water resources enhancing the enforcement of the Danube River Protection Convention.

Eleven of the 13 DRB countries eligible to join the Convention have signed with the European Commission the Danube River Protection Convention (DRPC), which came into force in October 1998, and most have ratified it.

(ii) The International Commission for the Protection of the Danube River (ICPDR)

Recognizing individually and responding in common to the obligations of the DRPC, the Danube countries have established the International Commission for the Protection of the Danube River to strengthen regional cooperation. It is the institutional frame not only for pollution control and the protection of water bodies but it also sets a common platform for sustainable use of ecological resources and coherent and integrated river basin management.

The Commission has created several Expert Groups to strengthen the proactive participation of all Contracting Parties and associated countries in the design and implementation of joint measures for pollution reduction, including nutrients, and water management.



I-7 Cooperation between the ICPDR and the International Commission for the Protection of the Black Sea (ICPBS)

(i) Findings of the Joint Ad-hoc Technical Working Group of the ICPDR and the ICPBS

In 1998, the ICPDR and the ICPBS established a joint Working Group, which analyzed the causes and the effects of eutrophication in the Black Sea. In its findings, the Working Group indicated that the loads entering the Black Sea from the Danube had fallen in recent years due to the collapse of the economy of many transition countries formerly attached to the Soviet Block, the measures undertaken to reduce nutrient discharges in the upper Danube countries, in particular Germany and Austria, and a decline in the use of phosphate in detergent.

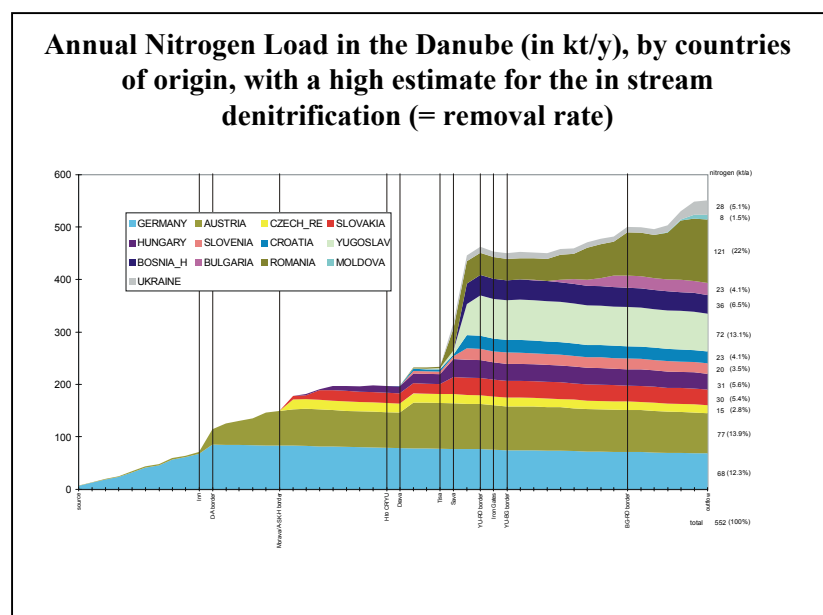
The Working Group concluded that in spite of the evidence of recovery in the Black Sea ecosystems, there were still concerns that the nutrient discharges to the Black Sea – in line with the expected economic growth – were likely to rise again unless action was taken to implement nutrient discharge control measures as part of economic development strategies. The Working Group went on to define the possible objectives and strategies, which are presently included in the Memorandum of Understanding between the ICPDR and the ICPBS, as follows:

- ⇒ the long-term goal is defined as a recovery of the Black Sea ecosystems to conditions similar to those in 1960;
- ⇒ as a mid-term goal, measures should be taken to prevent discharges of nutrients and hazardous substances from exceeding the levels of 1997;
- ⇒ inputs of nutrients and hazardous substances should be assessed, monitoring and sampling procedures should be determined, and the results should be reported.

(ii) Analysis of Point Sources and Non-Point Sources of Pollution with Particular Attention to Nutrient Transport to the Black Sea

In the frame of the Pollution Reduction Programme, over 500 hot spots were identified for the municipal, industrial and agricultural sectors. The geographical distribution of hot spots in the Danube River Basin indicates a clear concentration of municipal and agricultural hot spots in the upper Drava and Sava Sub-river Basins, in the Lower Tisza and around Belgrade and in the central part of Bosnia-Herzegovina. In the Carpathian Mountains of the upper Tisza and Prut Sub-river Basins, important mining and industrial hot spots have been identified, from which recent accidents - the cyanide spill of Baia Mare and the sludge containing heavy metals from Baia Borsa - have been reported. (Annex 7 – Maps: Distribution of Hot Spots in the Danube Sub-River Basins).

Applying the Danube Water Quality Model (DWQM), the total nutrient transport from point and non-point sources, to the Black Sea was analyzed, indicating a total of 552 kilotons of nitrogen and 48.9 kilotons of phosphorus reaching annually the Black Sea. Studies undertaken in the frame of the Danube Environmental Programme suggest that about half of the nutrient discharged internally in the basin come from agriculture (diffuse sources of pollution), slightly more than one quarter from domestic sources, an additional larger share comes from industry and the remainder from “background” sources.



II Project Objectives

The long-term development objective of the proposed Regional Project is to contribute to sustainable human development in the DRB through reinforcing the capacities of the participating countries in developing effective mechanisms for regional cooperation and coordination in order to ensure protection of international waters, sustainable management of natural resources and biodiversity.

In this context, the proposed GEF Regional Project should support the ICPDR, its structures and the participating countries in order to ensure an integrated and coherent implementation of the Strategic Action Plan 1994 (SAP 1994), the Common Platform and the forthcoming JAP and the related investment programmes in line with the objectives of the DRPC.

The overall objective of the Danube Regional Project is to complement the activities of the ICPDR required to provide a regional approach and global significance to the development of national policies and legislation and the definition of priority actions for nutrient reduction and pollution control with particular attention to achieving sustainable transboundary ecological effects within the DRB and the Black Sea area.

The specific objective of Phase 1, September 2001 – August 2003, is to prepare and initiate basin-wide capacity-building activities, which will be consolidated in the second phase of the Project. This second Phase will be implemented from September 2003 – August 2006, building up on the results archived in the first Phase. During the first Phase, altogether 20 project components with 80 activities will be carried out and thus establishing a solid base for the implementation of Phase 2 of the GEF support to the ICPDR.

Further, the Danube Regional Project, in its Phases 1 and 2, shall facilitate implementation of the Danube River Protection Convention in providing a framework for coordination, dissemination and replication of successful demonstration that will be developed through investment projects (World Bank-GEF Partnership Investment Facility for Nutrient Reduction, EBRD, EU programmes for accession countries etc.).

Taking into account the basic orientations of the Danube/Black Sea Basin Strategic Partnership, the following immediate objectives can be designed to respond to the overall development objective:

(1) OBJECTIVE : Creation of sustainable ecological conditions for land use and water management

Output : Concepts for nutrient reduction policies and legal instruments and measures for compliance are developed for all Danube River Basin countries with particular attention to the EU Water Framework Directive, integrated river basin management, best agricultural practices, appropriate land use and wetlands management and economic instruments.

Approach : Supporting the ICPDR and the DRB countries in developing of appropriate policies and legal instruments for river basin management, appropriate land use, improved water management and water quality control with particular attention to toxic substances and nutrient reduction (e.g. agricultural, industrial, and municipal policy and legislative reforms, wetlands management) and in developing mechanisms for exacting compliance with policies and legislation.

Assuring policy coherence to the guidelines of the Global Programme of Action on Control of Land Based Sources of Pollution, with particular emphasis on the strategic goals regarding mitigation of transboundary effects and rehabilitation of the Black Sea.

(2) OBJECTIVE : Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the DRB

Output : Institutional and organizational mechanisms for transboundary cooperation in pollution control and nutrient reduction are put in place and concepts for improved water quality monitoring, emission control, emergency warning and accidental prevention are developed.

Approach : Conceptualizing and putting in place “Inter-ministerial Committees” at the national level, involving all technical, administrative and financial departments to assure adequate coordination and implementation of policies, legislation and projects for nutrient reduction and pollution control. Supporting the ICPDR and its Expert Groups to improve their institutional, administrative and technical capacities to assure basin wide harmonization of water quality regulatory standards including specific provisions for nutrient reduction; to further develop specific regional information system and mechanisms for transboundary pollution monitoring and evaluation considering EU regulations (WFD) and GEF IW M&E indicators (process, stress reduction, environmental status).

Organizing workshops and training courses on institutional, administrative, technological and economic issues for individuals and participants from ministries, public authorities and private institutions with responsibilities related to the use, control and impacts of nutrients in the DRB, respectively their effects on the Black Sea.

(3) OBJECTIVE : Strengthening of public involvement in environmental decision making and reinforcement of community actions for pollution reduction and protection of ecosystems

Output : The DEF Secretariat is fully operational and supports national NGOs. Community based projects for nutrient reduction (Small Grants Programme) and awareness campaigns are prepared and information material is regularly published. Consequently public concern and response to ecological issues has increased.

Approach : Supporting NGOs in professional, institutional, administrative and funding issues to boost their capacities for active participation in transboundary pollution control with particular attention to nutrients and certain toxic substances. In this context, NGO activities and public awareness shall be reinforced through the setting up of a Small Grants Programme providing financial support for community based nutrient reduction projects. Concepts for special campaigns for awareness raising and information of the public shall be developed and cooperation with mass media shall be reinforced.

(4) OBJECTIVE : Reinforcement of monitoring, evaluation and information systems to control transboundary pollution, and to reduce nutrients and harmful substances

Output : A Danube Basin wide system for monitoring and evaluation of environmental impacts is prepared and indicators are identified for process, stress reduction and environmental status in line with EU and international reporting requirements. Economic instruments for nutrient reduction (nutrient trading possibilities) are analysed and findings are published.

Approach : Supporting the development and upgrading of monitoring and information systems, which are of significant importance for transboundary cooperation in water quality and water management and of common interest for the Danube and the Black Sea countries. Particular attention will be given to the development of indicators (process, stress reduction and environmental status indicators) to monitor progress of project implementation. For this purpose special methodologies will be developed for assessment nutrient removal capacities of wetlands. Also economic mechanisms will be analysed to encourage investments in nutrient reduction measures.

III Project Description

The compilation of immediate objectives indicates the broad spectrum of 20 project components and 80 activities to be dealt with in the framework of the proposed Phase 1 of the Danube Regional Project in order to fulfill its role as an integral part of the proposed Danube/Black Sea Basin Strategic Partnership.

In line with the immediate objectives, the particular 20 project components of the proposed Phase 1 of the Danube Regional Project can be grouped as follows:

1. Creation of sustainable ecological conditions for land use and water management;
2. Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the Danube River Basin;
3. Strengthening of public involvement in environmental decision making and reinforcement of community actions for pollution reduction and protection of ecosystems;
4. Reinforcement of monitoring, evaluation and information systems to control transboundary pollution, and to reduce nutrients and harmful substances.

The detailed description of expected outputs and activities for each objective is given in the Project Management Sheets, Part E of the Project Document, indicating implementation steps and specific outputs in Phase 1 and consequently in Phase 2 of project implementation.

1. Creation of sustainable ecological conditions for land use and water management

In most central and downstream DRB countries, the development of water-related policies and legal instruments are still in the phase of preparation and it is obvious that there are significant deficiencies in the existing policy framework. Most of these countries are in the EU accession process and have to adjust their legal frame to meet the EU directives and regulations and assure compliance. For issues that are of common interest for the DRB countries and of special importance for water quality and water resource management, particularly related to nutrients, eight project components have been identified to be carried out in the frame of the present Regional Project.

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

Considering the DRPC's mandate to assure sustainable water management in the DRB and taking into account the central role of the river basin management in implementing the new EU Water Framework Directive, there is a substantial need to facilitate the development of river basin management plans in the Danube River Basin and in its sub-basin areas. These river basin management plans will have to deal with nutrient reduction from point- and non-point sources.

To assure efficient implementation of the EU Water Framework Directive and a coherent approach to River Basin Management, the ICPDR has set up a specialized Expert Group to develop guidelines for the elaboration of the River Basin Management Plans, their implementation and the development of institutional and legal mechanisms. Two workshops have been organized in the frame of the EC Phare assistance programme and case study material had been prepared. These elements will be integrated in the proposed activities of the GEF-DRP. During the Phase 1 of the Danube Project concepts and analytical material will be prepared, which later during Phase 2 of the Project will be implemented in form of national contributions, pilot projects and workshops on river basin management and implementation of the EU WFD.

The activities of the EG shall be supported by international expertise in order to develop standardized methodologies and guidelines for sub-river basin management plans and a methodology for the aggregation of the sub-river basin management plans to a basin wide management concept. This should take into consideration EU-WFD and GEF IW strategies to develop guidelines for particular sub-river basins to reinforce transboundary cooperation.

The main activities to be supported and carried out in Phase 1 in cooperation with the RBM Expert Group can be summarized as follows:

- 1.1.1 Identifying River Basin District (RBD), in particular the assignment of coastal waters and groundwater bodies;
- 1.1.2 Developing common approaches and methodologies for pressure and impact analysis;
- 1.1.3 Implementing the common approaches and methodologies for pressure and impact analysis at the national level (*will be completed in Phase 2*);
- 1.1.4 Applying the EU Guidelines for economic analysis and arrive at the overall economic analysis for the Danube River Basin (*will be completed in Phase 2*);
- 1.1.5 Developing RBM tools (mapping, GIS, remote sensing, etc.) and related data management, including the arriving at the typology of surface waters and the relevant reference conditions (*will be completed in Phase 2*);
- 1.1.6 Identifying pilot river basins and apply common approaches, methodologies, standards and guidelines, in observing also the link to the Working Groups of the European Commission (*will be completed in Phase 2*);
- 1.1.7 Develop concepts and programmes for workshops and training courses in order to produce the River Basin Management Plan and to strengthen basin-wide cooperation (*will be completed in Phase 2*).

1.2 Reduction of nutrients and other harmful substances from agricultural point and non-point sources through agricultural policy changes

As indicated in chapter I–7 it is assumed that about half of nutrients discharged internally in the Danube Basin to the fine web of the river network come from agriculture. The project will support a series of measures to operationalize actions for pollution reduction from point and non-point source. In the Phase 1 of the Project, a first analysis should be based on a revised and prioritized “hot spot” inventory of point and non-point sources of pollution and take into account the findings and recommendations of the field-based demonstration programmes conducted in Eastern European countries with the support of the European Union and GEF. The project will update the information on the use of agrochemicals and identify specific policy and legal measures to assist the participating countries in meeting their obligations to reduce agricultural point and non-point source pollution. For EU accession countries, specific programmes will be developed that will assist them in meeting their obligations under the EU Environment and Water Framework Directives, as well as the requirements of the important Nitrate Directive (91/676/EEC). In Phase 2 of the Project policy and legal recommendations will be worked out for DRB governments to reinforce the introduction of “best agricultural practice” and to optimize the use of agrochemicals

The main focus of this assistance is to identify for each DRB country the main administrative, institutional and funding deficiencies and to develop priority reform measures for policies which are expected to best support the integration of environmental concerns into farm management (“best agricultural practices”), including improvements in the handling of manure and sludge from livestock operations, minimization of chemical fertilizers and pesticides, promotion of improved tillage methods, management of restored wetlands and buffer zones as well as farmer education and outreach activities.

For this purpose, the following actions should be considered in Phase 1:

- 1.2.1 Up-dating the basin-wide inventory on priority agricultural point and non-point sources of pollution “hot spots” in line with EMIS emission inventory;
- 1.2.2 Reviewing the relevant legislation, existing policy programmes and actual state of enforcement in the DRB with respect to promotion and application of best agricultural practices (*will be completed in Phase 2*);
- 1.2.3 Reviewing the inventory on important agrochemicals (nutrients etc.) in terms of quantities of utilization, their misuse in application, their environmental impacts and potential for reduction (*will be completed in Phase 2*);

- 1.2.4 Identifying the main institutional, administrative and funding deficiencies (including complementary measures) to reduce pollutants;
- 1.2.5 Introducing or, where existing, further developing concepts for the application of best agricultural practices in all DRB countries, by taking into account country-specific traditional, social and economic issues, and the ECE recommendations (*will be completed in Phase 2*).

1.3 Development of pilot projects on reduction of nutrients and other harmful substances from agricultural point and non-point sources

This pilot project component has to be considered as complementary to the above-described policy component, which also includes the updating of the list of point and non-point sources of pollution with particular attention to priority agricultural “hot spots”. It is particularly focusing on adequate handling of manure and on the practical introduction of organic farming methods. Agricultural point sources (e.g. large pig farms), including inappropriate handling of manure, are estimated to supply 2.5% and 6.8 %, respectively, of the nitrogen and phosphorus reaching the Danube River Basin.

The initial project review of existing national programmes promoting best agricultural practice should be based on and take into account the findings and recommendations of the field-based demonstration programmes conducted in Eastern European countries with the support of the European Union and GEF.

Specific needs to improve agricultural practices and relevant sites for demonstration activities on manure handling and should be identified in practical concepts for each DRB country. Focus countries for pilot projects (training and institutional development of best agricultural practice) should be Ukraine, Moldova, Romania, Bulgaria, Yugoslavia and Bosnia & Herzegovina. The implementation of the prioritized pilot projects will be carried out in Phase 2.

The following steps should lead to an efficient implementation of this project component in Phase 1:

- 1.3.1 Analyzing existing programmes and pilot projects promoting best agricultural practice (especially regarding animal farming and manure handling, as well as organic farming) in DRB countries, and assess nutrient reduction capacities;
- 1.3.2 Developing practical concepts for the introduction respectively promotion of appropriate agricultural practices and manure handling in the central and downstream DRB countries by taking into account national demand and international markets and ECE recommendations;
- 1.3.3 Preparing and implementing for the central and lower DRB countries typical pilot projects (especially in UA, MD, RO, BG, YU and B-H) to train and support farmers in the application of best agricultural practice (*will be completed in Phase 2*).

1.4 Policy development for wetlands rehabilitation under the aspect of appropriate land use

In the case of conflicting land use, priorities were in the past usually set on extension and intensification of human settlement and economic activities, with the consequence that ecologically sensitive areas/wetlands were steadily impacted in their function or completely disappeared.

The present project component shall address questions in relation to typical situations of inappropriate land use resulting from municipal settlement, agricultural activities, hydraulic structures and their impact on ecologically sensitive areas and wetlands and effects of transboundary pollution with particular attention to nutrients and toxic substances. Standardized concepts shall be developed for the rehabilitation of selected sensitive areas/wetlands and for an integrated land use especially around these wetlands. In Phase 2 of the Project, these concepts shall be implemented and required policy, legal and institutional reforms shall be applied for integrated land use as models for the DRB.

The main tasks of the proposed activity in Phase 1 can be summarized as follows:

- 1.4.1 Define methodology for integrated land use assessment around wetlands (called "wetland areas");
- 1.4.2 Carry out case studies for selected wetland areas and assess inappropriate land use (e.g. forestry, settlements and development zones, agriculture and hydraulic structures);
- 1.4.3 Develop alternative concepts and strategies for achieving integrated land use and management in chosen wetland areas, including required actions and measures (regulatory and legal issues, economic fines and incentives, compensation payments, etc.)

1.5 Industrial reform and development of policies and legislation for application of BAT (best available techniques including cleaner technologies) towards reduction of nutrients (N and P) and dangerous substances

Industrial reform is one of the most urgent and most critical issues in most central and lower DRB countries and can certainly not be efficiently initiated by an environmental programme of this scale. Considering that in transition countries the industrial production is actually very low, it is not surprising, that industry generates only respectively 5 and 8 % of nitrogen and phosphorus that enter the Danube River.

Taking into account the expected revitalization of industries, it is necessary to focus on industrial policies and on a review of legislation in order to ensure that environmental considerations are adequately taken into account and that mechanisms for compliance are put in place.

The project should also address the problem of industrial “hot spots” in relation to Significant Impact Areas (SIA) as identified in the Transboundary Analysis, to determine transboundary nutrients and toxics pollution from particular industries and identify possible solutions (BAT - best available techniques including cleaner technologies, treatment process, etc.) to reduce the emissions of toxic substances and nutrients in particular. While Phase 1 of the Project focuses on the identification of gaps and opportunities for reforms, Phase 2 will later develop pilot applications of BAT concepts in selected countries.

The subject of this component is closely related to the work of the EMIS/EG, therefore the project component should closely cooperate with the envisaged UNIDO-TEST MSP to ensure that interventions at the policy/legislative and at the technical (demonstration) levels are complementary. In this context, the execution of the project component through an IAA or sub-contract with UNIDO should be considered.

The following steps should lead in Phase 1 to an efficient implementation of this project component:

- 1.5.1 Up-dating the basin-wide inventory on industrial and mining “hot spots” (EMIS inventory) taking into account emissions of nutrient and toxic substances;
- 1.5.2 Reviewing data and information on the actual status of industrial production techniques involving nutrients (N and P) and dangerous substances in the DRB countries;
- 1.5.3 Reviewing policies and relevant existing and future legislation for industrial pollution control and identification enforcement mechanisms on a country level (*will be completed in Phase 2*);
- 1.5.4 Comparing and identifying gaps between relevant EU and national legislation (*will be completed in Phase 2*);
- 1.5.5 Developing necessary complementing policy and legal measures for the introduction of BAT taking into account regulatory and legal issues, awareness raising, financial fines and incentives, etc (*will be completed in Phase 2*);
- 1.5.6 Identifying, in relation to Significant Impact Areas, industrial “hot spots” having a significant impact on water resources and water quality (*will be completed in Phase 2*);
- 1.5.8 Organizing workshops with participants from relevant ministries, industrial managers, banking institutions, introducing information on best available technologies, financial support, etc. (*will be completed in Phase 2*).

1.6 Policy reform and legislation measures for the development of cost-covering concepts for water and waste water tariffs, focusing on nutrient reduction and control of dangerous substances

The funding of water sector-related investments and the cost coverage for the operation of WWTP in the DRB countries largely depends on economically and socially acceptable water and waste water tariffs. An assessment of water and waste water tariffs is currently being conducted with financial support from the Austrian Environmental GEF Trust Fund. Based on the results of this study, which will be available in June 2001, policy and legislative measures shall be developed for interested DRB countries to assure the introduction of economically and socially acceptable tariffs. This project component shall help to improve the investment possibilities for reduction of nutrients and toxic substances. Phase 1 of the Project will focus on developing country-specific concepts for tariff reforms while the Phase 2 will analyze and finalize these results in cooperation with all national stakeholders.

The implementation of new policy and legislative measures can make a substantial contribution towards increasing internal funds and releasing public budgets and can thus facilitate the provision of baseline contributions for new investment projects in transboundary nutrient reduction and pollution control.

Based on the results of the assessment of Water and Waste Water Tariffs, the following actions shall be considered in Phase 1:

- 1.6.1 Analyzing significant differences /deficiencies regarding water sector relevant legislation, level of tariffs, status of metering, level of illegal and unaccounted for consumptions, collection rate, etc.; assessing the potential for the increase of revenues of the companies operating in the water and waste water sector;
- 1.6.2 Developing appropriate concepts for tariff reforms aimed at cost covering models in line with the EU WFD (on a country level).

1.7 Implementation of effective systems of water pollution charges, fines and incentives, focusing on nutrients and dangerous substances

Most DRB countries are not putting into operation any effective system of fines for water pollution or respective incentives as applied in industrialized Western European countries. The basic idea is, therefore, to assist the interested DRB countries to develop an effective system of fines and incentives to promote rational utilization of water resources and to prevent or reduce effects of environmental pollution, specifically nutrients and certain toxics. Within the broad framework of fines and incentives particular attention should be given on discharges of nutrients and toxic pollutants with significant transboundary effects. Phase 1 of the Project will produce a DRB-wide assessment of presently existing tools and institutional mechanisms, while Phase 2 will prepare and suggest guidelines for the most appropriate charges, fines and incentives.

The main tasks of the proposed component in Phase 1 can be summarized as follows:

- 1.7.1 Analyzing the present systems of water pollution charges, fines and incentives in the DRB countries and identifying significant deficiencies (types and basis of charges, fines and incentives, effectiveness, collection procedures, exemptions, etc);
- 1.7.2 Identifying the most essential and effective water pollution charges, fines and incentives, assessing the main obstacles/barriers to their introduction and develop enforcement mechanisms;
- 1.7.3 Assessing the institutional and economic capabilities of the particular DRB countries for a reform of water pollution charges, fines and incentives.

1.8 Recommendations for the reduction of phosphorus in detergents

The EU policies and legislation do not provide for phosphate detergents phase-out plans. The present situation in the EU countries is based on voluntary arrangements set by the industry. Phase 1 of the Project will assess the country-specific situation and discuss measures to overcome reduction barriers, while Phase 2 will later periodically check the implementation of recommendations.

The basic idea of this project component in Phase 1 is to:

- 1.8.1 Reviewing the existing legislation, policies and voluntary commitments;
- 1.8.2 Developing recommendations for phosphorus reduction in detergents in line with EU regulations and commonly agreed international standards;
- 1.8.3 Developing proposals for enforcement and compliance (economic, financial incentives);
- 1.8.4 Organizing a basin-wide workshop dealing with the implementation of recommendations at national level (*will be completed in Phase 2*).

The country-specific recommendations and implementation schedules should be mostly based on the experiences from Western European countries and should take into account the institutional and especially the economic capability of the particular DRB countries.

2. Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the Danube River Basin

One of the essential and positive results of the previous GEF Pollution Reduction Programme was the successful support provided for institutional strengthening and capacity building of government, local administration and the private sector (NGOs) in the participating DRB countries.

In order to ensure efficient implementation of the ICPDR policies and related Investment Programme defined under the DRPC, it is recommended that national capacities of the central and the sub-ordinate national level should be reinforced. In this context, exchange of information, reinforcement of environment research and standardization of methods and parameters are essential to strengthen regional cooperation and joint decision making in implementing the SAP. At the national level “Inter-ministerial Committees” will be set up to assure adequate coordination and implementation of policies, legislation and projects for nutrient reduction and pollution control.

The respective project components defined in the frame of the present Regional Project (Phases 1 and 2) are primarily designed to support the ICPDR in establishing an appropriate Management and Information System, and in establishing appropriate indicators for evaluation and monitoring of programme and project implementation (process, status and stress reduction). Secondly, the Expert Groups established under the ICPDR should be supported in carrying out the particular tasks and activities clearly dealing with nutrient reduction and transboundary issues, which might not be adequately covered without GEF assistance.

