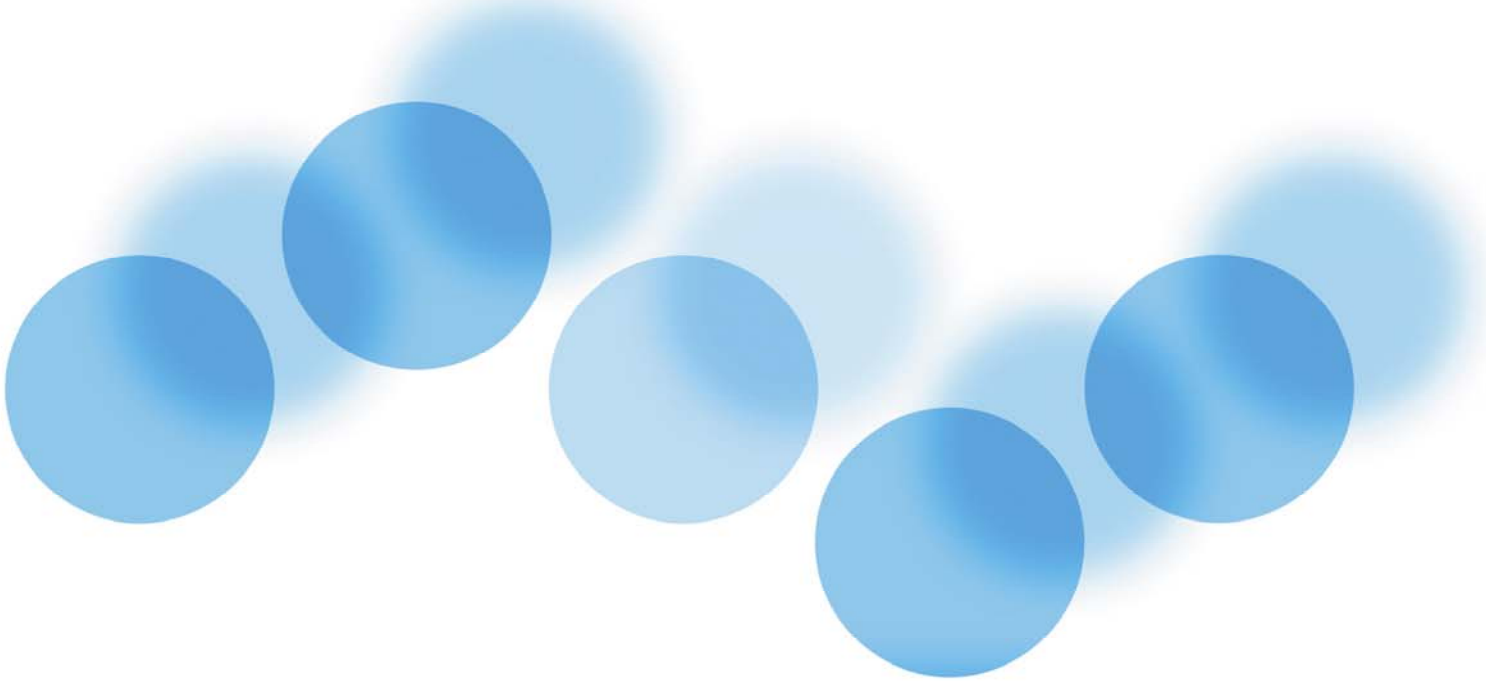
UNDP I GEF
DANUBE
REGIONAL
PROJECT

February 2007

OVERVIEW OF UNDP/GEF DANUBE REGIONAL PROJECT ACTIVITIES

Final Seminar, 21-22 February 2007

Bucharest, Romania



WORKING FOR THE DANUBE AND ITS PEOPLE

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ABBREVIATIONS

AEWS	Accident Early Warning System
AQEM	5th EU FP Project: Development and testing of an integrated assessment system for the ecological quality of streams and rivers throughout Europe using benthic macroinvertebrates
ASTEC	Accounts Simulation for Tariffs and Effluent Charges
BAP	Best Agricultural Practices
BAT	Best Available Techniques
BSERP	Black Sea Ecosystems Recovery Project
DABLAS TF	Danube – Black Sea Task Force
daNUbs	5th EU FP Project: Nutrient Management in the Danube Basin and its Impact on the Black Sea
DBAM	Danube Basin Alarm Model
DEF	Danube Environmental Forum
DRB	Danube River Basin
DRP	Danube Regional Project
DRPC	Danube River Protection Convention
DWQM	Danube Water Quality Model
EMIS EG	Emissions Expert Group
EC GIG	Eastern Continental Geographical Intercalibration Group
EG	Expert Group
EU	European Union
EPDRB	Environmental Programme for the Danube River Basin
EU WFD	EU Water Framework Directive
GEF	Global Environment Facility
GIS	Geographic Information System
ICPDR	International Commission for the Protection of the Danube River
IMCM	Inter-ministerial coordination mechanisms
JTWG	Joint Technical Working Group
MA EG	Monitoring and Assessment Expert Group
PIACs	Principal Incident Alarm Centres
P&M EG	Pressures and Measures EG
PRP	Pollution Reduction Programme
RBM	River Basin Management
REC	Regional Environmental Centre
TDA	Trans-boundary Diagnostic Analysis
UNDP	United Nations Development Programme
WB	World Bank

1. INTRODUCTION

The Danube Regional Project (DRP) is the last Danube River Basin-wide intervention following 15 years of continuous funding by UNDP/GEF. The DRP is also ending in the spring of 2007 and this document has been prepared to provide an overview of the main activities of the Project since 2001 giving a background to participants at the DRP's Final Seminar in Bucharest on 21/22 February 2007. This is not an exhaustive account of DRP's activities but provides a summary on the key projects undertaken.

1.1. Background to the UNDP/GEF Danube River Basin Programme

Until the 1960s, the Black Sea was known for its productive fishery, scenic beauty, and as a resort destination for millions of people. Since that time, as with other waterbodies around the world, massive over-fertilization of the sea by nitrogen and phosphorus from agriculture, municipal, and industrial sources has seriously degraded the ecosystem, disrupted the fisheries, reduced biodiversity, posed health threats to humans, and resulted in billions of dollars of losses to the economies of the six Black Sea littoral countries.