2.1 Setting up of “Inter-ministerial Committees” for development, implementation and follow-up of national policies legislation and projects for nutrient reduction and pollution control

To assure adequate coordination and implementation of policies, legislation and projects for nutrient reduction and pollution control, “Inter-ministerial Committees” will be set up at the national level involving all technical, administrative and financial departments. The following steps are foreseen :

- 2.1.1 Evaluate existing national structures for coordination of water management and water pollution control (follow up action on report on “Existing and planned inter-ministerial coordination mechanisms relating to pollution control and nutrient reduction”, August 2000, Annex 8.1);
- 2.1.2 In cooperation with national governments, propose adequate structures, including technical, administrative and financial departments to coordinate the review and implementation of policies, legislation and projects for nutrient reduction and pollution control;
- 2.1.3 Assist Governments in setting up national “Inter-ministerial Committees” and provide initial guidance for the implementation of GEF project components.

2.2 Development of operational tools for monitoring, laboratory and information management and for emission analysis from point and non-point sources of pollution with particular attention to nutrients and toxic substances

The subject of this component is professional and financial support aimed at reinforcing the activities related to emission control (EMIS/EG) and monitoring of water quality, laboratory and information management (MLIM/EG), particularly aiming at improvement, further development and application of:

- the Danube Water Quality Model;
- the Modelling Nutrient Emissions in River Systems (MONERIS);
- the Analytical Quality Control (AQC).

If adequately designed and provided with reliable data, these two models and the quality assurance programme are essential tools for a profound assessment of transboundary nutrient and toxic pollutant flows as well as an assessment of the expected effects of nutrient and other pollution reduction measures. The present nutrient reduction plans can be adjusted and the implementation of policy measures can be focused on specific areas or sectors. Phase 1 of the Project will prepare the upgrading of existing operational tools, while Phase 2 will secure their effective application and the DRB-wide data availability.

Further assistance is proposed in Phase 1 to strengthen other activities in the MLIM/EG and the EMIS/EG, with particular attention to the following nutrient/pollution reduction and transboundary issues:

- 2.2.1 Harmonizing water quality standards and quality assurance for nutrients and toxic substances (*will be completed in Phase 2*);
- 2.2.2 Assisting in the creation of a database and emission inventory for point and non point sources of phosphorus and nitrogen, including maps (*will be completed in Phase 2*);
- 2.2.3 Optimizing TNMN and identifying sources and amounts of transboundary pollution for substances on the list of EU priority substances (*will be completed in Phase 2*).

In this context, consultation and working meetings of the Expert Groups for particular research work (modelling, development of nutrient data base, etc) should be arranged in cooperation with international consultants specialized in the respective field of work. For this purpose, special TOR have to be defined by the Expert Groups.

To assure the coherence and viability of data collection in all Danube countries, it would be necessary to provide training and additional laboratory and monitoring tools, in particular for those countries that:

- still need to be brought to the same operational level (Ukraine, Moldova) or
- are not yet integrated in the MLIM and EMIS systems (Bosnia-Herzegovina, FR Yugoslavia).

2.3 Improvement of procedures and tools for accidental emergency response with particular attention to transboundary emergency situations

The recent accidental pollution of the Tisza river from mining activities and the effects of NATO intervention in Yugoslavia, the bombing of petrochemical and other industrial complexes in the Danube River Basin, led to a contamination of ground water and rivers with toxic substances (PCBs, PAHs, cyanide, etc.), the accumulation of heavy metals in sediments and to a degradation of ecosystems (fish kill). Hence, urgent support is needed to improve preventive and emergency response measures.

The subject of this project component is to support development activities for accident emergency warning and prevention of accidental pollution. The experience from the recent accidental pollution events indicates that the basically established AEPWS/EG needs substantial improvement before it can become a satisfactory tool for adequate management of transboundary contamination from catastrophic events. During Phase 1 of the Project, the operational bases of the alarm system will be upgraded and preventive policy measures recommended. During Phase 2, the practical application of the alarm system will be further extended in the DRB.

In this context, technical assistance and reinforcement of operational conditions are required in Phase 1 for:

- 2.3.1 The reinforcement of operational conditions in national alert stations (PIACs) and geographical extension of the AEPWS in Bosnia & Herzegovina and the FR of Yugoslavia¹⁾ (*will be completed in Phase 2*);
- 2.3.2 The completion of the inventory presently available only for the upper Tisza River Basin, and evaluation of all high accidental risk spots in all countries in the Danube River Basin, in line with EU legislation, considering that similar accidental “hot spots” exist in many transition countries (*will be completed in Phase 2*);
- 2.3.3 The designing of preventive measures, the adjusting of national legislation and improved compliance with safety standards (*will be completed in Phase 2*);
- 2.3.4 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 (*will be completed in Phase 2*).

2.4 Support for reinforcement of ICPDR Information and Monitoring System (DANUBIS)

The Danube Information System (DANUBIS) has been developed with the financial support from the Austrian Government (computer equipment and software) and from the Austrian Environmental Trust Fund, administered by UNOPS (concept and development of the Information System). The system is presently installed at the Permanent Secretariat of the ICPDR (Vienna International Center) and fully operational.

Further professional/technical and financial support is needed for the build-up and extension of DANUBIS to assure adequate administration of the information and reporting obligations under the DRPC. A new interactive web-site is to be adapted ensuring a smooth flow of textual and geographic information between the national level and the central unit at the ICPDR Secretariat to achieve permanent monitoring and exchange of information on pollution control and nutrient reduction measures and to disseminate information to the public on policy and legal matters related to nutrient reduction: GEF nutrient reduction policies, relevant EU guidelines and directives, other information from international initiatives/conventions concerning land based sources of pollution, agricultural practices, fertilizer application, phosphate free detergents, etc. During Phase 1 of the Project, the DANUBIS website extension will be made fully operational, during Phase 2 the new interactive website will be built up.

¹⁾ The FR of Yugoslavia is situated in an extremely important geographical position in the center of the Danube River Basin where the most important tributaries, Tisza, Sava and Drava are joining the Danube. During the recent accidental pollution the AEWS has also informed Yugoslavia and cooperated with its technical staff to monitor the effects of accidental pollution. The UNEP Balkan Task Force and the EU-Baia Mare Task Force have closely cooperated with Yugoslavian authorities in the assessment of accidental pollution and the design of emergency measures.

This would require in Phase 1 that:

- 2.4.1 The ICPDR Information System is fully developed and used by its expert groups and other operational bodies;
- 2.4.2 All Contracting Parties of the ICPDR and other participating countries would be linked to DANUBIS, which applies the development and implementation of national linkages and establishment of operational units to communicate also in case of accidental emergency situations (*will be completed in Phase 2*);
- 2.4.3 DANUBIS would be reinforced through the implementation of an interactive web-site to integrate further textual, numerical and digital mapping information and to fulfill all the requirements of the work of the nutrient reduction programme (communication, monitoring, public information, etc.) (*will be completed in Phase 2*);
- 2.4.4 An extensive training programme would be launched and series of workshops be organized at different users levels and in different regions of the DRB to train and assist futures users in the best use of the tools made available by the system (*will be completed in Phase 2*).

It should be noted that the ICPDR assure regular maintenance and updating of the information with particular attention the Data Base developed within the frame of the previous GEF project (Danube Pollution Reduction Programme).

2.5 Implementation of the Memorandum of Understanding between the ICPDR and the ICPBS relating to discharges of nutrients and hazardous substances to the Black Sea

This component implies assisting the ICPBS and the ICPDR in further implementing the Memorandum of Understanding (MoU), identifying appropriate modalities for the implementation and developing of a monitoring system for commonly agreed process, stress reduction and environmental status indicators for the Black Sea. During the Phase 1 of the Project, a joint working programme will be worked out and approved, which will be practically applied in Phase 2.

The main tasks for the implementation of the MoU in Phase 1 can be summarized as follows:

- 2.5.1 Developing a joint work programme for MoU implementation (*will be completed in Phase 2*);
- 2.5.2 Defining and agreeing on status indicators to monitor nutrient transport from the Danube and change of ecosystems in the Black Sea (*will be completed in Phase 2*);
- 2.5.3 Defining and establish reporting procedures (*will be completed in Phase 2*);
- 2.5.4 Re-establishing and organizing regular meetings of the Joint Danube-Black Sea working groups to evaluate progress of nutrient reduction and recovery of Black Sea ecosystems (*will be completed in Phase 2*);
- 2.5.5 Organizing joint Danube-Black Sea meeting to approve and sign MoU by both Commissions.

2.6 Training and consultation workshops for resource management and pollution control with particular attention to nutrient reduction and transboundary issues

In order to assure sustainability of appropriate resources management and pollution control and to assure the same level of understanding throughout the Danube River Basin, it is necessary to provide training in the fields of environmental analysis and planning, management and impact assessment for nutrient reduction and control of toxic substances through workshops, consultation meetings and study tours for participants from government, local administration, NGOs and other stakeholder from the private sector (professional associations, opinion leaders, etc.). Besides this, additional materials and equipment should be supplied and technical assistance should be provided where necessary. During the Phase 1 of the Project, the various training programmes will be worked out and trainers trained, during the Phase 2 Project these trainings will be organized and evaluated.

Besides the workshops on policy development and legislation to be organized in the frame of each of the above-described project components, training courses should be provided in Phase 1 in the following fields:

- 2.6.1 Policy development and legal frame for transboundary cooperation in nutrient reduction and control of toxic substances (*will be completed in Phase 2*);
- 2.6.2 Technical and legal issues of river basin planning and transboundary water resources management in line with the new EU Water Framework Directive with a view to ensuring effective nutrient reduction (*will be completed in Phase 2*);
- 2.6.3 Technical and legal issues (land reclamation) of wetland restoration and management to assure nutrient removal (*will be completed in Phase 2*);
- 2.6.4 Innovative technologies for municipal and industrial waste water treatment; use of sewage and animal waste as fertilizer to reduce nutrient emissions (*will be completed in Phase 2*);
- 2.6.5 Technical and legal issues of management and control of use of fertilizers and manure (*will be completed in Phase 2*);
- 2.6.6 Preparation of documents for nutrient reduction projects with international co-funding and application of GEF criteria concerning incremental cost calculation (*will be completed in Phase 2*);
- 2.6.7 Training courses for NGO activities (*will be completed in Phase 2*).

The last training course should also focus on methodology and standards for economic and financial analysis of bankable projects with international co-funding; and in particular on identification and documentation of nutrient reduction projects according to GEF requirements and guidelines regarding baseline / incremental cost, transboundary effects, etc.

The proposed training courses should be organized with the assistance of experienced international consultants in a series of three-to-five-days workshops and should also be run in the national languages at least once in each Project Phase (i.e. twice during the total project period of 5 years). Regional Workshops designed to reinforce transboundary cooperation should be attended by at least two or three participants from each DRB country. One essential task will be to prepare, prior to the workshops, adequate documents and case study materials for dissemination among the participants.

3. Strengthening of public involvement in environmental decision making and reinforcement of community actions for pollution reduction and protection of ecosystems

All activities outlined in the previous chapter on institutional strengthening and capacity building contribute to awareness raising in a broader sense. The publication through the mass media and through publications of the ICPDR (Danube Watch etc.) of the results of ICPDR's and its Expert Groups' activities, in particular the results of workshops and consultation meetings, constitute an excellent opportunity to raise public awareness. These actions of awareness raising should primarily address representatives from central and local governments and from administration and – to a lesser extent – from the private sector.

The Regional Environmental Center (REC) in Hungary has elaborated a project proposal for GEF financial support for the Building of Environmental Citizenship to Support Transboundary Pollution Reduction in the Danube. Public awareness and public participation, as well as cooperation with the government and administration, shall be demonstrated in the frame of two pilot projects in Hungary and Slovenia.

The present GEF Regional Project component has a much wider spectrum and geographical outreach but should nevertheless benefit from the REC initiative and establish close cooperation during its implementation period.

The objective of the Project is to enhance awareness raising in the civil society and the reinforcement of the role of NGOs in water management and pollution reduction (nutrients and toxic substances)

with particular attention to transboundary cooperation and river basin management. This can best be achieved through practical measures and the support of community-based activities for rational resources management, transboundary cooperation and pollution control with particular attention to nutrient reduction. Financial support should be provided to assist the implementation of community-based demonstration projects in various Danube River Basin countries (Small Grants Programme).

Cooperation of the civil society and in particular the local NGOs is essential to achieving the objectives and goals of the ICPDR and the new Danube Regional Project. Particular attention will be given to the reinforcement and the role of the Danube Environmental Forum (DEF), which is the umbrella organization of the NGOs in the Danube River Basin. The previous GEF Project has provided some support to facilitate the organization of NGO cooperation at the national level and the establishment of the Danube Environmental Forum.

Within the frame of the present GEF project component, the support for awareness raising should be extended (i.e. make each project more relevant), linked with the reinforcement of NGO activities and should focus on concrete demonstration measures of pollution control, nutrient reduction and transboundary cooperation. In this context, the following project components have been identified as particularly promising:

3.1 Support for institutional development of NGOs and community involvement

This should come in the form of technical/professional assistance and financial support for the Danube Environmental Forum and for national NGOs working on transboundary pollution issues and nutrient reduction. During Phase 1 of the Project, this will be focusing on making the DEF fully operational and preparing the training programmes which will be completed in Phase 2 with the actual training and publications:

- 3.1.1 Support for the DEF Secretariat for operation, communication and information management (*will be completed in Phase 2*);
- 3.1.2 Organization of consultation meetings and training workshops on nutrients and toxics issues (*will be completed in Phase 2*);
- 3.1.3 Publishing special NGO publications in national languages on nutrients and toxic substances (*will be completed in Phase 2*);
- 3.1.4 Organization of training courses for the development of NGO activities and cooperation in national projects (nutrient reduction) (*will be completed in Phase 2*).

3.2 Applied awareness raising through community-based “Small Grants Programme”

It is important and necessary to provide administrative, professional and financial support for the extension of the GEF-Small Grants Programme. This is mainly focusing in Phase 1 of the Project on the identification of suitable projects and the preparation of applications for financial support. In Phase 2 of the Project grants will be awarded and the programme will be implemented:

- 3.2.1 Identifying NGO grants programme and projects for reduction of nutrients and toxic substances and mitigation of transboundary pollution;
- 3.2.2 Designing and implementing a region-wide granting programme focusing on demonstration activities and awareness campaigns for sustainable land management and pollution reduction (nutrients) in the agricultural, industrial and municipal sectors (*will be completed in Phase 2*);
- 3.2.3 Designing and implementing two granting programmes at the local and national level in terms of small scale community based investment projects for pollution control, rehabilitation of wetlands, best agricultural practices, reduction of use of fertilizers, manure management, improvement of village sewer systems, etc. (*will be completed in Phase 2*).

Based on previous experience and good performance, this project component shall be implemented with technical and policy guidance from the ICPDR, by the Regional Environmental Center (REC) in Hungary. Through its national offices, the REC will inform local communities and NGOs to develop and submit relevant project proposals and will organize and follow-up in the 2nd Phase of the Project the implementation of selected projects for nutrient reduction and awareness raising.

3.3 Organization of public awareness raising campaigns on nutrient reduction and control of toxic substances

The practical awareness and daily sensitivity of the general public on pollution problems and their transboundary impacts is still very low in most DRB countries. The many new local NGO small grants projects organized within this GEF Project frame (component 3.3.(i)) will become more relevant for the public's opinion-making at national and regional scale if they will be complemented by nationwide awareness campaigns. Therefore, the GEF Project aims at raising awareness on accidental pollution and prevention and nutrient reduction in daily life through media activities and campaigning. Phase 1 of the Project will prepare and start first public activities in the DRB countries, which will be intensified in Phase 2 of the Project. Further support will be given in both Phases by the publication of periodicals in English and in national languages.

Phase 1 of the Project will therefore focus on:

- 3.3.1 Conceptualization and implementation of public awareness raising campaigns on nutrients issues (*will be completed in Phase 2*);
- 3.3.2 Development and production of materials for public press and mass media on nutrients and toxics (*will be completed in Phase 2*);
- 3.3.3 Support to the publication of scientific documents and regular papers or special issues on water management and pollution reduction with particular attention to nutrient issues and Black Sea recovery (*will be completed in Phase 2*).

4. Reinforcement of monitoring, evaluation and information systems to control transboundary pollution, and to reduce nutrients and harmful substances

The development and the upgrading the monitoring and information systems is of significant importance for transboundary cooperation in water quality and water management, and of common interest for the Danube and the Black Sea countries. Particular attention will be given to the development of indicators (process, stress reduction and environmental status indicators) to monitor progress of project implementation. For this purpose, special methodologies will be developed to assess sediments (heavy metals, toxic substances) and nutrient removal capacities of wetlands. Also economic mechanisms will be analyzed to encourage investments in nutrient reduction measures.

Regarding specific issues on monitoring and preparation of information, the following project activities have been proposed to be carried out within the frame of Phase 1 and 2 of the Danube Regional Project:

4.1 Development of indicators for project monitoring and impact evaluation

To assure efficient monitoring and evaluation of project implementation, and to document project and programme achievements, it is necessary – in line with EU and the existing international requirements – to establish an operational system of indicators (process, stress reduction and environmental status) under the ICPDR. It should be considered, that under the new EU Water Framework Directive criteria for the assessment of the ecological status of the rivers and for monitoring the achievement of good ecological status will have to be applied. Within Phase 1 of the Project, new indicators and methodologies will be developed, which will be established and applied in Phase 2.

The following tasks should therefore be carried out in Phase 1 under this component:

- 4.1.1 Establishing a system for M&E in using specific indicators for process (legal and institutional frame), stress reduction (emissions, removal of hot spots) and environmental status (water quality, recovery of ecosystems) to demonstrate results of programme and project implementation and to evaluate environmental effects of implementation of policies and regulations (nutrient reduction) (*will be completed in Phase 2*);

- 4.1.2 Reviewing in the frame of the ICPDR Trans National Monitoring Programme (TNMN) specific indicators (e.g. bio-indicators) for emission control and water quality monitoring with particular attention to nutrients and toxic substances (*will be completed in Phase 2*);
- 4.1.3 Establishing monitoring system in using specific progress indicators (benchmarks) for project implementation (GEF- projects activities) (*will be completed in Phase 2*);
- 4.1.4 Implementing ecological status assessment in line with requirements of EU WFD using specific bio-indicators to demonstrate effects of pollution /nutrient reduction in water-bodies and ecosystems(*will be completed in Phase 2*).

4.2 Analysis of sediments in the Iron Gate reservoirs and impact assessment of heavy metals and other dangerous substances on the Danube and Black Sea ecosystems

(This component will be carried out in the Phase 2 of the Project.)

4.3 Monitoring and assessment of nutrient removal capacities of riverine wetlands

In the frame of the GEF Pollution Reduction Programme, the rehabilitation and management of about 600.000 hectares of wetlands and floodplains in the DRB have been proposed. In the World Bank-GEF Partnership Investment Facility for Nutrient Reduction, the restoration or creation of wetlands is one of the three types of projects eligible for funding. It is generally recognized that the removal capacity varies considerably according to water flow, concentration, loads and natural conditions of the wetlands.

In the frame of Phase 1 and 2 of the Projects, a quantified approach could be made for the DRB wetlands to better assess their removal capacities and the possibilities in wetland management to optimize such processes, while still giving priority to the ecological needs of these ecosystems. These results would considerably improve and disseminate world-wide the knowledge about nutrient removal through wetlands rehabilitation and would define the technical and economic parameters for efficient wetlands management.

This proposed project component, which would support a larger GEF need in the frame of Targeted Research, should cover in Phase 1 preparatory tasks and would later in Phase 2 provide the actual removal observation programme and management guidance:

- 4.3.1 Classifying the wetlands and floodplains in the DRB by category and define potential observation sites;
- 4.3.2 Defining the methodological approach for assessment of nutrient removal capacities of wetlands and flood plains.

4.4 Danube Basin study on pollution trading and corresponding economic instruments for nutrient reduction

In the frame of the study on Financing Pollution Reduction Measures in the DRB – Present Situation and Suggestions for New Instruments, the implementation of a system of nutrient discharge quotas and auctions has been proposed. Considering the diversified economic conditions of the riparian countries and the particular relation of the Danube countries to the Black Sea, new approaches, in particular economic instruments, could be necessary to achieve efficiency in nutrient reduction reforms. Whenever the principle of “pollutant auctions” is presently not compatible with the EU water quality guidelines, which are based on the emission principle, interesting and innovative approaches could be developed and possibly introduced in the forthcoming EU policies to solve the nutrient problem. Further, the results would also contribute to support a larger GEF need for Targeted Research in developing economic instruments for nutrient reduction.

This component should therefore assess the viability and feasibility of “pollution trading” concept in the DRB countries (Phase 1 of the Project) and initiate a broad discussion with all stakeholders on alternative economic concepts for pollution control (Phase 2 of the Project). It should further be noted that the present study proposed for the Danube River Basin (considering in particular the EU policies and directives) is complementary to a similar study conducted by the World Bank in the frame of the Black Sea Regional Project, which shall develop the concept of nutrient emission trading taking into account the specific conditions of the Black Sea countries.

For this purpose, it is proposed to prepare an EU-Danube specific assessment covering in Phase 1 the following main issues:

- 4.4.1 Reviewing existing concepts of successful “pollutant trading / auctions” or corresponding economic instruments in the water and air pollution sector in the US, Australia and Europe;
- 4.4.2 Studying the general possibilities to establish the idea of "pollution trading" or corresponding economic instruments for nutrient reduction under the EU policies and directives in the Danube River Basin;
- 4.4.3 Assessing the main problems / obstacles for "pollution trading" and corresponding economic instruments in the DRB and the interest of the particular DRB countries for implementation.

IV Sustainability and Participation

The proposed Danube Regional Projects (Phases 1 and 2) have to be seen as a logical continuation of the GEF assistance to the Danube Environmental Programme. The Danube Pollution Reduction Programme has established the necessary conditions for the ICPDR and for the DRB countries to assure efficient implementation of policies and measures for pollution reduction and resource management. The proposed Danube Regional Projects can build on a very favorable framework for sustainability and participation, and on the findings and recommendations of:

- the SAP 1994 as the agreed-upon policy document of the EPDRB focusing on policies and strategies for pollution control and resource management,
- the Common Platform for the Development of National Policies and Actions for Pollution Reduction under the DRPC, representing a summary of policies and actions developed in the frame of the Pollution Reduction Programme,
- the Danube Pollution Reduction Programme (DPRP) and the Inventory of Investment Projects (Database) providing the operational basis for promoting investments for pollution reduction measures.

Institutional capacities and arrangements: With its entry into force on 22 October 1998, the Danube River Protection Convention (DRPC), to which the ECE-Convention for the Protection and Use of Transboundary Waters (Helsinki Convention 1992) is the framework, became the overall legal instrument for cooperation and transboundary water management in the Danube River Basin. Since mid-1999 all bodies of the ICPDR, the Expert Groups and the ICPDR Permanent Secretariat have been fully operational. The primary objective of the proposed Danube Regional Project is to support the ICPDR in order to achieve a well-balanced integrated implementation of the Common Platform, the PRP and the forthcoming JAP. It is assured that there is a full developed and functioning institutional framework for project performance.

As the ICPDR is permanently sustained via financial contributions of the member states, the GEF intervention would support and strengthen the ICPDR and its Expert Groups to improve technical and management capacities for the implementation of nutrient reduction measures identified in the Pollution Reduction Programme.

The participation of the contracting parties including the European Community, the signatory countries (Ukraine) and other cooperating countries (Bosnia-Herzegovina and Yugoslavia) of the DRB is assured through the work of ICPDR-Steering Group and the through the Conference of Parties, which is the highest body for the implementation of the Danube River Protection Convention.

Government commitment: All countries in the DRB have actively participated in the frame of the elaboration of the Pollution Reduction Programme and have provided all necessary information for the preparation of the present Project Brief (PDF-Block B actives) and thus demonstrated their interest in and commitment to pollution control, nutrient reduction and sustainable water management. Further, it should be noticed that central and downstream Danube countries are actually preparing for accession to the European Union and are therefore committed to applying the European water directives and guidelines for pollution reduction with particular attention to the EU Nitrate Directive, the Urban Waste Water Directive and the implementation of the new EU Water Framework Directive.

Legal Frame: The Danube River Protection Convention is a legally binding instrument, which provides a solid framework and a legal basis for cooperation, including enforcement. The International Commission for the Protection of the Danube River (ICPDR) has been established according to the Danube River Protection Convention provision (Art.18) and has its seat in Vienna, Austria. The ICPDR and its bodies are responsible for the implementation of the Danube River Protection Convention.

Stakeholder participation: The development of NGOs and the re-establishment of the Danube Environmental Forum as an umbrella organization for all Danube NGOs was an essential contribution of the previous GEF assistance to assure public participation in the planning and plan implementation processes. Further, the GEF Small Grants Programme has facilitated the implementation of community-based projects in the middle and lower Danube countries. It is thus assured that the existing structures of local NGOs and the DEF will play an important role in the implementation of the GEF Danube Regional Project and in the development and application of new policies and regulation to improve water quality and to assure rational use of resources.

V Lessons Learned

Some important lessons have been learned from a range of GEF and other environmental planning projects in the Danube region, and especially from the GEF-supported Danube Pollution Reduction Programme (DPRP), which was completed in June 1999. In the frame of this project, the Danube countries cooperating under the DRPC have achieved important results in terms of capacity building and institutional strengthening. The planning process in elaborating the Transboundary Analysis and in revising the SAP, which involved stakeholders from the local governments, scientific institutions and NGOs had created a high momentum in adopting GEF operational principles for the protection of international waters and ecosystems. Further, the interaction with other organization, in particular the EU Phare and Tacis, the World Bank, the EBRD, etc., and joint actions with the Black Sea Programme have set new standards for regional cooperation. These positive achievements will be consolidated in implementing the Danube / Black Sea Basin Strategic Partnership.

The first phase of the DPRP indicated how time consuming and difficult it is to set up institutional structures, information networks and to introduce new approaches of planning in countries that are in a continuous process of political and economic transition. Based on this experience, it is recommended that – wherever possible - the newly created institutional settings, networks and methodological tools should be reinforced through the Danube Regional Project. Special emphasis should be put on the maximum utilization of the participatory approach that is now fully understood and accepted by the participating countries.

In many transition countries, the policy and legal frame is presently being reviewed and adjusted, focusing in particular on unclear land ownership and uncontrolled resource management (forestry, mining, etc.), which lead to environmental degradation and damage. In many countries, compliance with environmental laws and regulations is not controlled and is consequently very low. This is partially due to structural and organizational weaknesses and more to budgetary limitations.

Inter-ministerial coordination is another common and serious problem for project implementation when coordinating structures are missing at national levels. The involvement and cooperation of all relevant governmental bodies, in particular the Ministry of Finance, Ministry of Agriculture, of Land Reform, of Foreign Affairs, etc. is essential in the early project preparation phase.

Another lesson learned is that project activities conducted by international expert teams without close integration and cooperation with experts from the relevant Danube countries are often not recognized. In the frame of the Environmental Programme for the Danube River Basin (EU Phare) many project components have failed to be sufficiently coordinated with the ICPDR and its Expert Groups and thus did not respond to the expressed needs of the beneficiaries. It is therefore recommended that all project components should be carried out under the guidance of the ICPDR and in close cooperation with its expert bodies and that highly qualified national experts/consultants – available in all DRB countries – should be contracted.

A particular feature impacting basin-wide project activities is that of the disparities between the DRB countries, which have clearly different institutional, administrative and economic capabilities and are confronted with qualitatively different requirements. Particular attention should be paid on the one hand to the EU accession countries that have reached a high level of competence and organization and, on the other hand, to the central Danube Basin countries as Bosnia-Herzegovina and Yugoslavia, which have been affected by the war and political instability.

In this context, IW: LEARN, a distance education programme whose purpose is to improve the global management of transboundary water systems, will contribute to improve regional cooperation and capacity building. Following the experience gained in the DPRP, IW: LEARN should be connected to the Danube Information System (DANUBIS) and used as an interactive conference capacity across and within GEF international waters projects for sharing information and learning related to nutrient reduction and river basin and coastal zones management. Training courses started during the DPRP will be revitalized and continued to enhance technical knowledge for water managers in nutrient reduction and sustainable management of water resources and ecosystems in the Danube River Basin.

VI Project Budget and Financing

VI-1 GEF Budget Contribution

The total financial requirements for the performance of the proposed Phase 1 Danube Regional Project are USD 5,000,000. According to the provisional estimates the allocation of the budget by cost categories is anticipated as follows:

BUDGET OF THE DRP BY COST CATEGORIES	USD	Percentage
Permanent professional project staff	386,000	7.7 %
Project Support Staff	256,250	5.1 %
Subcontractors / International consultants	1,404,000	28.1 %
National consultants from the DRB countries	1,080,000	21.6 %
Workshops, training courses, meetings	536,890	10.8 %
Identification and preparation of “GEF- Small Grants Projects”	153,350	3.1 %
Awareness raising and public information material	100,000	2.0 %
Equipment for nutrient monitoring/information	267,000	5.3 %
Project operational costs	246,140	4.9 %
Organizational support for DEF and NGOs	200,000	4.0 %
UNOPS Support cost	370,370	7.4 %
Total	5,000,000	100 %

The allocation of the budget by the main project components according to the budget proposal (Annex 4) is as follows:

	BUDGET BY MAIN PROJECT COMPONENTS	USD	Percentage
(1)	Creation of sustainable ecological conditions	2,425,400	48.5 %
(2)	Capacity building and reinforcement of transboundary cooperation	821,940	16.4 %
(3)	Strengthening of public involvement and reinforce. community actions	827,650	16.6 %
(4)	Reinforcement of monitoring, evaluation and information systems	554,640	11.1 %
	UNOPS Support cost	370,370	7.4 %
	Total	5,000,000	100,0 %

From the GEF budget contributions 48.5 % is earmarked for the development of policies and legal instruments for nutrient reduction and will be invested directly in supporting the work at the national level. 16.4 % of the budget is aimed at strengthening regional cooperation for implementing the ICPDR policies and related investment programmes (JAP) and at reinforcing monitoring and information capacities. In both first project components a total of 10.8 % is allocated for training courses and preparation of workshops.

The budgetary allotment for awareness raising and NGO activities is 16.6 % to assure participation of the civil society in nutrient reduction activities. 11.1 % of the GEF budget is earmarked for strengthening monitoring, evaluation and information systems. 7.4 % is earmarked as support cost for the executing agencies.

Detailed Budget by Project Components and Assigned Baseline Costs (USD)		Project Budget		Baseline Costs
		GEF	Particip. Danube Countries	
1	Creation of sustainable ecological conditions for land use and water management			
	General project costs	629,032		400,000
1.1	Development and implementation of policy guidelines for river basin management	447,600	1,188,000	22,470,000
1.2	Reduction of nutrients and harmful substances from agricultural point and non-point sources through agricultural policy changes	380,600		16,740,000
1.3	Development of pilot projects on reduction of nutrients and other harmful substances from agricultural point and non-point sources	269,200		16,810,000
1.4	Policy development for wetland rehabilitation under the aspect of appropriate land use	246,400		9,460,000
1.5	Industrial reform and development of policies and legislation for application of BAT	269,600		16,215,000
1.6	Policy reform and legislation measures for the development of cost-covering concepts for water and waste water tariffs	163,000		7,780,000
1.7	Implementation of effective systems of water pollution charges, fines and incentives, focusing on nutrients and dangerous substances	92,000		4,700,000
1.8	Recommendations for the reduction of phosphorus in detergents	122,000		3,780,000
	Subtotal	2,619,432	1,188,000	98,355,000
2	Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the DRB			
	General project costs	243,255		2,400,000
2.1	Setting up of "Inter-ministerial Committees" for development, implementation and follow-up of national policies, legislation and projects for nutrient reduction and pollution control	38,000	181,500	3,720,000
2.2	Development of operational tools for monitoring, laboratory and information management and for emission analysis from point and non-point sources of pollution	178,720	1,089,000	22,320,000
2.3	Improvement of procedures and tools for accidental emergency response with particular attention to transboundary emergency situations	81,160	762,300	15,624,000
2.4	Support for reinforcement of ICPDR Information System (DANUBIS)	202,160	1,089,000	20,832,000
2.5	Implementation of the "Memorandum of Understanding" between the ICPDR and the ICPBS relating to discharges of nutrients and hazard. Substances to the Black Sea	27,600	217,800	4,464,000
2.6	Training and consultation workshops for resource management and pollution control with particular attention to nutrient reduction and transboundary issues	116,800		137,800,000
	Subtotal	887,695	3,267,000	207,160,000
3	Strengthening of public involvement in environmental decision making and reinforcement of community actions for pollution reduction and protection of ecosystems			
	General project costs	167,212		10,100,000
3.1	Support for institutional development of NGOs and community involvement	275,300	143,220	2,570,000
3.2	Applied awareness raising through community based "Small Grants Programme"	188,350	55,440	9,030,000
3.3	Awareness raising campaigns on nutrient reduction & control of toxic substances	263,000	263,340	108,800
	Subtotal	893,862	462,000	21,808,800
4	Reinforcement of monitoring, evaluation and information systems to control transboundary pollution, and to reduce nutrients and harmful substances			
	General project costs	167,121	0	
4.1	Development of indicators for project monitoring and impact evaluation	126,150	363,000	7,440,000
4.2	Analysis of sediments in the Iron Gate reservoir and impact assessment of heavy metals and other substances on the Danube and the Black Sea ecosystems	0	396,000	5,580,000
4.3	Monitoring and assessment of nutrient removal capacities of riverine wetlands	109,340	528,000	7,520,000
4.4	Danube Basin study on pollution trading and corresponding economic instruments for nutrient reduction	196,400	396,000	5,580,000
	Subtotal	599,011	1,683,000	18,680,000
	PDF-B	350,000		
	PROJECT TOTAL	5,350,000	6,600,000	353,443,800

VI-2 Contributions from the ICPDR and participating countries:

Total ICPDR and Danube country contributions :	6,600,000 USD
○ The ICPDR, Permanent Secretariat will facilitate overall project implementation with an annual operational budget of 800,000 USD for a period of 2 years :	1,600,000 USD
○ The ICPDR Expert Groups will assure the implementation of project components. The cost for experts, operation, participation and communication can be estimated at 1,200,000 USD per year, for a period of 2 years :	2,400,000 USD
○ The participating countries will contribute in the frame of joint activities under the DRPC to project implementation through financial and in kind contributions (experts, equipment, operational cost), estimated at 100,000 USD per country and year, for 13 countries and 2 years :	2,600,000 USD

VI-3 National Capital Investments and Development Costs (2001 – 2006)

The Joint Action Programme (JAP) has been developed under the ICPDR, and is in most cases coherent with the Five-Year Nutrient Reduction Action Plan prepared in the frame of the PDF-Block B activities (see Annex 8-3). The following costs for policy and legislation development and for capital investments for municipal and industrial waste water treatment and wetland restoration have been identified :

Total capital investments²⁾	4.40 billion €
○ Assured national funding	1.72 billion €
○ Assured international loans	1.16 billion €
○ Expected grants (national and EU)	0.66 billion €
○ Additional funding to be raised	0.86 billion €
Total cost for non-structural measures	0.51 billion €

It should be noted that from the planned investments of 4.40 billion €, about 3.54 billion € have been made available from national funding sources, whereas 0.86 billion € remain to be raised. 510,989,000 € are estimated for developing adequate monitoring and enforcement systems in the frame of the EU accession process³⁾ and are considered as non-structural investments to be mobilized by all Danube countries.

VI-4 World Bank Partnership and UNDP (estimated 5 years period)

W.B. Nutrient reduction projects

}	○ Loans	210,000,000 USD	280,000,000 USD
	○ GEF Grants	70,000,000 USD	

UNDP country programmes (2 to 4 years)	1,069,000 USD
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²⁾ 4.0 billion USD, respectively 3.22 billion USD available and 0.78 billion USD to be raised

³⁾ Sector Case Study, WRc, Report CO 3291/2, 1993

VI-5 Investments from EU for environmental measures (accession countries)

The following investment from the EU is for a period of seven years to assist accession countries to improve environmental management and to build or modernize waste water treatment plants and other technical structures; it can be assumed that about half of the Phare money is earmarked for non-structural measures:

Total investment for a period of 7 years ⁴⁾	13.5 billion €
○ EU Stability Pact for Southeastern Europe (Danube countries)	3.0 billion €
○ Phare for environmental protection (Danube countries)	5.3 billion €
○ ISPA funds for environment and infrastructure (Danube countries)	3.5 billion €
○ SAPARD funds for agricultural sector (Danube countries)	1.7 billion €

VI-6 Assistance from bilateral sources (estimated 2 to 4 years)

○ USAID (amount allocated for environmental/sustainable development projects in 2000 out of which 120.000.000 for structural projects)	162,000,000 USD
○ Danish Environmental Protection Agency (DEPA)	} not available
○ Netherlands (Wetlands Ukraine)	

VI-7 Assistance provided through private sector organizations (international and Danube NGOs for a 2 to 4 years period)

Total Investments (estimated 2 to 4 years period)	29,437,800 USD
○ Regional Environmental Center (REC): support for national NGO activities (environmental, sustainable development, awareness raising)	22,500,000 USD
○ World Wide Fund for Nature (WWF): Implementation of environmental projects in cooperation with governments and national NGOs	5,800,000 USD
○ Danube national NGOs (ECCG-Romania, Distelverein-Austria)	1,137,000 USD

VI-8 Total contributions for environmental protection and nutrient reduction in the Danube River Basin

The total allocations earmarked for pollution control and nutrient reduction in the Danube River Basin fall into two categories:

- Non-structural projects (estimation for 2 years period):** Reinforcement of legislation and institutional mechanisms for transboundary cooperation (Danube Regional Project for nutrient reduction):
 - GEF UNDP: Danube Regional Project Phase 1 (2 years) + PDF-B 5,350,000 USD
 - ICPDR and participating countries for Danube Regional Project (2 years) 6,600,000 USD
 - National investments for monitoring and enforcement systems (2 years) 186,000,000 USD
 - International private organizations and NGOs 2 to 4 years) 11,774,800 USD
 - Bilateral Assistance (USAID) and UNDP (2 to 4 years) 17,869,000 USD
 - EU programme for Danube accession countries, 2 years period 137,800,000 USD
(10 % of Phare programme is estimated for non structural measures)

⁴⁾ 12.28 billion USD, applied exchange rate : 1 € = 0.91 USD

The GEF budget and the contributions from the ICPDR and the participating countries are considered as “incremental” costs for the overall development and implementation of new policies and legislation in line with GEF operational principles for international waters and with EU environmental directives. The non-structural “baseline” cost is estimated at 353.4 million USD, out of which the Danube countries will contribute 52.6 % and the EU in the frame of the Phare programme 40.0 %. NGOs will provide 3.3 % of the total costs. However, it has to be taken into account that the actual figures are incomplete and that real bilateral and NGO contributions in the coming 2 to 5 years will be a great deal higher than indicated.

Summary of capital investments by country and expected nutrient reduction (5 years programme)

Country	Funding Scheme (€)			Expected Reduction (t/y)	
	Assured Funding	Funds to be raised	Total Investments	N	P
Germany	231,000,000		231,000,000	4,091	74
Austria	264,000,000		264,000,000	3,950	404
Czech Republic	104,000,000	43,000,000	147,000,000	1,091	62
Slovakia	54,000,000	65,000,000	118,000,000	2,574	147
Hungary	682,000,000	5,000,000	687,000,000	6,708	1,522
Croatia	12,000,000	421,000,000	433,000,000	5,233	814
Slovenia	382,000,000	2,000,000	384,000,000	1,509	239
Bosnia & Herzegovina		176,000,000	176,000,000	4,700	853
Yugoslavia	785,000,000		785,000,000	6,793	4,850
Bulgaria	37,000,000	88,000,000	125,000,000	2,683	599
Romania	493,000,000		493,000,000	11,860	1,591
Moldova	493,000,000		493,000,000	6,901	905
Ukraine	5,000,000	62,000,000	67,000,000	486	65
TOTAL	3,542,000,000	862,000,000	4,404,000,000	58,579	12,138

2. **Structural projects (estimation for 2 years period)** : Investment figures as presented in the previous chapters 6.3, 6.4 and 6.5 have been theoretically adjusted to a 2 years period to demonstrate the capital investments during the project period. In the project period, the following investments for waste water treatment facilities, wetland restoration, the reduction of pollution from agricultural non-point sources, etc. could be expected:

- GEF World Bank Partnership Programme (loans and GRF grants) 112,000,000 USD
- Bilateral Assistance (USAID, other not available) 120,000,000 USD
- Joint Action Programme (assured funds from Danube countries) 1,289,000,000 USD
- EU programme for Danube accession countries, 2-year period 3,600,000,000 USD (ISPA, SAPARD, Stability Pact, 90% Phare for structural measures)

In the frame of the ICPDR Joint Action Programme (5-Year Nutrient Reduction Plan), the Danube countries contribute from own resources and internal loans for an estimated 2 years period 25.1 % to finance structural projects (municipal and industrial waste water treatment plants, wetlands restoration, agricultural projects etc.). The EU provides the biggest share of 70.3 % of investments to support national efforts of EU accession countries.

The contribution of the World Bank Partnership represents 2.2 % of investments for structural projects and is complementary to the UNDP/GEF Danube Regional Project. Other contributions, e.g. from the EBRD or the EIB, are not taken into account.

Summary of investments for reinforcement of legislation and institutional mechanisms (non-structural projects / programmes) by country and expected nutrient reduction (5 years programme)

Country	Funding Scheme (USD)						Expected Reduction (t/y)	
	Governments	UNDP	USAID	EU	NGO	Total	N	P
Germany	51,290,900					51,290,900	6,800	111
Austria	43,400,000				1,583,300	44,983,300	7,700	114
Czech Republic	15,781,800	95,000	2,455,000	14,681,900	2,983,300	35,997,000	1,500	33
Slovakia	29,309,100	125,000	5,454,000	27,266,400	2,983,300	65,137,800	4,500	170
Hungary	57,490,900		5,454,000	53,484,000	2,741,700	119,170,600	4,650	380
Croatia	9,581,800		3,954,000	8,914,000	2,741,700	25,191,500	3,000	130
Slovenia	18,036,400	80,000	2,455,000	16,779,300	2,741,700	40,092,400	3,450	220
Bosnia & Herzegovina	16,345,500		3,954,000	15,206,200	2,500,000	38,005,700	3,600	220
Yugoslavia	50,727,300		2,455,000	47,191,800	2,741,700	103,115,800	7,200	700
Bulgaria	21,981,800		3,954,000	20,449,800	3,466,700	49,852,300	2,300	400
Romania	127,381,800		6,955,000	118,503,800	3,503,700	256,344,300	12,100	1,270
Moldova	6,200,000		2,455,000	5,767,900	483,300	14,906,200	397	70
Ukraine	17,472,700	769,000	2,455,000	16,254,900	966,600	37,918,200	2,800	200
TOTAL	465,000,000	1,069,000	42,000,000	344,500,000	29,437,000	882,006,000	59,997	4,018

Total Expected Nutrient Reduction from Capital Investments and Investments for Non-structural Projects	118,576 tons N/y = 22 %
	16,156 tons P/y = 33 %

VII Incremental Costs

The description and calculation of baseline and incremental costs can adequately be done for technical investment projects designed for the protection and management of international waters, respectively the conservation of biodiversity. In these cases it is possible to determine for each expected output and for each activity the respective baseline and incremental costs and analyze the resulting domestic and global benefits.

In the case of the Danube Regional Project, “incremental” costs are considered to be the GEF project cost (including PDF-B) of 5,350,000 USD. The special contributions of the ICPDR and the participating countries for implementing the DRPC, which amount to 6,600,000 USD, are considered as “incremental” co-financing costs. The Project, with a total financial support of 11,950,000 USD will reinforce - in addition to the investments described under “baseline” cost - the capacities of the ICPDR and the participating countries to address adequately the problem of nutrient reduction. “Incremental” costs are specially defined to strengthen transboundary cooperation under the DRPC for the development of national policies and legislation and the identification of jointly implemented priority actions for nutrient reduction leading to the restoration of the Black Sea ecosystems.

For the definition of “baseline” costs directly related to the development of adequate monitoring and enforcement systems at the national level, the results of the WRc Sector Case Study from 1993⁵⁾ have been taken into account. According to this report, the present systems of monitoring are budget inadequate, staff resources are overstretched and laboratory facilities overloaded. The report estimates the annual cost of compliance for Bulgaria 10 million €, Hungary 12 million €, Romania 28 million € and Slovakia 6 million € based on per capita cost of 1.16 € at 1990 prices. Based on this information, the total cost for compliance, also for those Danube countries, which are not yet in the approximation process but which are undertaking special efforts to upgrade their legislation and mechanisms for compliance with international and EU standards has been estimated at 186,000,000 USD for the coming 2 years.

Other “baseline” costs, with a total of 416.9 million USD, but only indirectly related with project activities, can be identified in relation to non-structural projects for the development of policies, legislation, institutional mechanisms and enforcement systems, which are financed in the frame of technical assistance projects from bilateral and international sources :

- Bilateral Assistance (USAID) and UNDP 17,869,000 USD
- International private organizations and NGOs 11,774,800 USD
- EU programme for Danube accession countries, 5 years period 137,800,000 USD
(10 % of the Phare Programme is estimated for non structural measures)

Considering that the approximation process of the Danube countries will take between 10 and 20 years, including the introduction of new environmental standards in line with international and EU directives, the “incremental” support of the Project will enhance the process with particular attention to nutrient reduction and will considerably accelerate the development and implementation of policies, regulations and adequate monitoring and enforcement systems for nutrient emissions and reduction of nutrient loads discharged into the Black Sea.

Structural projects concerning actually planned investments in waste water treatment facilities, wetland restoration, agricultural pilot projects and other environmental measures, contributing mostly to pollution reduction from point sources or in-stream pollution reduction, amount to 12.6 billion USD. To demonstrate the capital investments during the project period, investment figures as presented in chapters 6.3, 6.4 and 6.5 of the Project Brief have been theoretically adjusted, indicating an amount of 5.1 billion USD for a period of 2 years. These capital investments are not contributing to project implementation and therefore are not considered as baseline cost.

⁵⁾ Sector Case Study, WRc, Report CO 3291/2, 1993

VIII Cost-effectiveness

Taking into account the social and economic development which will take place in the coming 10 to 20 years in the Danube transition countries and considering the EU approximation process and the need to adapt environmental standards to international and EU directives, it is evident that investments in environmental protection and management of resources are necessary to assure a sustainable development in the countries of the Danube River Basin.

It is to be expected that most Danube countries - mainly those in transition – will in the next five to seven years see their GDP grow at an annual rate of 2 to 4 % ending up in five years from now at 10 to 20 % above its current level. This economic growth will be the result of economic recovery in transition countries and new investments in industry, agriculture and services. The development and implementation of adequate environmental standards and mechanisms for compliance is, therefore, essential to assure sustainable development in the region.

The implementation of projects for waste water treatment in the urban and industrial sectors (including agro-industries) is part of national investment programmes for pollution reduction from point sources, summarized in the Five-Year Nutrient Reduction Action Plan and the Joint Action Plan of the ICPDR respectively. According to these documents, capital investments will be about 4.4 billion € (4.0 billion USD). Considering EU engagements for accession countries and other multilateral and bilateral assistance in the form of soft loans and grants (World Bank/GEF), the additional financial assistance for implementation of structural projects will be 9.4 billion USD. These investments will lead to an annual reduction of 58,600 tons of nitrogen and 12,100 tons of phosphorus representing 10.6 % and 24.8 % respectively of the total nutrient loads discharged into the Black Sea.

Non-point sources of pollution in relation to land use and agricultural activities represent about half of all nutrients, in particular nitrogen, discharged into the Black Sea. It is assumed that through the development and implementation of policies, legislation and mechanism for compliance, nutrient emissions from non-point sources (land use and agriculture) can be considerably reduced. The actual estimations in the Five-Year Nutrient Reduction Action Plan show that development and implementation of appropriate policies and legislation will lead to a reduction of about 60,000 tons of nitrogen and 4,000 tons of phosphorus, representing 10.9 % and 8.2 % respectively of total nutrient loads discharged into the Black Sea.

The corresponding investments for the development of new policies, legislation and monitoring and enforcements systems in line with international and EU directives are 913.9 million USD, out of which the major part – 465.0 million USD or 50.9 % – is considered as national contributions and part of direct baseline costs. 344.5 million USD or 37.7 % is provided from the EU Phare programme to the accession countries and 72.5 million USD or 7.9 % is provided in the frame of international, bilateral and non-governmental assistance. These investments for technical assistance are also baseline cost but only indirectly related to project implementation measures.

Considering the GEF/ICPDR investment of 11.95 million USD for a period of 2 years and taking into account additional investments of 19.9 million USD in the 2nd Phase of the project (July 2003 to June 2006), in the particular sector of nutrient reduction and restoration of the Black Sea ecosystems, the benefits for nutrient reduction from non-point sources of pollution - 10.9 % for nitrogen and 8.2 % for phosphorus - can be calculated as representing 20 % of the value for capital investments for nutrient reduction in point sources projects of the Five Year Nutrient Reduction Action Plan, which is equal to 800.0 million USD, respectively 320.0 million USD for a period of 2 years⁶⁾.

⁶⁾ The Pollution Reduction Programme Report, GEF/Environmental Programme for the DRB, June 1999 indicates in its methodological approach that 20 % of investments in WWTP are specified for nutrient reduction. Considering a total investments in the 5-YNRAP of 4.4 billion € = 4.0 billion USD, 20 % of the investment = 800.0 million USD would be needed for pollution reduction from point sources. This amount is considered as the comparative benefit for removal of nutrient also from non-point sources of pollution.

The cost-effectiveness of this Project lies in the opportunity to improve water quality in general and to reduce transboundary nutrient loads in particular, thus contributing to the rehabilitation of the Black Sea ecosystems. Considering incremental cost of 11.95 million USD for the 1st Phase of the Project, the benefits of the Project, at a cost-effectiveness ratio of 1:27 for the first two years period and of 1:25 for the full five years period, are considerable in terms of its contribution to reducing and mitigating serious damage to regional and globally important waters and ecosystems.

IX Project Risks

The success of two Regional Projects for the Danube and the Black Sea depends ultimately upon the political willingness and the financial and technical means of the contracting parties and participating countries to cooperate. This willingness depends not only on issues related to national or international security but also on changing political and economic conditions of the countries involved. Risks for the performance of the proposed Danube Regional Project might be occur in the following fields:

(i) Commitment of the UNDP/GEF

Taking into account that the submission of the Strategic Partnership Programme for Nutrient Reduction in the Black Sea and the Danube Basin to the GEF Council in November 2000 was deferred due to resources constraints, the actual Project as prepared in 2000 with a total budget of 15 million USD had to be split in two phases. The present Project Brief with a budget of 5 million USD, to be approved by the GEF Council in May 2001, covers the 1st Phase of the Project from September 2001 to August 2003. The 2nd Phase, with a budget of 10 million USD, will cover the period from September 2003 to August 2006. The 2nd tranche to be approved by the GEF Council in May 2002 includes 16 million USD for capacity building out of which 10 million are earmarked for the Danube and 6 million for the Black Sea Programme. The approval of these funds is essential to assure the continuation of the activities initiated in the 1st Phase of the project and to achieve the ultimate goals.

(ii) Commitment of participating countries

At the institutional level the conditions for the implementation of the Danube Regional Project are already set-up through the structures of the ICPDR, which have already been successfully utilized in the frame of the Pollution Reduction Programme. Taking into account that financial inputs from the participating countries are relatively small, there are probably no significant risks for project performance. All Danube countries are prepared to deliver in-kind contributions in the frame of the ICPDR Expert Groups and experience has shown that special in-kind contributions to the project implementation are also voluntarily made available.

Considering political and administrative constraints and slow decision-making process, a certain risk can be expected for the actual implementation of the findings and recommendations of the project, especially regarding the issues of policy reforms and changes of legislation. Also administrative obstacles might hamper the implementation of measures for exacting compliance.

(iii) Methodological approach

The methodological approach as applied for the implementation of the proposed project components is in line with the work programme of the ICPDR and corresponds national standards. It is therefore unlikely to expect major problems. However, as mentioned in point (i), the ultimate goals of the project will only be achieved if the funding for the 2nd Phase of the GEF assistance will be made available in time.