The Danube River as one of the main sources of nutrients flowing to the Black Sea is also facing a problem of pollution from nutrients and toxic substances due to industrial activities, extensive agriculture and growing municipalities these have a negative impact on the river including its water quality, water uses (e.g. water supplies for inhabitants), aquatic life.

Pollution from 17 countries has created this transboundary water quality problem. Since 1991, efforts have been underway with European Union and GEF support to gradually reverse this situation in the Danube and the Black Sea Basin.

Through its Operation Strategy, the GEF identified that there is a need to: (a) build the capacity of countries to work together, (b) jointly understand and set priorities based on the environmental status of waterbodies, (c) identify actions and develop the political commitment to address the top priority transboundary problems, and then (d) to implement the agreed policy, legal and institutional reforms and investments needed to address them.

Following the previous GEF assistance and building on the achieved results and efforts of the participating countries in the Danube/Black Sea Basins, a Strategic Partnership was developed, with the aim to accelerate implementation of nutrient reduction measures and policy/legal/institutional reforms in the basin.

GEF and its Implementing Agencies are implementing the Strategic Partnership consisting of capital investments, economic instruments, development and enforcement of environmental law and policy, strengthening of public participation and monitoring of trends and compliance over the period of 2001-2007 for the 17 countries of the Danube/Black Sea Basins. This Partnership is composed of three complementary parts:

1. The Black Sea Ecosystems Recovery Project (BSERP) - a GEF Black Sea Regional capacity building and technical assistance element implemented (in cooperation with the Black Sea Commission) under the leadership of UNDP;
2. The Danube Regional Project - a GEF Danube River Basin regional capacity building and technical assistance element implemented (in cooperation with the ICPDR) under the leadership of UNDP;
3. The World Bank Investment Fund - a GEF / World Bank Partnership Investment Fund for Nutrient Reduction focused on single country nutrient reduction investments.