For project implementation the choice of qualified experts is an essential prerequisite. Experts and consultants should be familiar with the social and economic conditions in the Danube River Basin and in the participating countries, knowledgeable about modern planning methodology and the efficient organization of consultation meetings and workshops.

The scope for the organization of workshops and awareness building activities should be clearly defined from the beginning and accepted by the participating countries; this should include the precise definition and agreement for the selection of participants, which is a joint responsibility of the stakeholders involved.

The same agreements have to be reached for the identification of sub-contractors and national consultants, which should respond to defined levels of professional standards and be acceptable to the ICPDR and the Executing Agency.

(iv) Delivery of counterpart contribution and availability of information

Considering administrative and financial constraints, participating countries might not be able to provide in time necessary data for the proposed project components and administrative support for meetings and workshops.

Hence, requests for counterpart contribution are to be precisely defined and timely delivery has to be agreed upon. The type of analysis and information needed has to be clearly identified in order to assure the timely availability of precise and viable information.

X Institutional Frameworks and Implementation

X-1 Institutional Arrangements

Taking into account that there was a successful GEF project in operation for 6 years, which resulted in a revised SAP (Common Platform for Development of National Policies and Actions for Pollution Reduction under the DRPC), and a Pollution Reduction Programme for the DRB, it is proposed to make utmost use of institutional mechanisms and structures which are already operational.

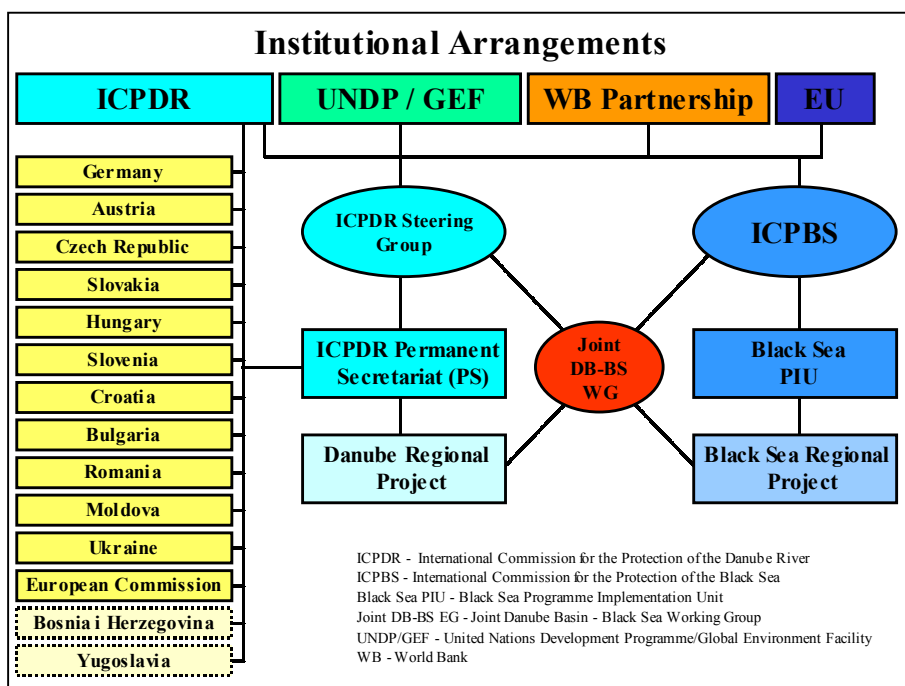
In this context it is proposed that the International Commission for the Protection of the Danube River (ICPDR) will become the responsible organization for project implementation in cooperation with UNOPS as executing agency. A Project Manager, under the supervision of the ICPDR Executive Secretary, shall establish close cooperation with all participating countries, organize efficiently the planning process and assure timely execution of all project components.

The ICPDR Steering Group(SG) should guide the implementation of the Danube Regional Project and assure engagement and cooperation at the national level. For this purpose the ICPDR SG should meet :

- at the beginning of Phase 1 of the Project to review and define scope, planning approach and work programme of the project;
- during project implementation use regular, twice a year, Steering Group meetings to review and assess the progress, to evaluate completed project components and to make recommendations for the continuation and/or adjustment of activities;
- at the end of Phase 1 of the Project to assess and approve the final results at a joint review meeting and to re-examine the planned activities of the 2nd Phase of the Project.

Regarding the elaboration of detailed scope of work and actual performance of the various project components it is proposed to use the professional competence and country specific experience of the existing Expert Groups established under the ICPDR : EMIS, MLIM, AEPWS, the newly created Expert Group for River Basin Management and implementation of the EU Water Framework Directive (RBM EG) and the Ad-hoc Ecological Expert Group (ECO EG).

At the central level, the Project Manager, in cooperation with the ICPDR Executive Secretary and following the directives of the Steering Group, will have the mandate to organize and coordinate the planning process and implementation activities and to assure, under UNOPS direction, the proper management of the GEF project funds.



At the national level it is proposed to incorporate as far as possible the professional competence, experience and knowledge of the Country Programme Coordinators (CPC) assigned in the framework of the previous GEF-Pollution Reduction Programme.

During Phase 1 of the project, “Inter-ministerial Committees” will be put in place to assure that all technical, administrative and financial departments are involved to facilitate and coordinate the implementation of policies, legislation and projects for nutrient reduction and pollution control.

At the regional level, a Joint Danube Basin-Black Sea Working Group (DB-BS/WG) shall assure proper coordination of activities between the Danube Project, the Black Sea Project and the W.B. Partnership Programme. Besides this coordinating role of project activities, the WG shall also follow-up the implementation of the Memorandum of Understanding for the Protection of the Black Sea agreed upon by the two Commissions. The Joint DB-BS Working Group shall meet at least twice a year after the respective Steering Group meetings of the two Commissions.

According to the broad spectrum of activities it is envisaged that most of the particular project components should be carried out by consultant services (on the basis of sub-contracts for international consulting companies and individual consultants from the DRB countries). Objectives, scope and terms of reference will have to be defined in close co-operation with the respective Expert Groups of the ICPDR and approved by the Steering Group Meeting.

In this case the project personnel employed on a fixed term basis and located in the offices of the ICPDR Permanent Secretariat can be restricted to :

- one Project Manager, specialist in environmental policy, with particular experience in institutional arrangements and water pollution legislation and knowledge of EU environmental directives and guidelines and nutrient issues;
- one specialist for awareness raising, organization of training courses and follow up of NGO activities, in particular implementation of the Small Grants Programme;
- one project administrator, with particular experience in budgeting, follow-up of expenditures and establishment of contracts;
- one technical expert for data management
- one administrative project assistant (support staff).

For specific tasks, conceptualization of activities and evaluation of results, highly specialized international consultants shall be assigned.

X-2 Monitoring and Evaluation

Project objectives, activities outputs and emerging issues will be regularly reviewed and evaluated by the competent bodies of the executing and implementing agencies (UNDP/GEF and UNOPS) and the ICPDR.

During the 1st Phase of the Project, a Monitoring and Evaluation System shall be developed and indicators for pollution reduction (process and stress indicators) and environmental status indicators will be defined. Progress indicators for project implementation are defined in the Logical Frame Matrix and will be revised at the initial phase of the Project to relate to specific activities and outputs of project components. Taking into account that in Phase 1 in most cases only intermediary results will be achieved and considering that the timeframe is relatively short, only process indicators can reasonably be applied. Final results, in measurable terms of stress reduction and environmental status will be reached in Phase 2 of the Project (5 years after begin of project activities). Annex 2.2 shows measurable indicators for Phase 2 of the Project demonstrating environmental impact and allowing final evaluation of project implementation measures. 90,000.00 USD, representing 1.8 % of the project budget is earmarked for the development of indicators for project monitoring and impact evaluation.

The annual review will focus on performance (effectiveness, efficiency and timeliness) and evaluate the results in applying the defined progress indicators. At the ICPDR Steering Group Meeting, the Project will submit and present an APR (Annual Project/Programme Report) in line with UNDP requirements and also participate in the GEF's PIR (Project Implementation Review) exercise each year.

The project will be subject to an external Project Performance Review at the end of the two-years project period. On these occasions an independent consultant team shall make an overall assessment of the project advancement and prepare an independent evaluation. During this review the team should pay particular attention to formulating recommendations for adjustments of procedures and activities of the 2nd Project Phase as needed.

Members of the ICPDR Steering Group should meet after the external review to evaluate project performance and make recommendations for the continuation and/or adjustment of activities in the 2nd Phase and should assess and approve the final results of the joint review meeting.

At the end of the 2nd project period, the project team, under the guidance of the ICPDR Permanent Secretariat, shall prepare a Project Performance Evaluation Report, which should be endorsed by the ICPDR Plenary Session.

X-3 Implementation Schedule

A provisional implementation schedule for the proposed Phase 1 Danube Regional Project is presented in Annex 5.

The project is supposed to start in the second half of 2001 and have a total duration of 24 months. This period includes a project mobilization phase of four months for putting in place the institutional structures and for the organizational preparation of project activities.

Each project component has a preparatory phase of two-to-three months and a consolidation phase of two-to-three months at the end of Phase 1 of the Project. This arrangement facilitates the preparation of the 2nd Project Phase from September 2003 to August 2006.

B. Prior Obligations and Legal Context

UNDP is implementing the project in consultation with the ICPDR. The Governments of all eligible participating States have taken all preparatory measures, including budgetary allocations for government contribution and have designated senior officials as GEF Focal Points. All contracting parties to the ICPDR, including Germany, Austria and the European Commission have indicated their commitment to actively support the implementation of the project.

The Heads of Delegations of the Contracting Parties to the DRPC, the Signatories of the DRPC and the Observer States are leading the process of project implementation at the national level.

At the regional level, the Steering Group of the ICPDR will ensure efficient coordination of project implementation.

There are no further prerequisites or obligations to be fulfilled prior to UNDP approval of the project.

Implementation arrangements between UNOPS as the executing agency and the ICPDR have to be developed and agreed upon by both parties.

The following types of revisions may be made to this project document with the signature of the UNDP only, provided the organization is assured that the other signatories of the project document have no objections to the proposed changes:

- Revision in, or addition of, any of the annexes to the project document.
- Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation
- Mandatory annual revisions, which rephrase the delivery of agreed, project inputs or increased expert or other costs due to inflation or taking into account agency expenditures flexibility.

C. Implementation Arrangements

Taking into account that GEF projects have been successfully implemented since 1993 in the frame of the Environmental Programme for the Danube River Basin and in cooperation with the structures of the ICPDR, it is proposed to make utmost use of institutional mechanisms and structures, which are already operational.

International level

In this context it is proposed that the International Commission for the Protection of the Danube River (ICPDR) will become the responsible counterpart organization for project implementation in cooperation with UNOPS as the executing agency. A Project Manager, under the guidance of the ICPDR Executive Secretary, shall establish close cooperation with all participating countries, organize efficiently the planning process and assure timely execution of all project components.

Regional level

The Project Manager, in cooperation with the ICPDR Executive Secretary and following the directives of the Steering Group, will have the mandate to organize and coordinate the planning process and implementation activities and to assure, under UNOPS direction, the proper management of the GEF project funds.

The project personnel employed on a fixed term basis (core staff) and located in the offices of the ICPDR Permanent Secretariat are the following (see ToR in Section D) :

- one Project Manager, specialist in environmental policy, with particular experience in institutional arrangements and water pollution legislation and knowledge in implementation of EU environmental directives and guidelines and in nutrient issues;
- one Environmental Specialist with experience in public participation, awareness raising, organization of training courses and follow up of NGO activities with particular attention to the implementation of the Small Grants Programme;
- one Project Administrator, with particular experience in budgeting, follow-up of expenditures and establishment of contracts;
- one technical expert in data management
- one administrative project assistant (support staff).

Regarding the elaboration of detailed scope of work and actual performance of the various project components it is proposed to use the professional competence and country specific experience of the existing Expert Groups established under the ICPDR : EMIS, MLIM, AEPWS, newly created Expert Groups for River Basin Management, which also coordinates the implementation of the EU Water Framework Directive (RBM EG) and the Ad-hoc Ecological Expert Group (ECO EG).

National level

At the national level it is proposed to incorporate as far as possible the professional competence, experience and knowledge of the Country Programme Coordinators (CPC) assigned in the framework of the previous GEF-Pollution Reduction Programme.

During Phase 1 of the project, “Inter-ministerial Committees” will be put in place to assure that all technical, administrative and financial departments are involved to facilitate and coordinate the implementation of policies, legislation and projects for nutrient reduction and pollution control. The national GEF Focal Points will cooperate in the “Inter-ministerial Committees”.

Inter-regional Cooperation

At the inter-regional level, a Joint Danube Basin-Black Sea Working Group (DB-BS WG) shall assure proper coordination of activities between the Danube Project, the Black Sea Project and the W.B. Partnership Programme. Besides this coordinating role of project activities, the WG shall also follow-up the implementation of the Memorandum of Understanding for the Protection of the Black Sea agreed upon by the two Commissions. The Joint DB-BS Working Group shall meet at least twice a year after the respective Steering Group meetings of the two Commissions.

Private Sector Involvement

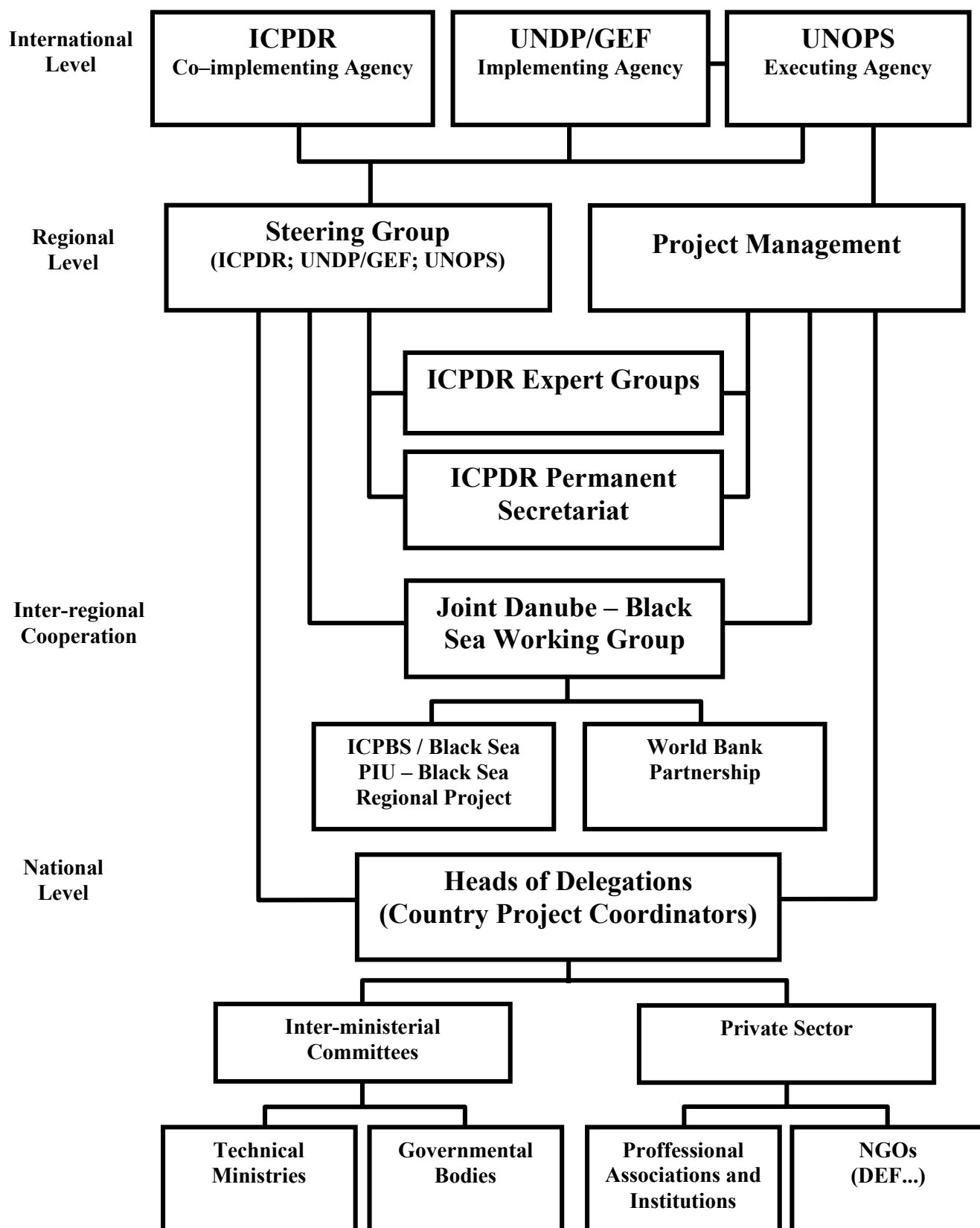
All project components related to nutrient reduction from agricultural and industrial activities require close cooperation and involvement of the private sector. Development and implementation of pilot projects for the introduction of best agricultural practices and nutrient reduction from diffuse sources of pollution can only be successful if the private sector is proactively involved in the preparation of project activities. Local communities shall be involved in wetland rehabilitation schemes and in development of mechanisms for appropriate land use. Particular attention will also be given to involve the private sector in the development of policies and introduction of best available techniques including cleaner technologies in the industrial sector.

Managers of selected industrial and agricultural enterprises and representatives of professional associations and research institutions will participate in training seminars and workshops where sector related policies and measures for nutrient reduction and pollution control will be discussed and respective recommendations will be developed.

Within the frame of private sector involvement, special focus is also given to the strengthening of non-governmental organizations. The re-establishment of the Danube Environmental Forum (DEF) as an umbrella organization for all Danube NGOs was an essential contribution of the previous GEF assistance to ensure public participation in the planning and implementation process. Further, the GEF Small Grants Programme has facilitated the implementation of community-based projects in the middle and lower Danube countries. It is thus assured that the existing structures of local NGOs and the DEF will play an important role in the implementation of the GEF Danube Regional Project and in the development and application of new policies and regulations to improve water quality and to assure rational use of resources.

Taking into account the importance of involving the private sector in all major project activities, the project personnel includes an Environmental Specialist with particular experience in public participation, awareness raising and strengthening of NGO activities to maintain good cooperation between governmental bodies and the public, as well as sustainability of project results.

Project Implementation Chart for Institutional Cooperation



MATRIX OF RESPONSIBILITIES

ACTIVITIES /TASKS	UNDP CO	UNDP/GEF	UNOPS	CTA (Proj.Office)	ICPDR (PS/EG)
COMPONENT 10					
BL 1101 – 1103 – International Staff					
Preparation of TOR for international team	available in prodoc				
Short listing and selection of candidates (CTA)		X	X		X
Final Approval of Selection		X	X		X
Contract signing and administration			X		
Performance Evaluation			X	X	X
Post (re-) classification			X		
Leave monitoring			X	X	
Separation process			X		
BL 1151 – 1158 International Consultants					
Terms of Reference (drafting)				X	X
TOR Reviewed			X		X
Screens and selects candidate			X	X	
Raise and issue contract			X		
Contract administration			X		
Performance evaluation				X	X
Payments			X		
BL 1701 – 1707 National Professional Personnel					
Terms of Reference (drafting)				X	X
TOR Reviewed			X		X
Screens and selects candidate				X	X
Authorization of funds to CO (RBEC)			X		
Raise and issue contract	X				
Contract administration	X				
Performance evaluation				X	X
Payments	X				
BL 1301 and 1351 – Admin. Support Staff					
Terms of Reference	available in Prodo				
TOR Reviewed				X	
Screens and selects candidate				X	
Contract administration			X		
Performance evaluation				X	
Payments			X		
BL 1501 – 1503 Duty travel					
Issuance of travel authorization			X		
Booking and purchase of tickets				X	
Hotel Reservation				X	
Settlement of travel claim				X	
BL 1601 – 1602 Mission costs UNDP					
Issuance of travel authorization			X		
Booking and purchase of tickets			X		
Hotel Reservation			X		
Settlement of travel claim			X		

ACTIVITIES /TASKS	UNDP CO	UNDP/GEF	UNOPS	CTA (Proj.Office)	ICPDR (PS/EG)
COMPONENT 20					
Subcontracts					
Preparation of statement of work/ TOR/tender documents/appraisal criteria			X	X	X
Advertisement/or issuing invitation to bid if applicable			X	X	
Short listing of potential subcontractor			X	X	X
Appraisal of proposals and recommendation for award of contract			X	X	X
Negotiation and signing of contract			X	X	
Sub contract administration (time & budget)			X	X	
COMPONENT 30					
Fellowships and Trainings					
Organizing workshop/training				X	X
Authorizing workshop/training			X		
Payments				X	
COMPONENT 40					
Internat. Procurement of Equipment & Supplies					
Preparation of equipment requirements list				X	X ^{*)}
Preparation of detailed specifications				X	X ^{*)}
Pre-qualification and short-listing			X		
Evaluation of bids			X		
Issuance of purchase order			X		
Inspection of delivery/customs clearance				X	
Payment to supplier			X		
Inventory bookkeeping			X	X	
Local Procurement					
Preparation of equipment requirements list				X	X ^{*)}
Preparation of detailed specifications				X	X ^{*)}
Pre-qualification and short-listing				X	
Evaluation of bids				X	
Issuance of authorization			X		
Issuance of purchase order				X	
Inspection of delivery/customs clearance				X	
Payment to supplier				X	
Inventory bookkeeping			X	X	
COMPONENT 50					
Printing and Publications					
Selection of reports for publication				X	X
Approval of selected publications			X		
Issuance of contract/authorizations			X		
Payment			X		
WORKPLANNING					
Preparation of 6-monthly work plan				X	
Feedback and Approval		X	X		X

^{*)} Equipment to support ICPDR activities

ACTIVITIES /TASKS	UNDP CO	UNDP/GEF	UNOPS	CTA (Proj.Office)	ICPDR (PS/EG)
FINANCIAL MANAGEMENT / ADMINISTRATION					
Formal submission of budget to UNDP and UNOPS (costing of workplans) (monthly expenditure statement)			X	X	
Budget revision/re-phasing & record keeping		X	X	X	
Transfer of funds / authorization based on approved work plan			X		
Financial reporting to external donors					
Establishment and maintenance of filing and other internal control systems (daily programme activities)			X	X	
REPORTING, MONITORING AND EVALUATION					
Preparation of quarterly progress reports				X	
Review and feedback of report		X	X		X
Planning and coordination of APR		X	X	X	
Preparation of APR report				X	
Comments on the APR report		X	X		X
Preparation on PIR				X	
Comments on PIR report		X	X		
Organize TPR			X		
Follow-up to TPR and APR			X	X	X
PROJECT CLOSURE					
Preparation of terminal, financial and review reports			X	X	
Preparation of ToR for Final Evaluation			X		
Review of evaluation ToR and process		X		X	X
Selection of evaluation team		X	X		X
Contracting of evaluation team			X		
Submission of evaluation report to OE/ GEF Sec			X		
Final budget revision			X		
Closure of accounts and transfer of unspent balances to activities in Phase 2			X		
Transfer of equipment to Phase 2			X		
Final Audit and Terminal Report			X		

E. Terms of Reference for Implementation of Project Components (Sub-contracts)

For the implementation of most of the Project activities Project Components have been developed for those cases where sub-contracts have to be established. These Project Components respond to one or several project objectives respectively outputs. Reference is therefore made to the Project Management Sheets. After the inception phase (development of the work program) the Project Manager has to review the Project Components, which serve as Terms of Reference for the establishment of subcontracts. The ToR and the conditions of sub-contracts have to be discussed and agreed upon with the ICPDR and in particular it's Expert Groups.

Sub-contracts should be tendered according to UN procedures; contracts will then be issued by the Executing Agency (UNOPS).

All project activities as described in the Project Management Sheets and which are not described in Project Components, will be executed by international and national consultants under the direct guidance and supervision of the Project Manger. Also these activities have to be in line with the work programme and the requirements of the ICPDR and its Expert Groups.

PROJECT COMPONENT 1

Development and Implementation of Policy Guidelines for River Basin and Water Resources Management (Output 1.1)

A Background Information

In most central and downstream DRB countries, the development of water-related policies and legal instruments are still in the phase of preparation and it is obvious that there are significant deficiencies in the existing policy framework. Most of these countries are in the EU accession process and have to adjust their legal frame to meet the EU directives and regulations and assure compliance.

Considering the DRPC's mandate to assure sustainable water management in the DRB and taking into account the central role of the river basin management in implementing the new EU Water Framework Directive, there is a substantial need to facilitate the development of river basin management plans in the Danube River Basin and in its sub-basin areas. These river basin management plans will have to deal with nutrient reduction from point- and non-point sources.

B Objectives /Tasks

To assure efficient implementation of the EU Water Framework Directive and a coherent approach to River Basin Management, the ICPDR has set up a specialized Expert Group to develop guidelines for the elaboration of the River Basin Management Plans, their implementation and the development of institutional and legal mechanisms. Two workshops have been organized in the frame of the EC Phare assistance programme and case study material had been prepared. These elements will be integrated in the proposed activities of the GEF-DRP.

During the Phase 1 of the Danube Project concepts and analytical material will be prepared, which later during Phase 2 of the Project will be implemented in form of national contributions, pilot projects and workshops on river basin management and implementation of the EU WFD.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
1.1-1	Identifying River Basin District (RBD), in particular the assignment of coastal waters and groundwater bodies;	Jan 2002-Aug 2003
1.1-2	Developing common approaches and methodologies for pressure and impact analysis;	Jan 2002-Aug 2002
1.1-3	Implementing the common approaches and methodologies for pressure and impact analysis at the national level (<i>will be completed in Phase 2</i>);	Aug 2002-Aug 2003
1.1-4	Applying the EU Guidelines for economic analysis and arrive at the overall economic analysis for the Danube Basin (<i>will be completed in Phase 2</i>);	Mar 2002-Aug 2003
1.1-6	Developing RBM tools (mapping, GIS, remote sensing, etc.) and related data management, including the arriving at the typology of surface waters and the relevant reference conditions (<i>will be completed in Phase 2</i>);	Mar 2002-Aug 2003
1.1-7	Identifying pilot river basins and apply common approaches, methodologies, standards and guidelines, in observing also the link to the Working Groups of the European Commission (<i>will be completed in Phase 2</i>);	Mar 2002-Aug 2003

Ref.	Activity	Time Frame
1.1-9	Develop concepts and programmes for workshops and training courses in order to produce the River Basin Management Plan and to strengthen basin-wide cooperation (<i>will be completed in Phase 2</i>).	Aug 2002-Aug 2003

D Output / Results

Activities	Outputs
1.1-1	Map of the River Danube Basin District with groundwater bodies
1.1-2	Overall concept for a step by step introduction of a common approach for the different DRB countries
1.1-3	Concept for a common approach for pressure and impact analysis at the national level
1.1-4	Concept for economic analysis and environmental cost-benefit analysis in line with the EU guidelines
1.1-6	Concept for a basin-wide GIS, including maps on the typology of surface waters and their reference conditions
1.1-7	1. Pilot river basins identified 2. Concepts for common approaches, methodologies, standards and guidelines defined
1.1-9	1. Programmes and contents for workshops and training sessions determined 2. Workshops and seminars implemented ; appropriate workshop documentation available

E Implementation Arrangements

The activities of the special Expert Groups set up by the ICPDR shall be supported by international expertise in order to develop standardized methodologies and guidelines for sub-river basin management plans and a methodology for the aggregation of the sub-river basin management plans to a basin wide management concept. This should take into consideration EU-WFD and GEF IW strategies to develop guidelines for particular sub-river basins to reinforce transboundary cooperation.

The country specific data and information have to be provided by national consultants /experts according to the provisions provided by the EG and the international consultant.

F Profile of the Subcontractor (International and National Consultants / Experts)

1. International consultants with expertise in water sector planning and particular expertise in EU water sector legislation;
2. National experts with expertise in water sector planning and particular expertise in EU water sector legislation.

PROJECT COMPONENT 2

Development of policies for nutrient reduction from agriculture, wetland restoration and implementation of pilot projects (Outputs 1.2; 1.3; 1.4)

Output 1.2

A Background information

According to the Transboundary Analysis (1999), it is assumed that about half of nutrients discharged in the Danube Basin to the fine web of the river network come from agricultural non point sources of pollution.

B Objectives and main tasks

Assisting the DRB countries in designing new agricultural non-point source pollution control policies and legislation ("sustainable agriculture") as well as compliance and enforcement plans in line with the existing and emerging (including EU accession) national legislation.

In the Phase 1 of the Project, a first analysis should be based on a revised "hot spot" inventory of point and non-point sources of pollution and take into account the findings and recommendations of the field-based demonstration programmes conducted in Eastern European countries with the support of the EU and GEF.

The project will update the information on the use of agrochemicals and identify specific policy and legal measures to assist the participating countries in meeting their obligations to reduce agricultural point and non-point source pollution.

For EU accession countries, specific programmes will be developed that will assist them in meeting their obligations under the EU Environment and Water Framework Directive, as well as the requirements of the important Nitrate Directive (91/676/EEC).

In Phase 2 of the Project policy and legal recommendations will be worked out for DRB governments to reinforce the introduction of "best agricultural practice" and to optimise the use of agrochemicals

The main focus of this assistance is to identify for each DRB country the main administrative, institutional and funding deficiencies and to develop priority reform measures for policies which are expected to best support the integration of environmental concerns into farm management ("best agricultural practices"), including improvements in the handling of manure and sludge from livestock operations, minimization of chemical fertilizers and pesticides, promotion of improved tillage methods, management of restored wetlands and buffer zones as well as farmer education and outreach activities.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
1.2-1	Up-dating the basin-wide inventory on agricultural point and non-point sources of pollution "hot spots" in line with EMIS emission inventory;	Mar 2002- June 2003
1.2-2	Reviewing the relevant legislation, existing policy programmes and actual state of enforcement in the DRB with respect to promotion and application of best agricultural practices (<i>will be completed in Phase 2</i>);	Mar 2002- June 2003

Ref.	Activity	Time Frame
1.2-3	Reviewing the inventory on important agrochemicals (nutrients etc.) in terms of quantities of utilization, their misuse in application, their environmental impacts and potential for reduction (<i>followed in Phase 2</i>);	Mar 2002- June 2003
1.2-4	Identifying the main institutional, administrative and funding deficiencies (including complementary measures) to reduce pollutants;	Mar 2002- June 2003
1.2-5	Introducing or, where existing, further developing concepts for the application of best agricultural practices in all DRB countries, by taking into account country-specific traditional, social and economic issues, and the ECE recommendations (<i>will be completed in Phase 2</i>).	Mar 2002- June 2003
1.2-6	Discussing the new concepts for the application of best agricultural practices in all DRB countries with and disseminating results to governments, farming communities and NGOs in the basin	Mar 2002- June 2003

D Output / Results

Activities	Outputs
1.2-1	Up-dated basin-wide inventory on agricultural point and non-point sources of pollution “hot spots”
1.2-2	Summary report on agricultural policies and state of enforcement in the DRB countries
1.2-3	Summary report on use of agrochemicals in the DRB countries
1.2-4	Report on main deficiencies and proposals for institutional, administrative and financial mechanisms suited to assure appropriate land use and agriculture
1.2-5	Report on existing situation and draft concepts for policy development and implementation of best agricultural practice in the DRB countries
1.2-6	Workshop on new concepts for the application of best agricultural practices implemented; appropriate workshop documentation adequately disseminated

Output 1.3

A Background Information

This pilot project component has to be considered as complementary to the above-described policy component, which also includes the updating of the list of point and non-point sources of pollution with particular attention to agricultural “hot spots”. It is particularly focusing on adequate handling of manure and on the practical introduction of organic farming methods. Agricultural point sources (e.g. large pig farms), including inappropriate handling of manure, are estimated to supply 2.5% and 6.8 %, respectively, of the nitrogen and phosphorus reaching the Danube River Basin.

The initial project review of existing national programmes promoting best agricultural practice should be based on and take into account the findings and recommendations of the field-based demonstration programmes conducted in Eastern European countries with the support of the European Union and GEF.

B Objectives / Main Tasks

Assist the DRB countries (especially in the lower Danube basin) with the development of low-input agriculture and with pilot programmes for agricultural pollution reduction, in line with existing and emerging (including EU accession) national environmental legislation.

Specific needs to improve agricultural practices and relevant sites for demonstration activities on manure handling should be identified in practical concepts for each DRB country. Focus countries for pilot projects (training and institutional development of best agricultural practice) should be Ukraine, Moldova, Romania, Bulgaria, Yugoslavia and Bosnia & Herzegovina.

The implementation of the prioritized pilot projects will be carried out in Phase 2.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
1.3-1	Analyzing existing programmes and pilot projects promoting best agricultural practice (especially regarding animal farming and manure handling, as well as organic farming) in DRB countries, and assess nutrient reduction capacities;	Mar 2002 - Feb 2003
1.3-2	Developing practical concepts for the introduction respectively promotion of appropriate agricultural practices and manure handling in the central and downstream DRB countries by taking into account national demand and international markets and ECE recommendations;	Mar 2002 - Feb 2003
1.3-3	Preparing and implementing for the central and lower DRB countries typical pilot projects (especially in UA, MD, RO, BG, YU and B-H) to train and support farmers in the application of best agricultural practice (<i>will be completed in Phase 2</i>);	Sept 2002 - June 2003
1.3-4	Organizing workshops dealing with the needs of new pilot activities for best agricultural practices (<i>will be completed in Phase 2</i>).	Mar 2003 - June 2003

D Output / Results

Activities	Outputs
1.3-1	1. Report on existing programs and pilot projects and proposals for the development of pilot projects 2. Priority list of identified needs for new pilot activities (especially for the 6 DRB countries Ukraine, Moldova, Romania, Bulgaria, Yugoslavia and Bosnia & Hercegovina)
1.3-2	1. Practical concepts for the introduction of best agricultural practice in DRB countries; code for best agricultural practice for manure handling 2. Priority list of identified institutional support requirements in the particular DRB countries
1.3-3	Proposals for implementation of pilot projects
1.3-4	Workshops dealing with the needs of new pilot activities for best agricultural practices implemented, appropriate workshop proceedings broadly disseminated

Output 1.4

A Background Information

In the case of conflicting land use, priorities were in the past usually set on extension and intensification of human settlement and economic activities, with the consequence that ecologically sensitive areas/wetlands were steadily impacted in their function or completely disappeared.

B Objectives and Main Tasks

Assist the DRB countries to prepare new land use and wetlands rehabilitation/protection policies and legislation, and compliance and enforcement mechanisms in line with the existing and emerging (including EU accession) environmental legislation;

The present project component shall address questions in relation to typical situations of inappropriate land use resulting from municipal settlement, agricultural activities, hydraulic structures and their impact on ecologically sensitive areas and wetlands and effects of transboundary pollution with particular attention to nutrients and toxic substances. Standardized concepts shall be developed for the rehabilitation of selected sensitive areas/wetlands and for an integrated land use especially around these wetlands.

In Phase 2 of the Project, these concepts shall be implemented and required policy, legal and institutional reforms shall be applied for integrated land use as models for the DRB.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
1.4-1	Define methodology for integrated land use assessment around wetlands (called "wetland areas");	Mar 2002-June 2003
1.4-2	Carry out case studies for selected wetland areas and assess inappropriate land use (e.g. forestry, settlements and development zones, agriculture and hydraulic structures);	Aug 2002-June 2003
1.4-3	Develop alternative concepts and strategies for achieving integrated land use and management in chosen wetland areas, including required actions and measures (regulatory and legal issues, economic fines and incentives, compensation payments, etc.) <i>(will be completed in Phase 2)</i> .	Mar 2002-June 2003
1.4-5	Disseminate project results in the Danube river basin through workshops on benefits and methodology of integrated river basin land use for wetlands <i>(will be completed in Phase 2)</i> .	Mar 2002-June 2003

D Output / Results

Activities	Outputs
1.4-1	Methodology for integrated land use assessment around wetlands defined; typical river wetland areas selected and proposed
1.4-2	Case studies, supported by local stakeholders, for the selected river basins and wetland areas (present and planned land uses)
1.4-3	Three concepts and strategies for appropriate land use in selected wetland areas, including proposals for required reforms
1.4-5	Workshops on benefits and methodology of integrated river basin land use for wetlands implemented, appropriate workshop proceedings broadly disseminated

E Implementation Arrangements for 1.2; 1.3; 1.4

The project activities should be carried out under the responsibility of an international consulting firm with particular expertise in both international environment policy and legislation, in the promotion and practises of sustainable agriculture, in the agricultural technologies applied in Central and Eastern European countries (specifically manure treatment) and the rehabilitation of riverine wetlands.

The country-specific data and information have to be provided by national consultants / experts according to the provisions specified by the international consultant.

The project activities should be carried out in close communication with the ICPDR expert groups (EMIS/MLIM/RBM); the relevant local and national agricultural institutions, WWF, the Ramsar Convention Secretariat, and national experts from the chosen areas.

F Profile of the Subcontractor (International and National Consultants / Experts)

The subcontractor (international and national experts) should have competence in both conventional and sustainable agriculture (policy and practices) and experience in practical aspects of sustainable agriculture (conversion to low-input and organic farming; reduction of manure; finance and marketing).

Further, the subcontractor (international and national consultants) should also have competence in wetland issues, environmental impact assessment, economic incentives and land use planning. Further expertise is required from previous projects in Central and Eastern European countries.

PROJECT COMPONENT 3

Industrial reform and development of policies and legislation for application of BAT (Best Available Techniques) towards reduction of nutrients and dangerous substances (Output 1.5)

A Background Information

Industrial reform is one of the most urgent and most critical issues in most central and lower DRB countries and can certainly not be efficiently initiated by an environmental program of this scale. Considering that industrial production in transition countries is actually very low, it is not surprising, that industry generates only respectively 5 and 8 % of nitrogen and phosphorus that enter the Danube River.

B Objectives / Main Tasks

Assist the DRB countries in the development of new industrial nutrient/toxics pollution control policies and legislation and compliance enforcement mechanisms in line with the existing and emerging (including EU legislation) national legislation.

Taking into account the expected revitalization of industries, it is necessary to focus on industrial policies and on a review of legislation in order to ensure that environmental considerations are adequately taken into account and that mechanisms for compliance are put in place.

The project should also address the problem of industrial “hot spots” in relation to Significant Impact Areas (SIA) as identified in the Transboundary Analysis, to determine transboundary nutrients and toxics pollution from particular industries and identify possible solutions (BAT - best available techniques including cleaner technologies, treatment process, etc.) to reduce the emissions of toxic substances and nutrients in particular.

The subject of this component is closely related to the work of the EMIS/EG, therefore the project component should closely cooperate with the envisaged UNIDO-TEST MSP to ensure that interventions at the policy/legislative and at the technical (demonstration) levels are complementary.

While Phase 1 of the Project focuses on the identification of gaps and opportunities for reforms, Phase 2 will develop pilot applications of BAT concepts in selected countries.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
1.5-1	Up-dating the basin-wide inventory on industrial and mining “hot spots” (EMIS inventory) for nutrient and toxic substances;	Mar 2002-June 2003
1.5-2	Reviewing data and information on the actual status of industrial production techniques involving nutrients (N and P) and dangerous substances in the DRB countries;	Mar 2002-June 2003
1.5-3	Reviewing policies and relevant existing and future legislation for industrial pollution control and identification enforcement mechanisms on a country level (<i>will be completed in Phase 2</i>);	Mar 2002-June 2003
1.5-4	Comparing and identifying gaps between relevant EU and national legislation (<i>will be completed in Phase 2</i>);	Sept 2002-June 2003

Ref.	Activity	Time Frame
1.5-5	Developing complementing policy and legal measures for the introduction of BAT taking into account regulatory and legal issues, awareness raising, financial fines and incentives, etc <i>(followed in Phase 2)</i> ;	Sept 2002-June 2003
1.5-6	Identifying, in relation to Significant Impact Areas, industrial “hot spots” having a significant impact on water resources and water quality <i>(will be completed in Phase 2)</i> ;	Sept 2002-Feb 2003
1.5-8	Organizing workshops with participants from relevant ministries, industrial managers, banking institutions, introducing information on best available technologies, financial support, etc. <i>(followed in Phase 2)</i> .	Sept 2002-Feb 2003

D Output / Results

Activities	Outputs
1.5-1	Up-dated basin-wide inventory
1.5-2	DRB reports on outdated techniques by sectors and inventory of status of industrial plants
1.5-3	DRB report on legislative and policy measures and enforcement mechanisms
1.5-4	DRB report on gaps between EU and national legislation and guidelines for improvement
1.5-5	DRB report on relevant complementary measures
1.5-6	Report on SIAs and priority list of industrial plants with outdated technologies (polluters)
1.5-8	1. Workshop and training programs prepared, target groups identified 2. Workshop introducing information on best available technologies, financial support, etc implemented; appropriate workshop documentation broadly disseminated

E Implementation Arrangements

The project activities should basically be carried out in coordination with the EMIS-EG, supported by an international consultant with particular expertise in EU water sector legislation. In this context, the execution of this project component through an international consulting firm or a inter-agency agreement with UNIDO should be considered.

The country-specific data and information have to be provided by national consultants / experts according to the guidelines provided by the EG, respectively the international consultant.

F Profile of the Subcontractor (International and National Consultants / Experts)

UNIDO has profound expertise in industrial and mining sectors with particular attention to environment-friendly techniques / technologies with water sector relevance.

Particular expertise in EU water sector legislation is also required.

National industrial experts with expertise in environment-friendly techniques / technologies with water sector relevance are needed.

UNIDO, in cooperation with the ICPDR Expert Groups should assure overall coordination and execution of this project component and integrate this activity in it's ongoing TEST programme, which is equally financed by GEF.

PROJECT COMPONENT 4

Policy reform and legislation considering economic instruments (water tariffs, pollution charges, fines and incentives) (Output 1.6, 1.7)

Output 1.6

A Background Information

The funding of water sector-related investments and the cost coverage for the operation of WWTP in the DRB countries largely depends on economically and socially acceptable water and waste water tariffs. An assessment of water and waste water tariffs is currently being conducted with financial support from the Austrian Environmental GEF Trust Fund.

B Objectives / Main Tasks

Assist the DRB countries in the development of new tariff systems to facilitate cost-covering operations of water and waste water services (including WWTPs with third stage for nutrient reduction) and to encourage respective investment decisions.

Based on the results of the ongoing study on water and waste water tariffs, which will be available in June 2001, policy and legislative measures shall be developed for interested DRB countries to assure the introduction of economically and socially acceptable tariffs. This project component shall help to improve the investment possibilities for reduction of nutrients and toxic substances.

The implementation of new policy and legislative measures can make a substantial contribution towards increasing internal funds and releasing public budgets and can thus facilitate the provision of baseline contributions for new investment projects in transboundary nutrient reduction and pollution control.

Phase 1 of the Project will focus on developing country-specific concepts for tariff reforms while the Phase 2 will analyse and finalize these results in cooperation with all national stakeholders.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
1.6-1	Analyzing significant differences /deficiencies regarding water sector relevant legislation, level of tariffs, status of metering, level of illegal and unaccounted for consumption, collection rate, etc.; assessing the potential for the increase of revenues of the companies operating in the water and waste water sector;	Jan 2002-Feb 2003
1.6-2	Developing appropriate concepts for tariff reforms aimed at cost covering models in line with the EU WFD (on a country level):	Sept 2002-June 2003
1.6-4	Organize a basin-wide workshop on the introduction of economically and socially acceptable water and waste water tariffs <i>(will be completed in Phase 2)</i> .	June 2003

D Output / Results

Activities	Outputs
1.6-1	1. Country specific reports on significant deficiencies regarding water sector relevant legislation, level of tariffs, status of metering, level of illegal and unaccounted for consumption, collection rate, etc 2. Report on best practices on international level 3. Report on differences between national and international practices 4. Country specific reports indicating the potential for increase of revenues in the water and waste water sector
1.6-2	1. Report on country-specific concepts for appropriate tariff reforms 2. Public information campaigns / materials
1.6-4	Workshop on the introduction of economically and socially acceptable water and waste water tariffs implemented; appropriate workshop documentation broadly disseminated

Output 1.7

A Background Information

Most DRB countries are currently not applying any effective system of charges and fines for water pollution or respective incentives as applied in industrialized Western European countries.

B Objectives / Main Tasks

The basic idea of this project component is, therefore, to assist the interested DRB countries to develop an effective system of charges, fines and incentives to promote rational utilization of water resources and to prevent or reduce effects of environmental pollution, specifically nutrients and certain toxics. Within the broad framework of charges, fines and incentives particular attention should be given on discharges of nutrients and toxic pollutants with significant transboundary effects.

Phase 1 of the Project will produce a DRB-wide assessment of presently existing tools and institutional mechanisms, while Phase 2 will prepare and suggest guidelines for the introduction of most appropriate charges, fines and incentives.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
1.7-1	Analyzing the present systems of water pollution charges, fines and incentives in the DRB countries and identifying significant deficiencies (types and basis of charges, fines and incentives, effectiveness, collection procedures, exemptions, etc);	Mar 2002-Feb 2003
1.7-2	Identifying the most essential and effective water pollution charges, fines and incentives, assessing the main obstacles/barriers to their introduction and develop enforcement mechanisms;	Sept 2002-June 2003
1.7-3	Assessing the institutional and economic capabilities of the particular DRB countries for a reform of water pollution charges, fines and incentives;	Dec 2002-June 2003

Ref.	Activity	Time Frame
1.7-5	Organize workshops on the application of appropriate water pollution charges, fines and incentives, with participants from relevant ministries, municipalities and the private sector (<i>will be completed in Phase 2</i>).	Sept 2002-June 2003

D Output / Results

Activities	Outputs
1.7-1	Comparative Analysis of the present systems of water pollution charges, fines and incentives in the DRB countries
1.7-2	Report on specified tools, detailed description of barriers, recommendations on legislative changes and enforcement mechanisms
1.7-3	Report on institutional capabilities and required arrangements, economic capability and results of the social acceptance survey
1.7-5	Workshop on the application of appropriate water pollution charges, fines and incentives implemented; appropriate workshop documentation broadly disseminated

E Implementation Arrangements for Component 4

The project activities should be carried out under the responsibility of an international consulting firm with particular expertise in water sector tariffs and funding policy in Central and Eastern European countries.

The country specific data and information have to be provided by national consultants / experts according to the guidelines provided by the international consultant.

F Profile of the Subcontractor for Component 4 (International and National Consultants / Experts)

1. International financial analyst with particular expertise in environmental economics with special focus on both EU water sector legislation and national water sector legislation and funding policies in Central and Eastern European countries;
2. National socio-economists with particular expertise in affordability and social acceptance of water and waste water tariffs in Central and Eastern European countries;
3. National financial experts with particular expertise in water sector legislation, funding policies and water tariffs in the particular Central and Eastern European countries.

PROJECT COMPONENT 5

Development of operational tools for water quality monitoring, emission control and improvement of emergency and accidental response (Output 2.2; 2.3)

Output 2.2

A Background Information

The development and upgrading of emission monitoring inventories and appropriate information systems is of major importance for transboundary cooperation in water quality and water management and of common interest for the Danube and the Black Sea countries.

B Objectives / Main Tasks

The subject of this component is professional and financial support aimed at reinforcing the activities related to emission control (EMIS/EG) and monitoring of water quality, laboratory and information management (MLIM/EG), particularly aiming at improvement, further development and application of:

- the Danube Water Quality Model;
- the Modeling Nutrient Emissions in River Systems (MONERIS);
- the Analytical Quality Control (AQC).

If adequately designed and provided with reliable data, these two models and the quality assurance programme are essential tools for a profound assessment of transboundary nutrient and toxic pollutant flows as well as an assessment of the expected effects of nutrient and other pollution reduction measures. The present nutrient reduction plans can be adjusted and the implementation of policy measures can be focused on specific areas or sectors. Phase 1 of the Project will prepare the upgrading of existing operational tools, while Phase 2 will secure their effective application and the DRB-wide data availability.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
2.2-1	Harmonizing water quality standards and quality assurance for nutrients and toxic substances (<i>will be completed in Phase 2</i>);	Jan 2002-June 2003
2.2-2	Assisting in the creation of a database and emission inventory for point and non point sources of phosphorus and nitrogen, including maps (<i>will be completed in Phase 2</i>);	Jan 2002-June 2003
2.2-3	Optimizing TNMN and identifying sources and amounts of transboundary pollution for substances on the list of EU priority substances (<i>will be completed in Phase 2</i>).	Jan 2002-June 2003
2.2-4	Organize 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 (<i>will be completed in Phase 2</i>).	Jan 2002-June 2003

D Output / Results

Activities	Outputs
2.2-1	1. Proposal for water quality classification system for the Danube Basin 2. Proposal for implementation of AQC program
2.2-2	1. Proposal of structure and indicators for a data base for point and non point sources of pollution 2. Proposal of structure for a monitoring system to control environmental impact 3. Updated emission inventory of point sources and non point sources
2.2-3	1. Evaluation reports available 2. Manual developed and implemented 3. Figures of annual loads in the Danube Basin available 4. Improved tool for transboundary pollution assessment available
2.2-4	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 implemented; appropriate documentation of workshop results disseminated

Output 2.3

A Background Information

The recent accidental pollution of the Tisza river from mining activities and the effects of NATO intervention in Yugoslavia, the bombing of petrochemical and other industrial complexes in the Danube River Basin, led to a contamination of ground water and rivers with toxic substances (PCBs, PAHs, cyanide, etc.), the accumulation of heavy metals in sediments and to a degradation of ecosystems (fish kill). Hence, urgent support is needed to improve preventive and emergency response measures.

B Objectives / Main Tasks

The subject of this project component is to support development activities for accident emergency warning and prevention of accidental pollution. The experience from the recent accidental pollution events indicates that the basically established AEPWS/EG needs substantial improvement before it can become a satisfactory tool for adequate management of transboundary contamination from catastrophic events.

During Phase 1 of the Project, the operational bases of the alarm system will be upgraded and preventive policy measures recommended. During Phase 2, the practical application of the alarm system will be further extended in the DRB.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
2.3-1	The reinforcement of operational conditions in national alert stations (PIACs) and geographical extension of the AEPWS in Bosnia & Herzegovina and the FR of Yugoslavia ⁷⁾ (<i>will be completed in Phase 2</i>);	Jan 2002-June 2003
2.3-2	The completion of the inventory presently available only for the upper Tisza River Basin, and evaluation of all high accidental risk spots in all countries in the Danube River Basin, considering that similar accidental “hot spots” exist in many transition countries (<i>will be completed in Phase 2</i>);	Jan 2002-June 2003
2.3-3	The designing of preventive measures, the adjusting of national legislation and improved compliance with safety standards (<i>will be completed in Phase 2</i>);	Jan 2002-June 2003
2.3-4	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 (<i>will be completed in Phase 2</i>).	Jan 2002-June 2003
2.3-5	Organize workshops to reinforce cooperation in accident and emergency/warning and development of preventive measures (<i>will be completed in Phase 2</i>).	Jan 2002-June 2003

D Output / Results

Activities	Outputs
2.3-1	1. Implementation schedule for PIAC setup in FRY and BiH 2. Communication software able to use both present satellite communication systems and cheap internet for the exchange of emergency Standard Forms translated into national languages
2.3-2	Harmonized risk inventories, ranked risk spots at the level of sub-basins as well as the whole DRB based on evaluation of the risk
2.3-3	Basic guidelines for accident prevention and risk reduction in hazardous installations, immediate and long-term planning approaches
2.3-4	1. Project concept available 2. Manual developed and implemented 3. Project briefs and TORs for DBAM calibration in the selected pilot area(s)
2.3-5	Workshops to reinforce cooperation in accident and emergency/warning and development of preventive measures implemented; appropriate documentation of workshop results disseminated

⁷⁾ The FR of Yugoslavia is situated in an extremely important geographical position in the center of the Danube River Basin where the most important tributaries, Tisza, Sava and Drava are joining the Danube. During the recent accidental pollution the AEWS has also informed Yugoslavia and cooperated with its technical staff to monitor the effects of accidental pollution. The UNEP Balkan Task Force and the EU-Baia Mare Task Force have closely cooperated with Yugoslavian authorities in the assessment of accidental pollution and the design of emergency measures.

E Implementation Arrangements for Component 5

In the framework of this program component, consultation and working meetings for particular research work (modelling, development of nutrient data base, etc) should be arranged. For this purpose, special TORs have to be defined by the Expert Groups (MLIM and EMIS).

To assure the coherence and viability of data collection in all Danube countries, it would be necessary to provide training and additional laboratory and monitoring tools, in particular for those countries that:

- ⇒ still need to be brought to the same operational level (Ukraine, Moldova) or
- ⇒ are not yet integrated in the MLIM and EMIS systems (Bosnia-Herzegovina, FR Yugoslavia).