The DRP is of global interest to GEF and other water basins that require international management. Concrete results have been achieved and future positive outputs are expected. This is especially true for reducing nutrient pollution - a common and serious problem in water bodies worldwide. Ultimately, the Danube Regional Project could become a progressive model for expanding public awareness of the threats from nutrient pollution worldwide.

The DRP 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 Danube River Basin.

1.2. Background to the Danube Regional Project

Since 1992 international assistance to develop appropriate mechanisms and planning tools for the implementation of the Danube River Protection Convention has been provided by the UNDP/GEF the EU through its Phare and Tacis programmes. In addition they have assisted with the funding of pollution prevention and reduction activities required to both restore the Danube River Basin and to protect the Black Sea environment.

In this frame, from 1992 to 2000, donor investments can be estimated at about 27 million USD for the EU Phare and Tacis Programs and about 12.4 million USD for the UNDP/GEF assistance. This facilitated the building up of capacities and structures of the ICPDR for joint operation under the Convention.

1.2.1. Environmental Programme for the Danube River Basin

The Environmental Programme for the Danube River Basin (EPDRB) was established in Sofia in September 1991 by the countries of the Danube River Basin, international institutions, financial organisations, G-24 countries and NGOs, to start an initiative to support, enhance and reinforce actions for the restoration and protection of the Danube River. The countries also set up a Task Force and a Programme Coordination Unit for the implementation of the 'Danube Environmental Programme', and agreed on further development of the Danube River Protection Convention.

The EPDRB was designed to support the Danube countries in their long-term objective of improving the environmental management of the Danube river basin and to enable the practical work to begin. In parallel, an international convention for the protection of the river Danube and its catchment area was being negotiated. The Danube Environmental Programme supported monitoring, collection and assessment of data, emergency response systems, pre-investment studies, institutional strengthening, capacity building and NGO activities.

1.2.2. UNDP/GEF Danube Pollution Reduction Programme

The project "Developing the Danube River Basin Pollution Reduction Program" represents the GEF contribution to the phase two of an Environmental Programme for the Danube River Basin. The Programme was carried out in period 1997-99 in the Danube River Basin, and its results supported the activities of the ICPDR through a program of action for the implementation of the DRPC. The Programme was a major international response to degradation of surface and ground water quality in the Danube River Basin (DRB) and eutrophication of the Black Sea and it had the following outputs:

- The Transboundary Diagnostic Analysis (TDA) was carried out to obtain a complete knowledge base for priority pollution loads and environmental issues in the Danube River Basin;

- The Danube Water Quality Model (DWQM) was designed to estimate and evaluate the flow of pollution – in particular nitrogen and phosphorus - through the Danube into the Black Sea;
- A revised Strategic Action Plan has been prepared as a review of the policy for the protection of the Danube River Basin, on the basis of existing analytical documents – National Review Reports and National Planning Workshop Reports;
- A Memorandum of Understanding between Danube and Black Sea Countries was drafted based on the results of the Danube-Black Sea Joint Ad Hoc Technical Working Group;
- The development of the ICPDR Information System;
- The Project Database includes the Pollution Reduction Programme (PRP) Investment Portfolio available for financing institutions and donor organizations in the future. The Database contained 421 projects, covering 246 hot spots in the Danube River Basin, comprising 192 municipal, 113 industrial, 67 agricultural, 29 wetland restoration projects and 20 projects classified as general measures;
- The project gave support to NGOs, in particular in developing the regional body, the Danube Environmental Forum (DEF), and the Small Grant Programme was financed to reinforce NGO participation in pollution reduction measures and awareness raising projects.

1.2.3. Danube Regional Project

Building on the achievements of previous projects, a new UNDP/GEF Danube Regional Project was prepared in the frame of the Danube/Black Sea Strategic Partnership, in order to further reinforce implementation of nutrient reduction measures and policy reforms in the Danube Basin countries.