Concerning the improvement of AEWS, the project activities should basically be carried out under the responsibility of the AEPWS/EG under the guidance of an international consulting firm (Subcontractor).

Country-specific data and information have to be provided by national consultants / experts according to the guidelines provided by the respective ICPDR Expert Group.

In the frame of the project activity 2.3 a financial support of 87 000 USD for purchase of equipment (monitoring/laboratory) is foreseen.

F. Profile of the Subcontractor for Component 5 (International and National Consultants / Experts)

The subcontractor should provide international and national expertise (consultants / experts); to carry out the proposed activities the following specializations are needed:

- ⇒ International water quality expert
- ⇒ International modelling expert
- ⇒ International hydraulic engineer
- ⇒ National hydrologist
- ⇒ National hydraulic engineer
- ⇒ National biological expert
- ⇒ National chemical expert.

PROJECT COMPONENT 6

Institutional Development of NGOs and Community Involvement – Support for DEF (Output 3.1)

A Background Information

Cooperation of the civil society and in particular the local NGOs is essential to achieving the objectives and goals of the ICPDR and the new Danube Regional Project. Particular attention will be given to the reinforcement and the role of the Danube Environmental Forum (DEF), which is the umbrella organization of the NGOs in the Danube River Basin. The previous GEF Project has provided some support to facilitate the organization of NGO cooperation at the national level and the establishment of the Danube Environmental Forum.

B Objectives / Main Tasks

Support for Institutional Development of NGOs and Community Involvement should come in the form of technical/professional assistance and financial support for the Danube Environmental Forum and for national NGOs working on transboundary pollution issues and nutrient reduction.

During Phase 1 of the Project, this will be focusing on making the DEF fully operational and preparing the training programmes which will be completed in Phase 2 with the actual training and publications.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
3.1-1	Support for the DEF Secretariat for operation, communication and information management (<i>will be completed in Phase 2</i>);	Dec 2001- Aug 2003
3.1-2	Organization of consultation meetings and training workshops on nutrients and toxics issues management (<i>will be completed in Phase 2</i>);	Dec 2001- Aug 2003
3.1-3	Publishing special NGO publications in national languages on nutrients and toxic substances(<i>will be completed in Phase 2</i>);	Dec 2001- Aug 2003
3.1-4	Organization of training courses for the development of NGO activities and cooperation in national projects (nutrient reduction) management (<i>will be completed in Phase 2</i>).	Dec 2001- Aug 2003

D Output / Results

Activities	Output
3.1-1	The DEF Secretariat is fully operational and able to support the national NGOs in administrative and organizational matters
3.1-2	1. Training programs on nutrients and toxics issues management identified; materials prepared 2. Consultation meetings and training workshops on nutrients and toxics issues management conducted; appropriate documentation of results broadly disseminated
3.1-3	Appropriate NGO publications in national languages on nutrients and toxic substances prepared for publication

Activities	Output
3.1-4	1. Training programs and materials for the development of NGO activities and cooperation in national projects management prepared 2. Training course for the development of NGO activities and cooperation in national projects management conducted; appropriate documentation broadly disseminated

E Implementation Arrangements

The project activities should be carried out under the management of the DEF Secretariat and under the control of the DEF Spokespersons by:

- ⇒ DEF network, including DEF members
- ⇒ Individual NGOs,
- ⇒ Educational institutions.

The country-specific data and information have to be provided by national NGOs and their experts with particular experience and expertise in water pollution, cross-sector co-operation and community involvement.

F Profile of the Subcontractor (International and National Consultants / Experts)

The subcontract will be established with the Danube Environmental Forum Secretariat located in Bratislava. The designated spokesperson of the DEF and the Director of the DEF Secretariat will be responsible for the implementation of the project component.

PROJECT COMPONENT 7

Small Grants Programme - Applied Awareness Raising (Output 3.2)

A Background Information

Previous Small Grants Programs have shown how much local NGOs can contribute to increase public involvement in nutrient reduction measures, including practical (replicable) and community-based projects, education and training, monitoring and control of policy programs. Awareness-raising can effectively contribute to expanding understanding of transboundary and even global environmental problems and solutions.

B Objectives / Main Tasks

The objective of this program component is to provide administrative, professional and financial support for the extension of the GEF-Small Grants Programme. This is mainly focusing in Phase 1 of the Project on the identification of suitable projects and the preparation of applications for financial support. In Phase 2 of the Project grants will be awarded and the programme will be implemented.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
3.2-1	Identifying NGO grants programme and projects for reduction of nutrients and toxic substances and mitigation of transboundary pollution;	Dec 2001- June 2003
3.2-2	Designing and implementing a region-wide granting programme focusing on demonstration activities and awareness campaigns for sustainable land management and pollution reduction (nutrients) in the agricultural, industrial and municipal sectors <i>(will be completed in Phase 2)</i> ;	Dec 2001- June 2003
3.2-3	Designing and implementing two granting programmes at the local and national level in terms of small scale community based investment projects for pollution control, rehabilitation of wetlands, best agricultural practices, reduction of use of fertilizers, manure management, improvement of village sewer systems, etc. <i>(will be completed in Phase 2)</i> .	Dec 2001- June 2003

D Output / Results

Activities	Outputs
3.2-1	Structure of the cooperative grants program on local / national / region-wide level; (major topics; guidelines, procedures, mechanisms for implementation; working plans; selection process and criteria)
3.2-2	1. List of received applications for demonstration activities / campaigns /projects 2. List of selected applications for demonstration activities / campaigns /projects 3. Training workshop implemented; appropriate documentation of results broadly disseminated
3.2-3	1. List of applications for grants 2. List of evaluated and selected applications for grants

E Implementation Arrangements

Based on previous experience and good performance, this project component shall be implemented with technical and policy guidance from the ICPDR, by the Regional Environmental Center (REC) in Hungary. Through its national offices, the REC will inform local communities and NGOs to develop and submit relevant project proposals and will organize and follow-up in the 2nd Phase of the Project the implementation of selected projects for nutrient reduction and awareness raising.

The responsibilities of the involved institutions could be allocated as follows:

- ⇒ REC : developing and running the program
- ⇒ ICPDR : assisting the technical implementation of the program and contributing to evaluation process
- ⇒ DEF: assisting the identification of projects and contributing to the evaluation process.

F Profile of the Subcontractor (International and National Consultants / Experts)

The international and national consultants and experts under REC and DEF should have particular experience and expertise in:

- ⇒ Program and projects management and planning;
- ⇒ Financial expertise/audits;
- ⇒ Water management;
- ⇒ Nutrients and toxic substances;
- ⇒ Wetland restoration.

PROJECT COMPONENT 8

Organization of Public Awareness Raising Campaigns for Nutrient Reduction and Control (Output 3.3)

A Background Information

The practical awareness and daily sensitivity of the general public on pollution problems and their transboundary impacts is still very low in most DRB countries. The many new local NGO small grants projects organized within this GEF Project frame (component 3.3.(i)) will become more relevant for the public's opinion-making at national and regional scale if they will be complemented by nation-wide awareness campaigns.

B Objectives / Main Tasks

The objective of this project component is to prepare and implement a series of regional and national public awareness activities. In this context the GEF Project aims in particular at raising awareness on accidental pollution and prevention and nutrient reduction in daily life through media activities and campaigning.

Phase 1 of the Project will prepare and start first public activities in the DRB countries, which will be intensified in Phase 2 of the Project. Further support will be given in both Phases by the publication of periodicals in English and in national languages.

C Scope of Work (Work Program and Time-frame)

Ref.	Activity	Time Frame
3.3-1	Conceptualization and implementation of public awareness raising campaigns on nutrients issues (<i>will be completed in Phase 2</i>);	Mar 2002-June 2003
3.3-2	Development and production of materials for public press and mass media on nutrients and toxics (<i>will be completed in Phase 2</i>);	Mar 2002-June 2003
3.3-3	Publication of scientific documents and regular papers or special issues on water management and pollution reduction with particular attention to nutrient issues and Black Sea recovery (<i>will be completed in Phase 2</i>).	Mar 2002-June 2003

D Output / Results

Activities	Outputs
3.3-1	Public Awareness Action Plan and campaign concept
3.3-2	Publications in public press and mass media (journals, posters, leaflets, articles in mass media, www- info, TV)
3.3-3	(Articles in) regular journals or special issues to disseminate information in the DRB and to the international public in English and /or national languages

E Implementation Arrangements

The project activities should be carried out by qualified sub-contractors under the supervision of the ICPDR. Special NGO publications will be developed under the guidance of the DEF network and national NGOs with the assistance of an international consultant with particular expertise in public awareness campaigning and water sector issues.

The country-specific data and information have to be provided by national experts with particular experience and expertise in public awareness raising and community involvement.

F Profile of the Subcontractor (International and National Consultants / Experts)

The international and national consultants and experts should have particular experience and expertise in the following fields:

- ⇒ Communication issues;
- ⇒ Public relation;
- ⇒ Editing/ Publishing;
- ⇒ Water management;
- ⇒ Wetland restoration.

F. Work Plan

Project Management Sheets

For each Objective and related activities and outputs a Project Management Sheet (PMS) has been prepared to present the implementation steps and the timeframe for Phase 1 and Phase 2 of the Project, indicating the coherence and complementarities of activities and expected results in the two phases of the Project. Further, implementation arrangements are indicated to demonstrate the involvement of the ICPDR Expert Groups and other links of cooperation as necessary prerequisites for efficient project implementation.

The Project Management Sheets are the base for the development of the Work Programme, which will be established in the inception phase of the project. Taking into account the activities and expected outputs described in the PMS, Project Components have been developed, regrouping one or more activities to constitute a coherent and integrated implementation approach. The Project Components facilitate establishing of subcontracts.

Other activities and related outputs described in the PMS will be carried out by international and national consultant under the direct guidance and supervision of the Project Manager.

Subcontractors and consultants have closely to cooperate with the ICPDR and its Expert Groups to respond to specific requirements in implementing the Danube River Protection Convention and in responding to principles of the GEF international waters.

The Project Implementation Schedule at the end of this chapter represents the time frame for the first phase as indicated in the PMS in a graphical form.

PROJECT MANAGEMENT SHEET**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**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
1.1-1 Identify the River Basin District (RBD), in particular the assignment of coastal waters and groundwater bodies	1. Collect and synthesize national information		1. Map of the River Danube Basin District with groundwater bodies		Jan 2002- Aug 2003		RBM EG, Cartographic Sub-group, international and national consultants.
1.1-2 Develop common approaches and methodologies for pressure and impact analysis	1. Adapt EU Guidelines to the conditions existing in the Danube Basin		1. Overall concept for a step by step introduction of a common approach for the different DRB countries		Jan 2002- Aug 2002		RBM EG, EMIS EG, international and national consultants.
1.1-3 Implement common approaches and methodologies for pressure and impact analysis (at the national level)	1. Develop methodology for collection of national data and information on environmental pressure and impact	1. Assist national level to conduct pressure and impact analysis	1. Concept for a common approach for pressure and impact analysis at the national level	1. National reports and basin-wide summary report on pressure and impact analysis	Aug 2002- Aug 2003	Sept 2003 - Feb 2005	RBM EG, EMIS EG, international and national consultants.
1.1-4 Apply the EU Guidelines for economic analysis and arrive at the overall economic analysis for the Danube River Basin	1. Develop concept for economic analysis and environmental cost-benefit analysis in RBM	1. Assist in elaboration of national economic analysis for implementation of WFD	1. Concept for economic analysis and environmental cost-benefit analysis in line with the EU guidelines	1. National reports and basin-wide summary report on economic issues relevant for implementation of WFD	Mar 2002- Aug 2003	Sept 2003 - Feb 2005	RBM EG, Economic Sub-group, international and national consultants.
1.1-5 Synthesize the results of the national analyses on environmental characteristics, evaluate the observed deficiencies in national reports and suggest ways to overcome them		1. Analyze national reports and propose measures to standardize and improve quality and comparability of data and information		1. Harmonized national analysis reports and basin-wide summary report		Sept 2003 - Aug 2004	RBM EG, international and national consultants.
1.1-6 Develop RBM tools (mapping, GIS, remote sensing, etc.) and related data management, including the arriving at the typology of surface waters and the relevant reference conditions	1. Collect national information / data on GIS issue and suggest a concept, incl. the typology of surface waters	1. Develop basin wide GIS system for nutrient control including typology of surface waters	1. Concept for a basin-wide GIS, including maps on the typology of surface waters and their reference conditions	1. GIS-based maps, including a map on the typology of surface waters and their reference conditions	Mar 2002- Aug 2003	Sept 2003 - Feb 2006	RBM EG, GIS Activity Center, international and national consultants.
1.1-7 Identify pilot river basins and apply common approaches, methodologies, standards and guidelines (in observing also the link to the Working Groups of the European Commission)	1. Identify pilot river basins 2. Define concepts for common approaches, methodologies, standards and guidelines	1. Develop RBM Plans in pilot river basins (e.g. Tisza River Basin) and apply in test areas common approaches, methodologies, standards and guidelines, 2. Provide feedback to the RMB EG and to the European Commission Working Groups for the implementation of the WFD	1. Pilot river basins identified 2. Concepts for common approaches, methodologies, standards and guidelines defined	1. RBM Plans in pilot river basins (e.g. Tisza River Basin) developed 2. Report on RBM Plans in pilot river basins available to the RMB/EG and to the European Commission Working Groups for the implementation of the WFD	1. Mar 2002 - Aug 2002 2. Sept 2002 - Aug 2003	Aug 2003 - Feb 2006	RBM/EG; link to the work of all ICPDR EGs within the pilot river basins to be observed (via DANUBIS); consultant to cover pilot-basin wide work, plus support by national experts
1.1-8 Assist Danube River Basin countries in developing strategies to come in compliance with the EU WFD, and in particular the EU Nitrate Directive, in preparing the programme of measures		1. Develop concept for implementation strategies and for program of measures at national level		1. Recommendation for implementation strategies and programme of measures likely to be effective in the transboundary context		Mar 2004 - Aug 2006	RBM/EG, all ICPDR/EGs must in some way be involved (via DANUBIS); consultants to cover basin-wide work, plus support by national experts
1.1-9 Organize workshops and training courses in order to produce the River Basin Management Plan and to strengthen basin-wide cooperation	1. Develop concepts and programmes for workshops and training courses 2. Organize and conduct four workshops	1. Organize and conduct a series of 10 workshops, seminars and training courses	1. Programmes and contents for workshops and training sessions determined 2. Workshops and seminars implemented ; appropriate workshop documentation available	1. Workshops, seminars and training courses implemented; cooperation for implementation of WFD strengthened	Aug 2002 - Aug 2003	Mar 2004 - Aug 2006	RBM/EG, all ICPDR/EGs must be involved (also via DANUBIS); consultants to cover basin-wide work; input by national experts needed

PROJECT MANAGEMENT SHEET

Objective 1: Creation of sustainable ecological conditions for land use and water management

Output 1.2: Reduction of nutrients and other harmful substances from agricultural point and non-point sources through agricultural policy changes

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
1.2-1 · Up-date the basin-wide inventory on agricultural point and non-point sources of pollution “hot spots” in line with EMIS emission inventory	1. Up-date the basin-wide inventory on agricultural point and non-point sources of pollution “hot spots”		1. Up-dated basin-wide inventory on agricultural point and non-point sources of pollution “hot spots”		Mar 2002- June 2003		ICPDR expert groups (EMIS/MLIM/RBM); national agricultural institutions (e.g. Ukraine national agricultural university); Components 1.2 and 1.3. should preferably be executed by the same consultant team.
1.2-2 Review relevant legislation, existing policy programs and actual state of enforcement in the DRB with respect to promotion and application of best agricultural practices	1. Review data and information in the DRB countries, taking into account the results of the UNDP/GEF Danube PRP and of the EU-Phare Project EU/301/91	1. Analyze results and formulate recommendations for legal and policy changes concerning the application of best agricultural practices	1. Summary report on agricultural policies and state of enforcement in the DRB countries	1. Recommendations for changes in national legislation and practice concerning the application of best agricultural practices	Mar 2002- June 2003	Sept 2003 - Feb 2005	
1.2-3 Review inventory on important agrochemicals (nutrients etc.) in terms of quantities of utilization, their misuse in application, their environmental impacts and potential for reduction	1. Review data and information in DRB countries, taking into account the results of the UNDP/GEF Danube PRP and of the EU-Phare Project EU/301/91	1. Analyze results and formulate recommendations for appropriate use of agrochemicals to reduce environmental impact	1. Summary report on use of agrochemicals in the DRB countries	1. Recommendations for appropriate use of agrochemicals and mechanisms for compliance	Mar 2002- June 2003	Sept 2003 - Feb 2005	
1.2-4 Identify main institutional, administrative and funding deficiencies (including complementary measures) to reduce pollutants	1. Collect information on institutional, administrative and funding deficiencies in the field of land use and agricultural practices		1. Report on main deficiencies and proposals for institutional, administrative and financial mechanisms suited to assure appropriate land use and agriculture		Mar 2002- June 2003		
1.2-5 Introduce or, where existing, further develop concepts for the application of best agricultural practices in all DRB countries, by taking into account country specific traditional, social and economic issues, and the ECE recommendations	1. Analyze existing situation for each DRB country and prepare concepts for application of best agricultural practices in DRB countries	1. Finalize concepts, obtain feedback from national level; make concrete proposals on how to implement them (indicate benefits)	1. Report on existing situation and draft concepts for policy development and implementation of best agricultural practice in the DRB countries	1. Recommendations for implementation of best agricultural practices in the DRB countries	Mar 2002- June 2003	Dec 2004 - Feb 2005	
1.2-6 Discuss the new concepts with and disseminate results to governments, farming communities and NGOs in the basin	1. Organize one workshop with participants from relevant institutions of all DRB countries	1. Organize ten national workshops in the DRB countries with participants from relevant institutions to discuss proposed concepts 2. Organize one regional workshop with participants from relevant institutions of all DRB countries to assess overall regional result and to strengthen application 3. Establish and develop internet platform	1. Workshop implemented; appropriate workshop documentation adequately disseminated	1+2. Concepts on best agricultural practices in DRB countries (e.g. through changes in agricultural policies and legislation) available and broadly disseminated 3. Information on national policies and on status of implementation of best agricultural practice broadly disseminated	Mar 2002- June 2003	Sept 2003 - Feb 2005 3. Feb 2005	

Remarks: The revision of the draft GEF project components 1.2. and 1.3. into one policy project (new component 1.2.) allowed an expansion of the budget for the second project with pilot/demonstration activities in lower Danube countries (new component 1.3.)

PROJECT MANAGEMENT SHEET**Objective 1: Creation of sustainable ecological conditions for land use and water management****Output 1.3: Development of pilot projects on reduction of nutrients and other harmful substances from agricultural point and non-point sources**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
1.3-1 Analyze existing programs and pilot projects promoting best agricultural practice (especially regarding animal farming and manure handling, as well as organic farming) in DRB countries, and assess nutrient reduction capacities	1. Carry out the analysis, taking into account the results of the UNDP/GEF PRP and of the EU-Phare Project EU/301/91 (Demonstr. Centres for Sustain. Agriculture in the DRB and Regional Market Study) 2. Identify needs for new pilot activities in best agricultural practices, especially in Ukraine, Moldova, Romania, Bulgaria, Yugoslavia and Bosnia & Hercegovina		1. Report on existing programs and pilot projects and proposals for the development of pilot projects 2. Priority list of identified needs for new pilot activities (especially for the 6 DRB countries Ukraine, Moldova, Romania, Bulgaria, Yugoslavia and Bosnia & Hercegovina		Mar 2002 - Feb 2003		ICPDR expert groups (EMIS/MLIM/RBM); local agricultural institutions (e.g. Ukraine national agricultural university); Components 1.2. and 1.3. should preferably be executed by the same consultant team.
1.3-2 Develop practical concepts for the introduction respectively promotion of appropriate agricultural practices and manure handling in the central and downstream RB countries by taking into account national demand and international markets and ECE recommendations	1. Develop the concept; develop criteria for best manure handling (adapt ECE legislation at national level) 2. Assess possibilities for national and regional institutional support in practically expanding best agricultural practices in DRB countries		1. Practical concepts for the introduction of best agricultural practice in DRB countries; code for best agricultural practice for manure handling 2. Priority list of identified institutional support requirements in the particular DRB countries		Mar 2002 - Feb 2003		
1.3-3 Prepare and implement for the central and lower DRB countries typical pilot projects (especially in UA, MD, RO, BG, YU and B-H) to train and support farmers in the application of best agricultural practice	1. Propose pilot projects based on the identified needs for new pilot activities in best agricultural practices, especially in Ukraine, Moldova, Romania, Bulgaria, Yugoslavia and Bosnia & Herzegovina	1. Prepare and implement pilot projects in practical training (including manure handling) and institutional support for expanding best agricultural practice in the DRB 2. Evaluate and report on progress of implementation of pilot projects 3. Evaluation of financial issues	1. Proposals for implementation of pilot projects	1. Pilot projects for best agricultural practices in selected DRB countries prepared 2. Evaluation and progress report on concluded pilot projects in at least 6 DRB countries: reduced pollution from manure, trained farmers and developed institutions promoting best agricultural practice 3. Evaluation report on financial implications	Sept 2002 - June 2003	1. Sept 2003- Feb 2006 2. Feb 2006 - Aug 2006 3. Mar 2006 - Aug 2006	
1.3-4 . Organize a series of demonstration workshops to disseminate the results of the pilot projects	1. Organize two workshops dealing with the needs of new pilot activities for best agricultural practices	1. Organize five national demonstration workshops with participants from animal farms, banking institutions, government agencies and NGOs	1. Workshops implemented, appropriate workshop proceedings broadly disseminated	1. Workshops implemented; appropriate workshop documentation on practical experience from pilot projects broadly disseminated	Mar 2003 - June 2003	Aug 2005 - Aug 2006	

Remarks: The revision of the draft GEF project components 1.2. and 1.3. into one policy project (new component 1.2.) allowed to expand the budget for the second project with pilot/demonstration activities in lower Danube countries (new component 1.3.)

PROJECT MANAGEMENT SHEET**Objective 1: Creation of sustainable ecological conditions for land use and water management****Output 1.4: Policy development for wetlands rehabilitation under the aspect of appropriate land use**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
1.4-1 Define methodology for integrated land use assessment around wetlands (called "wetland areas")	1. Selection of typical areas within (transboundary) river basins (proposal: the Morava, the Drava, the Tisza)		1. Methodology for integrated land use assessment around wetlands defined; typical river wetland areas selected and proposed		Mar 2002 - June 2003		ICPDR expert groups (RBM, MLIM, ECO), WWF, Ramsar secretariat, national experts from chosen areas
1.4-2 Carry out case studies for selected wetland areas and assess inappropriate land use (e.g. forestry, settlements and development zones, agriculture and hydraulic structures)	1. Collect data on present land use and on plans for the future development in selected wetland areas 2. Organize two workshops to discuss the assessed data from chosen areas with all stakeholders of the region		1.-2. Case studies, supported by local stakeholders, for the selected river basins and wetland areas (present and planned land uses)		1. Aug 2002 - June 2003 2. Mar - June 2003		
1.4-3 Develop alternative concepts and strategies for achieving integrated land use and management in chosen wetland areas, including required actions and measures (regulatory and legal issues, economic fines and incentives, compensation payments, etc);	1. Develop concept and strategy for each selected river basin and its wetland areas 2. Assess the need for reforms (legal and institutional)	1. Organize two workshops in selected river basins to discuss and agree the proposed concepts and strategies	1.-2. Three concepts and strategies for appropriate land use in selected wetland areas, including proposals for required reforms	1. Workshop implemented; concepts and strategies for appropriate land use in selected wetland areas discussed and agreed	Mar 2002 - June 2003	Sept 2003 - Aug 2004	
1.4-4 Secure governmental commitments to implement the newly proposed concepts for integrated land use in the selected case study areas		1. Convene a meeting of governmental decision makers to agree and endorse concepts and strategies		1. Agreed concepts and strategies for the implementation of integrated river basin land use for selected wetland areas		Sept 2003 - Aug 2004	
1.4-5 Disseminate project results in the Danube river basin	1. Organize two workshops on benefits and methodology of integrated river basin land use for wetlands, with participants from relevant ministries and institutions of the particular DRB countries	1. Organize three basin-wide workshop on benefits and methodology of integrated river basin land use for wetlands, with participants from relevant ministries and institutions of the particular DRB countries	1. Workshops implemented, appropriate workshop proceedings broadly disseminated	1. Workshop implemented; participants from the DRB trained on how to assess, develop and implement appropriate land use in wetland areas	Mar 2002 - June 2003	Nov 2004	

Remarks: After the major revision of this projects, the funds saved here should be transferred to component 4.3. (wetland nutrient removal capacities)

PROJECT MANAGEMENT SHEET**Objective 1: Creation of sustainable ecological conditions for land use and water management****Output 1.5: Industrial reform and development of policies and legislation for application of BAT (best available techniques including cleaner technologies) towards reduction of nutrients (N and P) and dangerous substances**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation on Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
1.5-1 · Up-date the basin-wide inventory on industrial and mining “hot spots” (EMIS inventory) taking into account emissions of nutrient and toxic substances	1. Up-date the basin-wide inventory on industrial and mining “hot spots”		1. Up-dated basin-wide inventory		Mar 2002 - June 2003		
1.5-2 Review data and information on the actual status of industrial production techniques involving nutrients (N and P) and dangerous substances in the DRB countries	1. Identify outdated techniques in relation to BAT reference notes in the framework of EU IPPC directive 2. Establish list of industrial facilities with outdated techniques		1.-2. DRB reports on outdated techniques by sectors and inventory of status of industrial plants		Mar 2002 - June 2003		EMIS; UNIDO; international consultant, national consultants
1.5-3 Review policies and relevant existing and future legislation for industrial pollution control and identification enforcement mechanisms on a country level	1. Review present and emerging policies and legislation and associated enforcement mechanisms in each DRB country	1.Introduce mechanisms at the national level to regular review policies and relevant legislation for industrial pollution control and reinforcement of control mechanisms 2. Update on an annual basis legislative and policy changes and compile country data on compliance of PRP plants	1. DRB report on legislative and policy measures and enforcement mechanisms	1.-2. Annual DRB report identifying policy and legislation changes and compliance status	Mar 2002 - June 2003	Sept 2003 - Feb 2006	
1.5-4 Compare and identify gaps between relevant EU and national legislation	1. Compare and identify gaps between EU and national legislation and develop proposals on how to close the gaps	1. Follow-up of actions at the national level on closure of gaps in particular countries	1. DRB report on gaps between EU and national legislation and guidelines for improvement	1. Annual DRB progress report regarding closure of gaps in particular countries	Sept 2002 - June 2003	Sept 2003 - Feb 2006	
1.5-5 Develop necessary complementing policy and legal measures for the introduction of BAT (taking into account regulatory and legal issues, awareness raising, financial fines and incentives, etc)	1. Identify and evaluate complementary measures	1. Advise and monitor country utilization of complementary measures	1. DRB report on relevant complementary measures	1. Case studies on DRB country experiences with complementary measures	Sept 2002 - June 2003	Sept 2003- Feb 2006	
1.5-6 Identify in relation to Significant Impact Areas, industrial “hot spots” having a significant impact on water resources and water quality	1. Verify SIAs and identify relevant plants with outdated techniques and their environmental effect	1. Elaborate proposals to reduce pollution from identified plants (closure, introduction of BAT, etc.) to improve ecological conditions in specific SIA	1. Report on SIAs and priority list of industrial plants with outdated technologies (polluters)	1. List of Government and private initiatives for implementation of pollution reduction measures at the national level	Sept 2002 - Feb 2003	Sept 2004- Oct 2004	
1.5-7 Develop appropriate implementation concepts for a step-by-step introduction of BAT in industrial sectors		1. Identify and evaluate appropriate implementation concepts for introducing BAT, including pilot applications		1. Pilot project applications for implementation of BAT concepts		Dec 2004 - June 2005	
1.5-8 Organize workshops with participants from relevant ministries, industrial managers, banking institutions, introducing information on best available technologies, financial support, etc.;	1. Prepare workshop programs, identify target groups, prepare training materials on harmonization of EU and national policies and legislation on BAT; 2. Organize and conduct one basin wide workshop	1. Organize and conduct eleven national workshops on step-by-step introduction of BAT and funding possibilities	1. Workshop and training programs prepared, target groups identified 2. Workshop implemented; appropriate workshop documentation broadly disseminated	1. Workshop implemented; appropriate workshop documentation broadly disseminated	Sept 2002 - Feb 2003	1. Sept 2003- Feb 2006 2. Mar 2006	

PROJECT MANAGEMENT SHEET**Objective 1: Creation of sustainable ecological conditions for land use and water management****Output 1.6: Policy reform and legislation measures for the development of cost-covering concepts for water and waste water tariffs, focusing on nutrient reduction and control of dangerous substances**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
1.6-1 Analyze significant deficiencies regarding water sector relevant legislation, level of tariffs, status of metering, level of illegal and unaccounted for consumptions, collection rate, etc.; assess the potential for the increase of revenues of the companies operating in the water and waste water sector	1. a) Regarding water supply: Analyze and assess on national level (based on the results of the existing basin-wide water and waste water study): water sector relevant legislation; level of tariffs; status of metering; level of illegal and unaccounted-for consumption, level of collection rate; 1. b) Regarding waste water services: Analyze and assess on national level (based on the results of the existing basin wide water and waste water study): level of tariffs, status of metering, level of collection rate, type of waste water collection and treatment (centralized and decentralized public collection syst., septic tanks, industrial collect.syst. and direct industrial discharges) 2. Study best practices on international level 3. Analyze differences between national and international practices 4. Assess on national level the potential for increase of revenues of the companies acting in the water and waste water sector		1. Country specific reports on significant deficiencies regarding water sector relevant legislation, level of tariffs, status of metering, level of illegal and unaccounted for consumption, collection rate, etc 2.-3. Report on best practices on international level and differences between national and international practices 4. Country specific reports indicating the potential for increase of revenues in the water and waste water sector		Jan 2002 - Feb 2003		International consultant, national consultants, national and regional authorities
1.6-2 Develop appropriate concepts for tariff reforms aimed at cost covering models in line with the EU WFD (on a country level)	1. Develop a catalogue of reform potential and requirements, built on best practices in line with the EU WFD		1. Report on country-specific concepts for appropriate tariff reforms 2. Public information campaigns / materials		Sept 2002- June 2003		International consultant, EU water authorities
1.6-3 Develop proposals for policy reforms and legislative measures required for the establishment of cost - covering tariff models in line with the WFD and propose recommendations for phased implementation of tariff reforms		1. Adapt elaborated catalogue of reform potential and requirements to country specific situation by involving all relevant stakeholders		1. Catalogue of country specific reform potential and requirements		Sept 2003- Sept 2005	International consultant, national consultants, national and regional authorities
1.6-4 Organize national workshops with participants from relevant ministries, municipalities and the private sector (NGOs) on the introduction of economically and socially acceptable water and waste water tariffs	1. Organize one basin-wide workshop on the introduction of economically and socially acceptable water and waste water tariffs	1. Organize eleven national workshops for all relevant stakeholders	1. Workshop implemented; appropriate workshop documentation broadly disseminated	1. Workshop implemented, appropriate workshop documentation broadly disseminated; increased cooperation of relevant stakeholders	June 2003	Sept 2003- Sept 2005	International and national consultants in cooperation with water authorities

PROJECT MANAGEMENT SHEET**Objective 1: Creation of sustainable ecological conditions for land use and water management****Output 1.7: Implementation of effective systems of water pollution charges, fines and incentives, focusing on nutrients and dangerous substances**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
1.7-1 Analyze the present systems of water pollution charges, fines and incentives in the DRB countries and identify significant deficiencies (types and basis of charges, fines and incentives, effectiveness, collection procedures, exemptions, etc)	1. Analyze the present systems of water pollution charges, fines and incentives in the DRB countries on a country level 2. Compare national systems on basin-wide level		1.-2. Comparative Analysis of the present systems of water pollution charges, fines and incentives in the DRB countries		Mar 2002 - Feb 2003		International consultant, national consultants
1.7-2 Identify the most essential and effective water pollution charges, fines and incentives, assess the main obstacles/barriers to their introduction and develop enforcement mechanisms	1. Specify particular tools for each country 2. Describe and analyze barriers to introduction and effective use 3. Develop appropriate enforcement mechanisms		1.-3. Report on specified tools, detailed description of barriers, recommendations on legislative changes and enforcement mechanisms		Sept 2002 - June 2003		International consultant, national consultants
1.7-3 Assess the institutional and economic capabilities of the particular DRB countries for a reform of water pollution charges, fines and incentives	1. Analyze and assess institutional capabilities and required arrangements on a country level 2. Assess economic capability and compatibility of proposed measures on a country level 3. Survey social acceptance on a country level		1.-3. Report on institutional capabilities and required arrangements, economic capability and results of the social acceptance survey		Dec 2002 - June 2003		International consultant, national consultants
1.7-4 Develop appropriate concepts for the introduction of balanced and effective systems of water pollution charges, fines and incentives in the particular DRB countries		1. Identify the most appropriate combination of effective charges, fines and incentives 2. Develop recommendations on how to introduce the identified set of charges, fines and incentives		1. Country specific systems of charges, fines and incentives 2. Guidelines for the introduction and implementation of the recommended systems of charges, fines and incentives		Sept 2003 - Aug 2004	International consultant, national consultants
1.7-5 Organize workshops on the application of appropriate water pollution charges, fines and incentives, with participants from relevant ministries, municipalities and the private sector	1. Organize one basin-wide workshop	1. Organize eleven national workshops for all relevant stakeholders	1. Workshop implemented; appropriate workshop documentation broadly disseminated	1. Workshop implemented; appropriate workshop documentation broadly disseminated	Sept 2002 - June 2003	Sept 2003 - Feb 2005	International consultant, national consultants, private-sector representatives, government representatives, NGOs

PROJECT MANAGEMENT SHEET**Objective 1: Creation of sustainable ecological conditions for land use and water management****Output 1.8: Recommendations for the reduction of phosphorus in detergents**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
1.8-1 Review the existing legislation, policies and voluntary commitments	1. Prepare an inventory of legislation and policies in the particular DRB countries concerning the present status P-content in detergents 2. Carry out a review and comparative analysis regarding compliance with the relevant EU regulations and GPA, DRP and Black Sea Conventions on a country basis 3. Assess the quantities of production and consumption, respectively export, import of phosphate based detergents in comparison to more environment. friendly forms		1.-2. Comparative analysis regarding the legislation and policies in the particular DRB countries and the compliance with the relevant EU regulations and GPA, DRP and Black Sea Conventions on a country basis 3. Assessment report on quantities of production and consumption, respectively export, import of phosphate based detergents in comparison to more environment friendly forms		Mar 2002 - Dec 2002		ICPDR/EMIS EG, international consultant, national consultants, representatives of producers and consumers, NGOs
1.8-2 Develop recommendations for phosphorus reduction in detergents in line with EU regulations and commonly agreed international standards	1. Formulate on the basis of activity 1.8.1 recommendations on phosphate phase out plans that may include product standards, ISO certificate, ecolabeling, voluntary agreements etc, as appropriate		1. Country-specific recommendations for a phased conversion to lower P contents in detergents (converting to more environment-friendly detergents)		Aug 2002 - June 2003		
1.8-3 Develop proposals for enforcement and compliance (economic, financial incentives)	1. Carry out consultations with producers to identify opportunities for a phased conversion to lower P contents in detergents 2. Identify main barriers to implementing measures proposed in activity 1.8-2, and propose measures to lower the identified barriers		1. Possibilities for the introduction and enforcement of a phased conversion to lower P contents in detergents identified 2.. Barriers for a phased conversion to lower P contents in detergents identified and appropriate measures for enforcement and compliance proposed		Aug 2002 - June 2003		
1.8-4 Organize a basin-wide workshop dealing with the implementation of recommendations at national level	1. Prepare Workshop	1. Organize one workshop dealing with the implementation of recommendations at national level	1. Documentation for workshop prepared	1. Workshop report, comprehensive documentation of workshop results		Mar 2006	ICPDR/EMIS EG, International consultant, national consultants (experts)
1.8-5 Monitor and evaluate results		1. Perform periodic monitoring and evaluation of implementation / realization 2. Follow-up implementation of recommendations at national level concerning government initiatives and response from private sector (producers, importers, sellers)		1. Periodic monitoring and evaluation reports 2. Analysis report on follow-up actions and effects on water quality and environment		Sept 2003 - Aug 2006	ICPDR/EMIS EG, international consultant, national consultants,

PROJECT MANAGEMENT SHEET

Objective 2: Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the DRB

Output 2.1: Setting up of “Inter-ministerial Committees” for development, implementation and follow-up of national policies legislation and projects for nutrient reduction and pollution control

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
2.1-1 Evaluate existing national structures for coordination of water management and water pollution control (follow up action on report on “Existing and planned inter-ministerial coordination mechanisms relating to pollution control and nutrient reduction”)	1. Analysis of existing inter-ministerial structures and mechanisms 2. Analysis of activities/competencies of existing structures		1.-2. Analysis report		Jan 2002 - Mar 2002		ICPDR; International Consultant with support from national level
2.1-2 In cooperation with national governments, propose adequate structures, including technical, administrative and financial departments to coordinate the review and implementation of policies, legislation and projects for nutrient reduction and pollution control	1. Establishing close cooperation with existing structures 2. Based on analysis, prepare proposal for new structures		1.- 2. Proposal for new structures or for improvement of existing structures		Jan 2002 - June 2002		
2.1-3 Assist Governments in setting up national “Inter-ministerial Committees” and provide initial guidance for the implementation of GEF project components	1. Setting up of relevant contacts 2. Initial support for committees for involvement in implementation of relevant project components		1.-2. Operational Inter-ministerial Committees		Jan 2002 - Feb 2003		

PROJECT MANAGEMENT SHEET**Objective 2: Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the DRB****Output 2.2: Development of operational tools for monitoring, laboratory and information management with particular attention to nutrients and toxic substances**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
2.2-1 Harmonize water quality standards and quality assurance for nutrients and toxic substances	1. Develop water quality classification schemes for the Danube, reflecting EU WFD procedures and List of Priority Substances; 2. Improve basin-wide AQC program with respect to the TNMN/phase II list of determinants (investment for equipment 87000 USD)	1. Finalize classification schemes 2. Implement AQC program	1. Proposal for water quality classification system for the Danube Basin; 2. Proposal for implementation of AQC program	1. Finalized and agreed water quality classification system 2. AQC program applied basin-wide	Jan 2002 - June 2003	Sept 2003 - Aug 2006	MLIM; ICPDR Secretariat support
2.2-2 Creating of a database and thematic maps for emission inventories for point and non point sources of pollution (municipal, industrial and agricultural hot spots) including P and N and develop monitoring system to control environmental impact	1. Assist in developing a data base for point and non point sources of pollution 2. Assist in developing a monitoring system to control environmental impact 3. Revise 'hot spot' inventory	1. Assist in creating a database and thematic maps for emission inventories for point and non point sources of pollution (municipal, industrial and agricultural "hot spots") including phosphorus and nitrogen 2. Apply monitoring system to control environmental impact	1. Proposal of structure and indicators for a data base for point and non point sources of pollution 2. Proposal of structure for a monitoring system to control environmental impact 3. Updated emission inventory of point sources and non point sources	1.-2. Availability of a basin-wide data base and emission inventory for point and non-point sources of nitrogen and phosphorus	Jan 2002 - June 2003	Sept 2003 - Aug 2006	EMIS ; ICPDR Secretariat support
2.2-3 Optimize TNMN and identify sources and amounts of transboundary pollution for substances on the list of EU priority substances	1. Prepare inventory for point and non-point sources of EU WFD priority substances 2. Include EU priority substances in TNMN 3. Evaluate loads 4. Improve and further develop DWQM and MONERIS	1. Review and update assessment 2. Optimize TNMN with regard to the list of EU priority substances 3. Improve load evaluation procedures 4. Apply DWQM and MONERIS for improved load assessment in the DRB	1. Evaluation reports available 2. Manual developed and implemented 3. Figures of annual loads in the Danube Basin available 4. Improved tool for transboundary pollution assessment available	1. Updated evaluation reports available 2. Enhanced knowledge on the water quality situation in the Danube 3. Improved quality of load figures suitable for trend analysis available 4. Enhanced tools for evaluation of emission and water quality situation in the Danube River Basin	Jan 2002 - June 2003	Sept 2003 - Aug 2006	EMIS ; ICPDR Secretariat support MLIM / EMIS ; ICPDR secretariat support
2.2-4 Organize 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	1. Organize two workshops for participants of relevant national ministries and institutions and the members of the MLIM/EG and EMIS/EG	1. Organize seven workshops for participants of relevant national ministries and institutions and the members of the MLIM/EG and EMIS/EG	1. Workshops implemented; appropriate documentation of workshop results disseminated	1. Workshops implemented; appropriate documentation of workshop results disseminated	Jan 2002 - June 2003	Sept 2003 - Aug 2006	

PROJECT MANAGEMENT SHEET**Objective 2: Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the DRB****Output 2.3: Improvement of procedures and tools for accidental emergency response with particular attention to transboundary emergency situations**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
2.3-1 Reinforce operational conditions in the national alert stations (PIACs) and geographical extension of the AEPWS in Bosnia & Herzegovina and the FR of Yugoslavia;	1. Review information flows at local and international level, design the implementation schedules for the extension of AEWS at the level of PIAC in FRY and BiH 2. Develop new sustainable communication solution for information exchange in emergency cases among the PIACs, ICPDR PS and other relevant bodies	1. Geographical extension of AEWS, setting up PIACs in BiH and FRY 2. Install, run operational tests and use the new communication software	1. Implementation schedule for PIAC setup in FRY and BiH 2. Communication software able to use both present satellite communication systems and cheap internet for the exchange of emergency Standard Forms translated into national languages	1. Operational PIACs in FRY and BiH 2. Upgraded AEWS international manual	Jan 2002 - June 2003	Sept 2003- Feb 2005	ICPDR AEPWS(EG) supported by sub-basin bodies/commissions such as Tisza initiative.
2.3-2 Complete the inventory presently available only for the upper Tisza river basin, and evaluate all high accidental risk spots in all countries in the Danube River Basin, in line with EU legislation, considering that similar accidental "hot spots" exist in many transition countries	1. Complete High Accidental Risk Spots Inventory in all Danube countries; review the risk evaluation criteria	1. Elaborate specific computerized methodology for the ARS classification, data retrieval, visualization and dissemination	1. Harmonized risk inventories, ranked risk spots at the level of sub-basins as well as the whole DRB based on evaluation of the risk	1. Computerized tool and application software for data manipulation and Accidental Risk Spots Classification	Jan 2002 - June 2003	Sept 2003- Feb 2005	
2.3-3 Design preventive measures, adjust national legislation and improve compliance with safety standards	1. Develop project concept and basic guidelines for accidental risk prevention	1. Assess safety of water endangering hazardous installations and draft immediate and long term preventive measures and action plans 2. Develop process, stress and environmental impact indicators 3. Define vulnerable areas and assess the need for contingency planning 4. Create pilot project proposal for the most vulnerable area	1. Basic guidelines for accident prevention and risk reduction in hazardous installations, immediate and long-term planning approaches	1. Industrial risk reduction plans in the most dangerous places; estimate of the national investments for the implementation of long term measures 2. Updated list of indicators developed 3.-4. Vulnerable areas defined and proposals for suitable pilot projects developed	Jan 2002- June 2003	Sept 2003-Feb 2005 Sept 2003-Feb 2006	
2.3-4 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	1. Develop project concept 2. Review the existing data, reports and operational regional hydraulic models 3. Identify suitable pilot area(s)	1. Update hydraulic data and parameters of the DBAM 2. Conduct test in pilot area	1. Project concept available 2. Manual developed and implemented 3. Project briefs and TORs for DBAM calibration in the selected pilot area(s)	1. Model operational	Jan 2002- June 2003	Sept 2003-Feb 2006	
2.3-5 Organize workshops to reinforce cooperation in accident and emergency/warning and development of preventive measures	1. Organize and carry out two workshops	1. Organize and carry out six training seminars / evaluation workshops to keep the high operational status of PIAC staff	1. Workshops implemented; appropriate documentation of workshop results disseminated	1. Improved knowledge and expertise, evaluation reports and recommendations	Jan 2002- June 2003	Sept 2003-Aug 2004	

PROJECT MANAGEMENT SHEET**Objective 2: Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the DRB****Output 2.4: Support for reinforcement of ICPDR Information System (DANUBIS)**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
2.4-1 Fully develop ICPDR Information System and ensure that it is used by its expert groups and other operational bodies	1. Ensure technical and financial support for DANUBIS extension (100000 USD for equipment) 2. Develop reporting obligations under DRPC 3. Ensure permanent monitoring of all information to fulfill the requirements of the expert group activities		1.-3. Fully operational ICPDR information system, with adequate access in the public area defined		Dec 2001-June 2003		ICPDR Secret. in cooperation with EGs
2.4-2 Link all Contracting Parties of the ICPDR and other participating countries to DANUBIS, which implies the development and implementation of national linkages and the establishment of operational units to communicate also in case of accidental emergency situations	1. Develop program for implementation and operation of national links to DANUBIS 2. Create operational units of AEWS and ensure national links to DANUBIS	1. Establish operational units at the national level linked to DANUBIS 2. Establish AEWS units linked to and suited to operate in DANUBIS	1. Country specific programme for linkage of national units to Danubis and transboundary cooperation of AEWS developed 2. Implementation schedule for linkage of AEWS units to DANUBIS developed	1. National units linked to DANUBIS in operation 2. National AEWS units linked to and suited to operating in DANUBIS	Dec 2001-June 2003	Sept 2003-Aug 2006 Sept 2003 - Feb 2006	ICPDR Secret. in cooperation with EGs and national level ICPDR Info Syst. in cooperation with AEPWS/EG and PIACS
2.4-3 Reinforce 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 program, respectively the work of the ICPDR and the GEF Project (communication, monitoring, public information, etc.)	1. Create interactive website to allow graphical analysis of the information	1. Ensure permanent updating of the background databases and basin-wide maintenance of the system	1. Manual developed and implemented	1. Web site with up-to-date information available	Dec 2001-June 2003	Sept 2003-Aug 2006	ICPDR Secretariat in cooperation with EGs and consultant (subcontract)
2.4-4 Launch an extensive training program and organize a series of workshops at different user levels and in different regions of the Danube River Basin in order to train and assist future users in the best use of the tools made available by the system	1. Organize two training workshops	1. Organize five training workshops	1. Improved knowledge in the use of the tools made available by the system	1. Fully developed operational national units; improved knowledge in the use of the tools made available by the system	Dec 2001-June 2003	Sept 2003-Aug 2006	Trainers from ICPDR EGs and external consultants

PROJECT MANAGEMENT SHEET**Objective 2: Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the DRB****Output 2.5: Implementation of the “Memorandum of Understanding” between the ICPDR and the ICPBS relating to discharges of nutrients and hazardous substances to the Black Sea**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
2.5-1 Develop joint work program for MOU implementation	1. Develop joint work program for MOU implementation	1. Implement joint working program and evaluate results	1. Joint working programme existing	1. Working Programme applied	Dec 2001-June 2003	Sept 2003-Aug 2006	Joint DANUBE Black Sea Working Group
2.5-2 Define and agree on status indicators to monitor nutrient transport from the Danube and change of ecosystems in the Black Sea	1. Define and agree on status indicators to monitor nutrient transport from the Danube and change of ecosystems in the Black Sea	1. Evaluate results and take follow-up actions	1. Indicators defined and agreed upon	1. Final indicators defined and agreed upon	Dec 2001-June 2003	Sept 2003-Aug 2006	
2.5-3 Define and establish reporting procedures	1. Define and establish reporting procedures	1. Evaluate results and prepare appropriate reports	1. Reporting procedure defined and agreed upon	1. Reports in line with procedure available in time	Dec 2001-June 2003	Sept 2003-Aug 2006	
2.5-4 Reestablish and organize regular meeting of the Joint Danube-Black Sea working groups to evaluate progress of nutrient reduction and recovery of Black Sea ecosystems	1. Organize regular meetings of the Joint Working Group	1. Organize regular meetings of the Joint Working Group	1. Joint actions discussed and approved	1. Joint actions discussed and approved	Dec 2001-June 2003	Sept 2003-Aug 2006	
2.5-5 Organize joint Danube Black Sea meeting to approve and sign MOU	1. Organize meeting at ministerial level		1. Work programme approved		Dec 2002		

PROJECT MANAGEMENT SHEET**Objective 2: Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the DRB****Output 2.6: Training and consultation workshops for resource management and pollution control with particular attention to nutrient reduction and transboundary issues**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
2.6-1 Policy development and legal frame for transboundary cooperation in nutrient reduction and control of toxic substances <i>(in the context of bilateral and multilateral agreements)</i>	1. Assess training needs on national and sub-basin levels and develop training program 2. Identify organization (subcontractor) to conduct training courses 3. Organize regional workshops to train the trainers	1. Organize training and consultation workshops at the regional and national levels	1.-3. Training program existing, specific training material developed, target groups identified and national staff (trainers) trained	1. Training organized, specific knowledge disseminated and applied in national policy development	Mar 2002- June 2003	Sept 2003-Aug 2006	GEF Project Management, ICPDR EGs; governments and international and national consultants
2.6-2 Technical and legal issues of river basin planning and transboundary water resources management in line with the new EU Water Framework Directive with a view to ensuring effective nutrient reduction	1. Assess training needs and develop training program 2. Identify organization (subcontractor) to conduct training courses 3. Organize regional workshops to train the trainers	1. Organize training and consultation workshops in the frame of River Basin Management Pilot projects (case study training)	1.-3. Training program existing, training material developed, target groups identified and national staff (trainers) trained	1. Training organized, specific knowledge disseminated and applied in River Basin Planning and implementation of EU WFD	Mar 2002- June 2003	Sept 2003-Aug 2006	
2.6-3 Technical and legal issues (land reclamation) of wetland restoration and management to assure nutrient removal	1. Assess training needs and develop training program 2. Identify organization (subcontractor) to conduct training courses	1. Organize training and consultation workshops in the frame of wetland restoration projects (case study training)	1.-2. Training program existing, specific material for training developed and target groups identified	1. Training organized, specific knowledge disseminated and applied for wetland restoration (improving nutrient reduction capacities)	Mar 2002- June 2003	Sept 2003-Aug 2006	
2.6-4 Innovative technologies for municipal and industrial waste water treatment; use of sewage and animal waste as fertilizer to reduce nutrient emissions	1. Assess training needs and develop training program 2. Identify organization (subcontractor) to conduct training courses	1. Organize training workshops and develop recommendations during training program for application of innovative technologies	1.-2. Training program existing, specific material for training developed and target groups identified	1. Training organized, specific knowledge disseminated and applied for introduction of innovative technologies	Mar 2002- June 2003	Sept 2003-Aug 2006	
2.6-5 Technical and legal issues of management and control of use of fertilizers and manure	1. Assess training needs and develop training program 2. Identify organization (subcontractor) to conduct training courses	1. Organize training workshops and develop recommendations during training program for use of agrochemicals and best agricultural practices	1.-2. Training program existing, specific material for training developed and target groups identified	1. Training organized, specific knowledge disseminated and applied for introduction of best agricultural practices and use of agrochemicals	Mar 2002- June 2003	Sept 2003-Aug 2006	
2.6-6 Preparation of documents for nutrient reduction projects with international co-funding and application of GEF criteria concerning "incremental cost" calculation	1. Assess training needs and develop training program 2. Identify organization (subcontractor) to conduct training courses	1. Organize training workshops and develop formats and project files for specific type of projects for international funding	1.-2. Training program existing, specific material for training developed and target groups identified	1. Training organized, specific knowledge disseminated and documents for international co-funding for nutrient reduction projects prepared at national level	Mar 2002- June 2003	Sept 2003-Aug 2006	
2.6-7 Training courses for NGO activities	1. Assess training needs and develop training program 2. Identify organization (subcontractor) to conduct training courses	1. Organize training workshops for NGO cooperation	1.-2. Training program existing, specific material for training developed and target groups identified	1. Training organized and cooperation with NGOs improved	Mar 2002- June 2003	Sept 2003-Aug 2006	