The long-term development objective *of the Danube 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.*

The overall objective of the *DRP* *is to reduce nutrient loadings into the Danube River and its tributaries, in order to improve water quality in the Danube, and in the Black Sea. The DRP is designed to complement the activities of the ICPDR.*

The DRP is designed to complement the activities of the International Commission for the Protection of the Danube River (ICPDR), an international commission established through the Danube River Protection Convention (DRPC), providing a regional approach 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 Danube River Basin and the Black Sea area.

The DRP is implementing in total 22 project components, out of which 18 are directly contributing or are relevant to the work and achievements of the ICPDR and its Expert Groups. The Project is being implemented under four key objectives plus associated pilot projects. Figure 1 shows the overview of the DRP objectives and project components.

Overview of project components

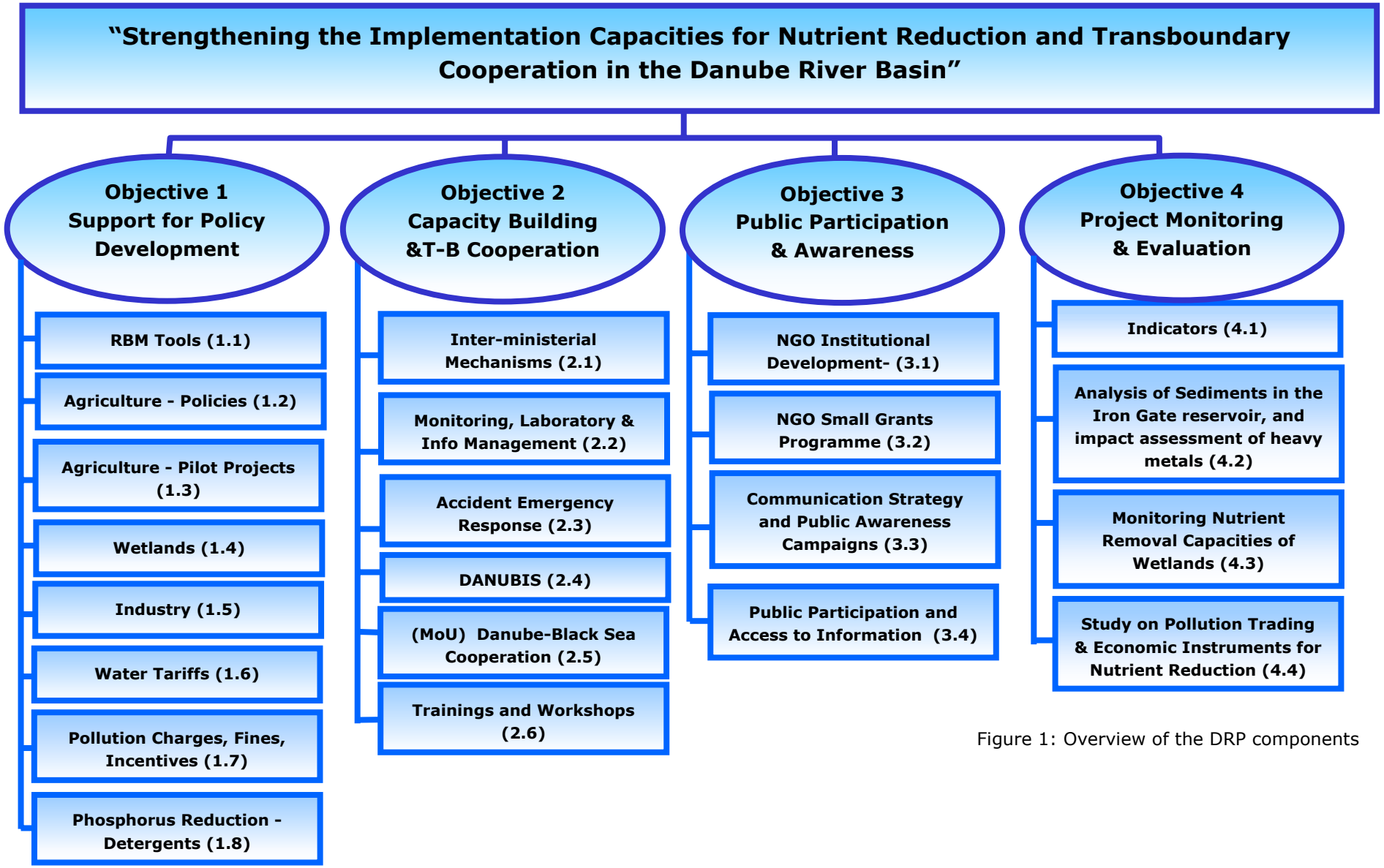

Figure 1: Overview of the DRP components

2. DRP FINAL SEMINAR 21 – 22 FEBRUARY 2007

2.1. Objective of Seminar

The objectives of this Seminar are to present and get feedback from the Danube countries on the key achievements, lessons learned and follow-up activities of the UNDP/GEF Danube Regional Project .

2.2. Format of Seminar

Following introductions and background information, a short presentation will be made by the DRP on the six project themes:

- River Basin Management;
- Agriculture and Diffuse Pollution;
- Industrial and Municipal Activities;
- Wetlands;
- Public Participation and Awareness Raising;
- Institutional Strengthening.

Each DRP presentation will be followed by a short response from the beneficiary countries and the ICPDR Secretariat on how the DRP's activities and outputs have been of benefit to their work on pollution reduction and transboundary co-operation.

The second day of the seminar is more devoted to future issues and challenges within the Danube River Basin and identifying how work initiated by the DRP can be channelled to assistance in identifying solutions to these problems.