PROJECT MANAGEMENT SHEET**Objective 3: Strengthening of public involvement in environmental decision making and reinforcement of community actions for pollution reduction and protection of ecosystems****Output 3.1: Support for institutional development of NGOs and community involvement**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
3.1-1 Provide support for the DEF Secretariat for operation, communication and information management	1. Provide support for operational cost of the DEF Secretariat (personnel, office, maintenance, communication, operational expenditures and DEF meetings)	1. Provide support for operational cost of the DEF Secretariat (personnel, office, maintenance, communication, operational expenditures and DEF meetings)	1. The DEF Secretariat is fully operational and able to support the national NGOs in administrative and organizational matters	1. The DEF Secretariat is fully operational and able to support the national NGOs in administrative and organizational matters	Dec 2001- Aug 2003	Sept 2003 - Aug 2006	DEF Secretariat in cooperation with GEF Project Management
3.1-2 Organize consultation meetings and training workshops on nutrients and toxic substances issues	1. Identify training needs and develop training programs for specific target groups 2. Organize one training workshop	1. Organize training workshops (for course content and financing see 2.6.2-6)	1. Training programs identified; materials prepared 2. Training workshop conducted; appropriate documentation of results broadly disseminated	1. Training workshops conducted; appropriate documentation of results broadly disseminated	Dec 2001- Aug 2003	Sept 2003 - Aug 2006	DEF Secretariat. in cooperation with ICPDR and educational institutions (REC/WWF/ UNIDO)
3.1-3 Publish special NGO publications in national languages on nutrients and toxic substances	1. Identify and prepare materials for publication	1. Edit and publish appropriate materials	1. Appropriate materials prepared for publication	1. Appropriate publications	Dec 2001- Aug 2003	Sept 2003 - Aug 2006	DEF Secretariat in cooperation with ICPDR
3.1-4 Organize training courses for the development of NGO activities and cooperation in national projects (nutrient reduction)	1. Design training programs and materials responding to the identified needs 2. Organize one training course	1. Organize training courses (for course content and financing see 2.6.7)	1. Training programs and appropriate materials prepared 2. Training course conducted; appropriate documentation broadly disseminated	1. Training courses conducted; cooperation between NGO is strengthened	Dec 2001- Aug 2003	Sept 2003 - Aug 2006	DEF Secretariat in cooperation with educational institutions (REC/WWF/UNIDO)

* one regional training workshop will be organized for both activities

PROJECT MANAGEMENT SHEET**Objective 3: Strengthening of public involvement in environmental decision making and reinforcement of community actions for pollution reduction and protection of ecosystems****Output 3.2: Applied awareness raising through community based “Small Grant Program”**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
3.2-1 Identify NGO grants programme and projects for reduction of nutrients and toxic substances and mitigation of transboundary pollution	1. Prepare and design the structure of the grant program (refer to the ICPDR Joint Action Program for identifying the grants topics; define the mechanisms of the process; define the categories of grants; define the procedures for grants implementation, reporting and evaluation; identify the selection criteria for grants; define the selection process for each of the granting programs)		1. Structure of the cooperative grants program on local / national / region-wide level; (major topics; guidelines, procedures, mechanisms for implementation; working plans; selection process and criteria)		Dec 2001 - June 2003		REC in cooperation with ICPDR and DEF under the supervision of the GEF Project Management
3.2-2 Design and implement a region-wide granting program focusing on demonstration activities and awareness campaigns for sustainable land management and pollution reduction (nutrients) in the agricultural, industrial and municipal sectors	1. Call for proposals for demonstration activities / campaigns / projects 2. Organize a training workshop for awareness raising 3. Evaluate proposals for demonstration activities / campaigns / projects and select adequate applications	1. Implement demonstration activities / campaigns / projects	1. List of received applications for demonstration activities / campaigns / projects 2. Training workshop implemented; appropriate documentation of results broadly disseminated 3. List of selected applications for demonstration activities / campaigns / projects	1. Implementation of cooperative projects awarded through grants from the grants programme	Dec 2001 - June 2003	Sept 2003 - June 2006	
3.2-3 Design and implement two granting programs at the local and national level in terms of small scale community based investment projects for pollution control, rehabilitation of wetlands, best agricultural practices, reduction of use of fertilizers, manure management, improvement of village sewer systems, etc.	1. Call for local grants applications 2. Evaluate the proposed small grants projects received and select adequate applications	1. Implement Small Grants Projects through national NGOs	1. List of applications for grants 2. List of evaluated and selected applications for grants	1. National projects awarded through the "Small Grant Program" implemented 2. Enhanced public awareness through the "Small Grant Program"	Dec 2001 - June 2003	Sept 2003 - June 2006	

PROJECT MANAGEMENT SHEET**Objective 3: Strengthening of public involvement in environmental decision making and reinforcement of community actions for pollution reduction and protection of ecosystems****Output 3.3: Organization of public awareness raising campaigns on nutrient reduction and control of toxic substances**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
3.3-1 Conceptualize and implement public awareness raising campaigns on nutrients issues	1. Develop concept for public awareness raising campaigns on nutrients issues (identify stakeholder and social target groups ; identify info channels for communications aimed at raising public awareness; identify mechanisms raising public awareness on nutrient reduction; identify training needs for public organizations in communication related issues)	1. Elaborate public awareness action plan 2. Organize seven training courses for facilitators and trainers on public awareness raising and management (see also general training for NGOs) 3. Conduct public awareness raising campaigns	1. Public Awareness Action Plan and campaign concept	1. Action Plan implemented 2. Trainers and facilitators trained for organizing awareness raising campaigns 3. Public awareness is increased through conduct of national workshops (special attention to accidental pollution and prevention)	Mar 2002-June 2003	Sept 2003-June 2006	ICPDR (subcontract) in cooperation with relevant institutions (DEF, REC, WWF, national NGOs etc)
3.3-2 Develop and produce materials for public press and mass media on nutrients and toxics	1. Prepare materials to inform the public on environmental protection and nutrient reduction 2. Publish information materials (journals, posters, leaflets, articles in mass media, www- info, etc) - investment 100000 USD	1. Prepare materials to inform the public on environmental protection and nutrient reduction 2. Publish information materials (journals, posters, articles in mass media, web info, etc) 3. Monitor information dissemination efficiency	1.-2. Publications in public press and mass media (journals, posters, leaflets, articles in mass media, www- info, TV)	1.-2. Publications in public press and mass media (journals, posters, leaflets, articles in mass media, www- info, TV) 3. Processed feedback and enhanced information and management	Mar 2002-June 2003	Sept 2003-June 2006	ICPDR (subcontract) in cooperation with relevant institutions (DEF, REC, WWF, national NGOs etc)
3.3-3 Support publication of scientific documents and regular journals or special issues on water management and pollution reduction with particular attention to nutrient issues and Black Sea recovery	1. Analyze information needs and publish (articles in) regular journals or special issues to disseminate information in the DRB and to the international public in English language 2. Publish (articles in) regular journals or special issues which can be made available also in national languages	1. Analyze information needs and publish (articles in) regular journals or special issues to disseminate information in the DRB and to the international public in English language 2. Publish (articles in) regular journals or special issues which can be made available also in national languages	1.-2. (Articles in) regular journals or special issues to disseminate information in the DRB and to the international public in English and /or national languages	1.-2. (Articles in) regular journals or special issues to disseminate information in the DRB and to the international public in English and /or national languages	Mar 2002-June 2003	Sept 2003-June 2006	ICPDR in cooperation with DEF and national organizations

PROJECT MANAGEMENT SHEET**Objective 4: Reinforcement of monitoring, evaluation and information systems to control transboundary pollution, and to reduce nutrients and harmful substances****Output 4.1: Development of indicators for project monitoring and impact evaluation**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
4.1-1 · Establish a system for M&E in using specific indicators for process (legal and institutional frame), stress reduction (emissions, removal of hot spots) and environmental status (water quality, recovery of ecosystems) to demonstrate results of program and project implementation and to evaluate environmental effects of implementation of policies and regulations (nutrient reduction)	1. Develop and operationalize a monitoring and evaluation system to follow-up project and programme implementation 2. Develop impact indicators (process, stress reduction, environmental status) to evaluate environmental effects of policy and programme implementation	1. Evaluate practicability and efficiency of the proposed monitoring and evaluation system 3. Apply indicators 3. Demonstrate effects of project implementation	1. List of indicators for monitoring and evaluation of process, stress and environmental status	1. Project progress measured and analyzed by means of the proposed M&E system 2. Information on project implementation progress	Mar 2002 - June 2003	Sept 2003 - Feb 2006	ICPDR MLIM/EMIS EG, international and national consultants
4.1-2 · Review in the frame of the ICPDR Trans National Monitoring Program (TNMN) specific indicators (e.g. bio-indicators) for emission control and water quality monitoring with particular attention to nutrients and toxic substances	1. Review indicators for emission control and water quality monitoring with particular attention to nutrients and toxic substances	1. Update indicators for emission control and for water quality monitoring and apply in TNMN	1. Proposals for up-dating of indicators available	1a) Options for enhancing the M&E system 1b) Improved information on emissions	Mar 2002 - June 2003	Sept 2003 - Feb 2006	
4.1-3 · Establish monitoring system in using specific progress indicators (benchmarks) for project implementation (GEF- projects activities)	1. Develop progress indicators for the monitoring of project implementation (GEF- supported nutrient reduction projects)	1. Establish monitoring system in using specific progress indicators (benchmarks) for project implementation	1. Proposals of progress indicators finalized	1. Progress monitoring system established and indicators applied	Mar 2002 - June 2003	Sept 2003 - Feb 2006	
4.1-4 · Implement ecological status assessment in line with requirements of EU WFD using specific bio-indicators to demonstrate effects of pollution /nutrient reduction in water-bodies and ecosystems	1. Analyze ecological characteristics and development of bio-indicators 2. Identify methods on how to assess the ecological status in line with EU WFD 3. Organize a workshop with participants from relevant ministries and institutions regarding the development of process, stress reduction and environmental status indicators	1. Implement ecological status assessment using specific bio-indicators to demonstrate effects of pollution/nutrient reduction 2. Organize a workshop with participants from relevant ministries and institutions regarding adequate application of process, stress reduction and environmental status indicators	1. Proposal for monitoring system and indicators developed 2. Methodology for assessment of ecological status and indicators developed 3. Workshop implemented; appropriate workshop documentation broadly disseminated	1. Monitoring system established to demonstrate pollution/nutrient reduction in the DRB and the Black Sea 2. Methodology applied in the frame of TNMN to demonstrate pollution/nutrient reduction 3. Workshop implemented; appropriate workshop documentation broadly disseminated	Mar 2002 - June 2003	Sept 2003 - Feb 2006	
4.1-5 Prepare a manual on the use and application of monitoring and impact indicators.		1. Develop a manual on the use and application of indicators 2. Edit and produce manuals in national languages for application at national levels		1.-2. Manuals for M&E and application of indicators existing in national languages		Sept 2003 - Feb 2006	

Note: M&E = monitoring and evaluation

PROJECT MANAGEMENT SHEET**Objective 4: Reinforcement of monitoring, evaluation and information systems to control transboundary pollution, and to reduce nutrients and harmful substances****Output 4.2: Analysis of sediments in the Iron Gate reservoir and impact assessment of heavy metals and other dangerous substances on the Danube and the Black Sea ecosystems**

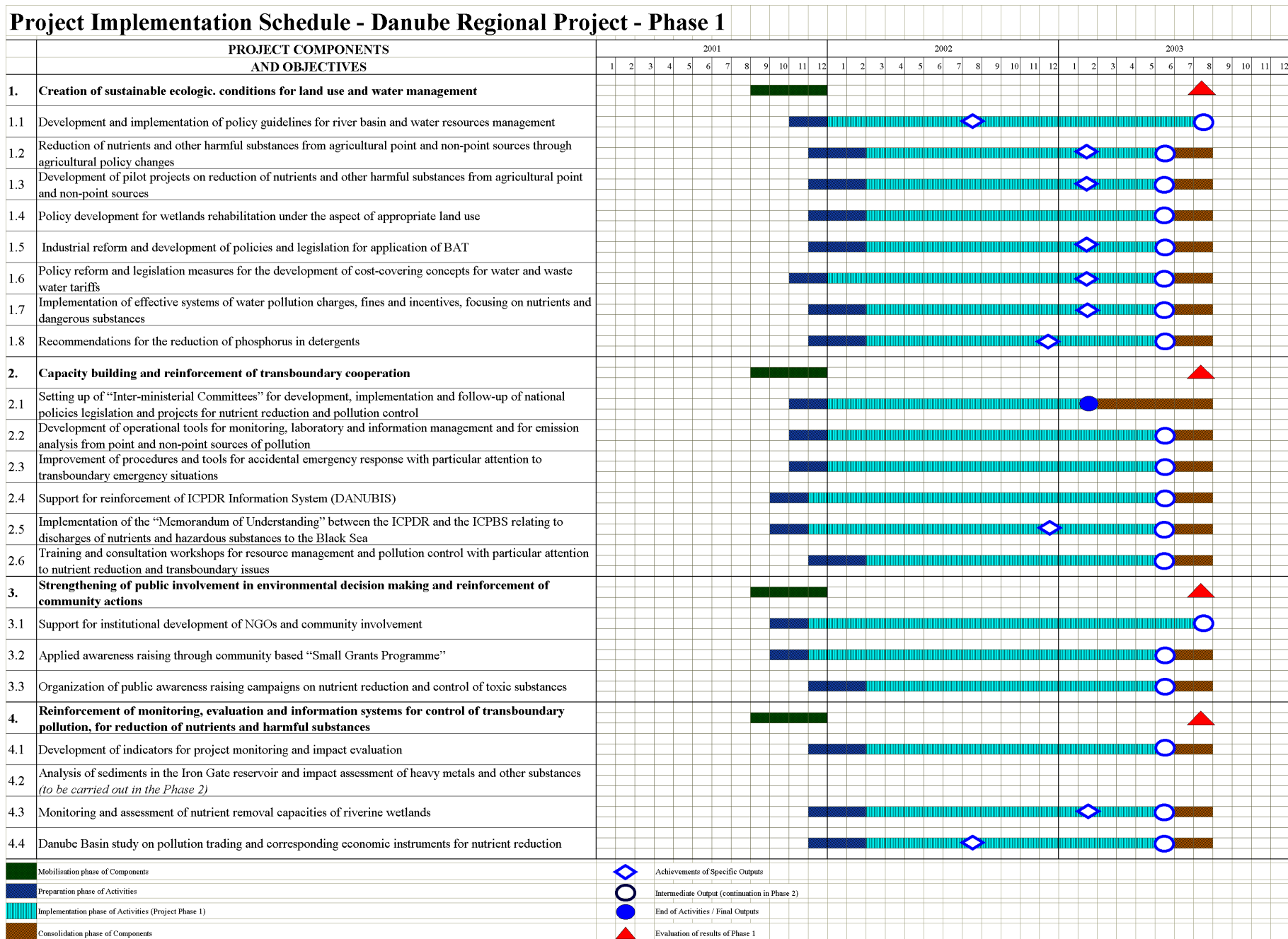
Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
4.2-1 Collect and review the existing data and information on the present situation (especially heavy metals, nutrients, silicates and other dangerous substances)		1. Collect and review the existing data and information on the present situation		Report on the contents of heavy metals, nutrients, silicates and other dangerous substances		Sept 2003 - Feb 2004	ICPDR and ICPBS expert groups (MLIM, EMIS + ?) as well as CPs from RO, YU and BG
4.2-2 Assess the main types and quantities of dangerous substances		1. Assess the main types and quantities of dangerous substances		List and assessed quantities of dangerous substances		Sept 2003 - Feb 2004	
4.2-3 Assess the potential environmental impacts on the Danube and the Black Sea		1. Assess the potential environmental impacts on the Danube and the Black Sea		Report on the environmental impacts on the Danube and the Black Sea		Sept 2003 - Feb 2004	
4.2-4 Forecast the development for a period of 20 years		1. Forecast the development for a period of 20 years;		Draft forecast		Sept 2003 - Feb 2004	
4.2-5 Discuss possible precautionary and rehabilitation measures for the Danube and the Black Sea		1. Discuss possible precautionary and rehabilitation measures for the Danube and the Black Sea;		List of recommendations containing adequate measures		Mar 2004 - Aug 2004	
4.2-6 Prepare recommendations for dealing with this problem in the forthcoming decade (measures to be included in the Joint Action Programme of the ICPDR)		1. Prepare recommendations how to deal with this problem in the forthcoming decade		List of recommended measures for the JAP		Mar 2004 - Aug 2004	
4.2-7 Propose further monitoring programmes		4.2-7 Propose further monitoring programmss		Specific monitoring programme		Mar 2004 - Aug 2004	

PROJECT MANAGEMENT SHEET**Objective 4: Reinforcement of monitoring, evaluation and information systems to control transboundary pollution, and to reduce nutrients and harmful substances****Output 4.3: Monitoring and assessment of nutrient removal capacities of riverine wetlands**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
4.3-1 Classify the wetlands and floodplains in the DRB by category and define potential observation sites	1. Identify existing or planned/potential case studies and existing monitoring data 2. Prepare overall assessment of wetlands (quality and type) in DRB		1. List of potential case study sites (restoration projects) and list of data available 2. Assessment report on existing wetlands (by quality and types) in DRB (incl. map)		Mar 2002- Feb 2003		ICPDR expert groups ECO, EMIS, MLIM; WWF, Ramsar Convention, NGOs (DEF); linkages to other similar projects producing useful data, linkage to the 5th EU action program
4.3-2 Define the methodological approach for assessment of nutrient removal capacities of wetlands and flood plains	1. Organize international expert workshop to review existing methodologies and to decide on approach in DRB (on pre-study); assess possibilities to make use of data collected in other projects 2. Identify other harmful substances and their potential to be removed /stored in restored wetlands 3. Propose observation program (case studies) in the DRB to be followed for the 20 years observation programme		1.-3. Report on agreed methodologies, pre-study results and chosen case study observation sites		1. Nov 2002 2. Mar 2003 - June 2003		
4.3-3 Implement the observation program to assess the annual removal capacity (tons of N and P and of harmful substances per ha) for each category of wetland for a period of 20 years (3 years covered by present project)		1. Organize data collection at chosen sites and start observation programme		1. First part of observation programme completed (data collected and evaluated)		Sept 2003 - Feb 2006	
4.3-4 Assess possibilities for follow-up financing of observation program after 2005		1. Identify and propose possibilities for follow-up financing of observation program after 2005		1. Follow-up funding identified		Sept 2005	
4.3-5 Evaluate the aggregated removal capacities/potentials of nutrient and other harmful substances for the wetlands proposed for restoration (DPRP), taking into account the results of other investment and observation pro-grams (incl. Danube Partnership, "Lower Danube Green Corridor")		1. Check the range of removal capacities, based on new data; confirm/determine existing baseline information on nutrient removal capacities		1. Revised and refined baseline for reduction of nutrients and other harmful substances in wetlands established		Dec 2003 - June 2006	
4.3-6 Develop optimized wetland management programs to assure ecologically acceptable nutrient removal in the Danube River Basin		1. Assess possibilities to improve wetland management securing stronger removal of nutrients and harmful substances while maintaining/ improving the ecological quality; ensure connection with GEF component 1.4 2. Describe optimized management of selected wetlands and provide guidance for taking account of optimum nutrient removal related to ecological conditions		1.-2. Guidance for an optimized new wetland management program and for selected wetlands (including map)		Sept 2005 - Feb 2006	
4.3-7 Prepare relevant regulations for wetland restoration to assure implementation of projects with ecologically acceptable removal capacities for nutrients and other harmful substances.		1. Prepare Danube wetlands restoration and management agreement with action plan for endorsement by DRB governments		1. Danube wetlands agreement / action plan with governmental commitments		Mar 2006 - June 2006	

PROJECT MANAGEMENT SHEET**Objective 4: Reinforcement of monitoring, evaluation and information systems to control transboundary pollution, and to reduce nutrients and harmful substances****Output 4.4: Danube Basin study on pollution trading and corresponding economic instruments for nutrient reduction**

Activities	Implementation Steps		Specific Outputs		Timeframe		Implementation Arrangements
	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2	
4.4.-1 Review existing concepts of successful "pollutant trading / auctions" or corresponding economic instruments in the water and air pollution sector in the US, Australia and Europe	1. Collect and review information regarding existing concepts of pollution trading or corresponding economic instruments; carry out a comparative analysis		1. Summary report on international experiences in "pollution trading" or corresponding economic instruments		Mar 2002-Aug 2002		ICPDR S/EG, international consultant
4.4-2 Study the principle possibilities to establish the idea of "pollution trading" or corresponding economic instruments for nutrient reduction under the EU policies and directives in the Danube River Basin	1. Identify principle possibilities to establish "pollution trading" or corresponding economic instruments for nutrient reduction in the DRB 2. Review and analyze the relevant legislation on national and international level 3. Identify contradictions and basic obstacles 4. Identify legal and policy changes required		1. Report on principal possibilities to establish appropriate economic instruments for nutrient reduction in the DRB 2. Report on legal analysis focusing on legal texts to be changed 3.-4. "Draft" of legal and policy changes required		Sept 2002-June 2003		International consultant
4.4-3 Assess the main problems / obstacles for "pollution trading" and corresponding economic instruments in the DRB and the interest of the particular DRB countries for implementation	1. Study the needs for "pollution trading" and corresponding economic instruments on a country level 2. Elaborate principles for the definition and determination of country -specific "discharge quotas" 3. Identify main obstacles to implementation in the particular countries 4. Develop criteria for potential "donors" and "receivers"		1.-2. Report on "pollution trading" needs, definition of discharge quotas and general rules for economic assessment of the relevant pollution on a country basis 3.-4. Assessment of general viability of the "pollution trading" concept in the DRB and recommendations to the ICPDR		Sept 2002-June 2003		ICPDR / EU, EMIS EG, MLIM EG, international consultant, national consultants
4.4-4 Present the basic findings and discuss the results with all stakeholder groups on a DRB wide workshop	1. Organize a workshop for all stakeholder groups	1. Elaborate comprehensive working papers addressing the main stakeholder groups (administration, industry and general public); 2. Assure intensive discussion and broad dissemination of information	1. Report on workshop results; final conclusions regarding the feasibility of the "pollution trading" concept in the DRB countries	1. Comprehensive information papers disseminated to all relevant stakeholder groups		Sept 2003-Aug 2004	ICPDR secretariat International consultant, national consultants, national and international NGOs (DEF)



G. Monitoring and Evaluation

Inception Report and Work Plans

The inception report will be prepared by the Project Team at an early stage of the project implementation (preparatory phase) and represents the finalization of the project design. It will include a general work plan and the first detailed annual work plan. To assure a broad consensus of all stakeholders it is proposed to organize an Inception Workshop at the beginning of the Project to elaborate the Work Plan and to define the modalities of project implementation.

Further on, the project team, in cooperation with the ICPDR Expert Groups will prepare annually the work plans, comprising the provision of inputs, activities and expected results as well as time schedules and persons/institutions responsible for inputs and results.

Mid-term and final project evaluation procedure

- a) Project objectives, outputs and emerging issues will be regularly reviewed and evaluated annually by the Project Steering Committee, respectively the ICPDR Steering Group, enlarged by representatives from the UN organizations and other parties concerned. The project will be subject to the various evaluation and review mechanisms of the UNDP, including the Annual Programme / Project Report (APR), the Tri-Partite Review (TPR), and an external Evaluation and Final Report prior to termination of the 1st phase of the Project. The project will also participate in the annual Project Implementation Review (PIR) exercise of the GEF.
- b) In addition, particular emphasis will be given to GEF policy with regard to monitoring and evaluation in the context of GEF IW projects. The standard GEF indicators for monitoring and evaluation purposes consist of Process Indicators, Stress Reduction Indicators, and Environmental Status Indicators.
- c) Supplementary to the monitoring and evaluation (M&E) described above, monitoring of the project will be undertaken by a contracted supervision firm, and by a balanced group of experts selected by UNDP. The extensive experience by UNDP in monitoring large programs will be drawn upon to ensure that the project activities are carefully documented. There will be two evaluation periods, one at mid-term and another at the end of the Program.
- d) The mid-term review will focus on relevance, performance (effectiveness, efficiency and timeliness), issues requiring decisions and actions and initial lessons learned about project design, implementation and management. The final evaluation will focus on similar issues as the mid-term evaluation but will also look at early signs of potential impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. Recommendations on follow-up activities will also be provided.
- e) Approximately 1% of project funds will be allocated for the M&E to be undertaken by independent experts and UNDP. The evaluation process will be carried out according to standard procedures and formats in line with GEF requirements. The process will include:
 - (i) the collection and analysis of data on the Program and its various projects including an overall assessment, the achievement of clearly defined objectives and performance with verifiable indicators, annual reviews, and
 - (ii) the description and analysis of stakeholder participation in the Program design and implementation. Explanations will be given on how the monitoring and evaluation results will be used to adjust the implementation of the Program if required and to replicate the results throughout the region. As far as possible, the M&E process will be measured according to a detailed work-plan and a Logical Framework Analysis approach developed and tabulated in the project document.
- f) The project design includes the communication of all project findings to concerned and interested parties. In this context, and to ensure maximum transparency, all results of M&E performance review, etc. will be communicated to all stakeholders and interested parties of the public.

Monitoring and Evaluation Scheme

Activity / Report	Year 1*	Year 2				Year 3		
	4	1	2	3	4	1	2	3
Inception Report and Work Plan	X							
Annual Programme Report					X			
Tripartite Review and Report							X	
Project Implementation Review							X	
Mid-term Evaluation					X			
Final Evaluation								X
Terminal Report								X
Audit								X

* The Project will start in September and therefore only last quarter of the first year is considered for project activities.

J. Annexes to the Project Brief

- ANNEX 1 Incremental Cost Analysis and Matrix
– Project Phase 1**
- ANNEX 2 Logical Frame Matrix – Phase 1 and Phase 2
(Objectives, Results, Activities)**
- ANNEX 3 STAP Review (UNDP) and Response**
- ANNEX 4 Project Budget – Project Phase 1**
- ANNEX 5 Project Implementation Schedule
– Project Phase 1**
- ANNEX 6 Assessment of Nutrient Emissions and Loads
Discharged into the Black Sea**
- ANNEX 7 Thematic Maps**
- ANNEX 8 Summary Reports on National Contributions in
Support of the Project Brief**
- ANNEX 9 Danube / Black Sea Basin Strategic Partnership**
- ANNEX 10 Relevance of the GPA for Land-Based Sources of
Pollution in the frame of the DRPC**
- ANNEX 11 Causes and Effects of Eutrophication in the
Black Sea**
- ANNEX 12 Evaluation of the UNDP/GEF Pollution Reduction
Programme**
- ANNEX 13 Endorsement Letters**