2.3. Material Available for Final Seminar

The following material will be available for participants at the DRP's Final Seminar:

- This Overview report;
- '15 years of Managing the Danube River Basin, 1991 – 2006';
- Fact Sheets on DRP products and activities, including:
    - River Basin Management – 7 Fact Sheets and Background Stories;
    - Agriculture and Diffuse Pollution – 13 Fact Sheets and Background Stories
    - Industrial and Municipal Activities – 9 Fact Sheets and Background Stories;
    - Wetlands – 6 Fact Sheets and Background Stories
    - Public Participation and Awareness Raising– 5 Fact Sheets.
- DRP Brochure.

2.4. DRP Summary Statistics

The Danube Regional Project, launched in December 2001 has been planned for period of 5 years, with budget of 17.24 M USD – GEF contribution and in-kind contribution from beneficiary countries estimated to 19.5 M USD.

Theme	**No. of Contracts**	**Budget M USD**
River Basin Management	58	1.42
Agriculture and diffuse pollution	9	1.43
Industrial and municipal activities	28	1.42
Wetlands	18	0.66
Public Participation and communications	24	5.06
Institutional Strengthening	40	2.35
Project management and assistance staff		2.73
Office rental, equipment and PM travel		1.00
UNOPS		1.17
TOTAL	177	17.24

In addition to the above contracts 120 national and 10 regional projects have been organised under the DRP's Small Grant Programme administered by the Regional Environmental Centre.

An overview on number of meetings, seminars, workshops inc. total participants, organised by the DRP team, in addition to the workshops organised by sub-contractors within different components.

Year	**No. workshops, etc.**	**Total No. Participants**
2002	3	41
2003	33	606
2004	7	336
2005	11	175
2006	12	333
2007	3	155
TOTAL	69	1646

3. THE FINAL REPORT OF THE DANUBE REGIONAL PROJECT

This document will be further elaborated, and presented to the ICPDR's Standing Working Group Meeting in June 2007, to form the DRP's Final Report that will contain (on CD) all the DRP's outputs, including:

- Final Reports from all consultant activities;
- Project documentation;
- All DRP reports and outputs (e.g. mid-term report, Transboundary Diagnostic Analysis, brochures, etc.);
- DRP Fact Sheets.

4. DRP ACTIVITIES

4.1. River Basin Management

A key part of the DRP work programme has been directed at supporting activities associated with Integrated River Basin Management – a requirement of the Danube River Protection Convention, the Helsinki Convention on trans-boundary watercourses and most recently the EU Water Framework Directive.

4.1.1. Support to Danube Basin Analysis Report

The DRP has contributed significantly to the completion of the Danube River Basin Analysis, from the drafting of a number of key chapters including:

- Economic analysis;
- Heavily modified water bodies;
- Hydro-morphological alterations;
- Characterization of Ground Waters,
- Significant point and diffuse sources of pollution;
- Nutrients;
- Water Bodies;
- Assessment of the risk of failure to reach the environmental objectives.

The DRP also supported the preparation of the maps reported to the European Commission and the production of the Danube Basin Analysis Summary Report in six national languages.

4.1.2. Technical Support to Danube River Basin Management

GIS: The development of a harmonised GIS for the Danube River Basin has been identified as one of the key issues in the implementation of the WFD. It will help to coordinate the exchange of WFD-related data between the DRB countries and the ICPDR and to streamline the reporting requirements. Furthermore it will be a tool for the integration of existing and future data providing in the long-term a sound data basis for all water-related issues in the context of the whole DRB.

With input from the "Needs Assessment and Conceptual Design for a DRB GIS", prepared in 2003, the DRP supported further Danube GIS development activities: 'System Definition and Design' and 'Development of a Prototype'. The whole assignment was implemented by UBA Wien, and the Danube GIS Prototype is available now for further testing and development. The ICPDR takes over management of additional development with support from the EU.

Intercalibration: The EU Water Framework Directive stipulates the comparison of the results of biological assessment methods among countries. In the intercalibration exercise the good ecological status boundaries of national classification schemes are compared and harmonised.

The project focuses on the intercalibration of methods using benthic macroinvertebrates, macrophytes and phytobenthos in rivers of the Eastern Continental Geographical Intercalibration Group (EC GIG). Countries involved are Austria, Czech Republic, Slovak Republic, Hungary, Romania and Bulgaria. Based on national monitoring data, bio-statistical analyses are performed to compare national quality class boundaries against international benchmark conditions.

The intercalibration of the Austrian and Slovak methods using benthic macroinvertebrates has been completed. The intercalibration methodology elaborated within the project enables other countries to compare their classification schemes as soon as national WFD-compliant assessment methods are developed. Results of the EC GIG have been reported to the European Commission and presented at various international meetings (e.g. ECOSTAT, RBM EG, MA EG).

Support to Bosnia and Herzegovina (BiH): The DRP is providing direct assistance to the Minister of Foreign Trade and Economic Relations of Bosnia and Herzegovina (MoFTER) in BiH through an expert working in the Ministry with a responsibility of co-ordinating WFD activities with the ICPDR, the Ministry and the two entities. In addition the DRP has provided an expert to assist with developing a pragmatic monitoring programme inline with the expectations of the WFD and consistent with the available budget of the Ministries in BiH.

Water Quality Monitoring: The WFD places strong requirements for monitoring on the countries within the Danube Basin. While there has been a functional monitoring network in operation for a decade there has been a need to expand this to reflect the new needs of the WFD, particularly in the area of biological monitoring. Within the basin there was little experience of undertaking WFD-compliant biological monitoring and the DRP has organised a series of workshops across the basin to help implement a common approach to sampling and analysis of macro-invertebrates. The upgrade of the Trans-National Monitoring Network has been a key activity of the MA Expert Group. The DRP has supported this by providing a number of outputs that will assist with WFD compliance, including the development of a biological database, nutrient standards and most importantly assisting with the design of a basin-wide monitoring programme meeting the needs of the WFD to be submitted to the European Commission in March 2007.

Training Course in River Assessment: The WFD requires the development and implementation of compliant methods for assessing biological quality elements and the ecological status. The DRP organised three training programmes for sampling, analysis and interpretation on benthic macroinvertebrates based on the agreed AQEM approach.

Iron Gates Sediments: The overall objective has been to assess the sediment quality in the Iron Gate Reservoir and to prepare initial recommendations for future protection of the Danube River and Black Sea. The main actions included: the collection and review of existing data and undertaking a sampling and analysis programme to address gaps in data. The work was undertaken by teams from Romania and Serbia together with an independent laboratory (VITUKI). The results were presented during the MA Expert Group meeting in February 2007.

4.1.3. Sava River Basin Management

At the 4th meeting of the "Sava Working Group" on 12 December 2003 in Ljubljana, the "Draft Concept for the Preparation of the Sava RBM Plan" prepared by the DRP was presented, discussed and generally accepted. Particular attention was given to the need to reinforce national capacities to respond to the requirements for developing a pilot project for RBM planning in the Sava region. The DRP has continued the support with a project directed at assisting the Sava countries with the development of a structure of the river basin management plan and a road map for the preparation of the RBM plan.

4.1.4. Tisza River Basin Management

The DRP has provided technical assistance to Ukraine to participate actively in the ICPDR initiative on the Tisza River sub-basin. This assistance has enabled the completion of the templates necessary for the WFD river basin management plan.

4.1.5. Prut River Basin Management

The DRP undertook a small project aimed at strengthening the capacity of the Prut River basin countries with regards to implementing the WFD and specifically to assist with increasing the awareness of local stakeholders of the key steps leading to the River Basin Management Plan. In addition to the focus on the RBM plan the project also targeted awareness raising on issues associated with the Common Agricultural Policy and changing consumer behaviour on the introduction of phosphate-free detergents.

4.2. Agriculture and Diffuse Pollution

The UNDP/GEF Danube Pollution Reduction Programme (1999) identified that approximately 50% of nutrients derived from agriculture or non-point sources. This information was strengthened with the preparation of the Danube Basin Analysis Report (2004) presenting nutrient pollution as one of the four key issues affecting the Danube Basin.

The DRP has undertaken a range of activities aimed at both understanding the situation, providing recommendations on policy reform and demonstration projects working with farmers to practically reduce nutrient emissions.

The DRP has undertaken significant projects on the development and dissemination of Best Agricultural Practices (BAPs) that are considered to be appropriate for the Danube Basin and tested these in a pilot programme on eight farms in Serbia. In addition the DRP has funded a number of NGOs through the Small Grants Programme that have provided valuable local advice to farmers in their region on BAPs.

Linked to the needs of the River Basin Management activities the DRP has supported an upgrade of the nutrient model MONERIS. The model had been extensively used in the EC funded daNUbs project and the results significantly supported the Danube River Basin Analysis Report.

This issue has been the focus of significant projects throughout the DRP. In the first phase the project worked with the EMIS Expert Group (the current P&M EG) to assess the situation on agricultural policy development and the implementation of BAP across the whole basin. This work provided an agreed concept for BAP across the middle and lower Danube defined as *'…the highest level of pollution control practices that any farmer could be expected to adopt within their own national, regional and/or local context of the Danube River Basin'.* The first phase

identified six strategic aims with eleven objectives for measures to control and reduce agricultural pollution. In phase 2 of the project the work focused more on the lower seven Danube countries and developed further the concept of BAPs. Eight pilot farms in the Vojvodina region of Serbia were identified and 15 BAPs were tested over the final year of the DRP.

The DRP has developed a range of fact sheets that summarises the key outputs from phase 1 of the agricultural project and fact sheets from the phase 2 are in development.

4.2.1. Agricultural Policy assessment

The situation on agricultural policy and its enforcement has been has been assessed with regards to storage and use of manure, fertilisers and pesticides. This has resulted in a number of reports and recommendations provided to assist farmers and agricultural extension services. These assessments have been updated in phase 2 of the DRP for the lower Danube countries and recommendations regarding policy initiatives and the implementation of BAPs has been completed.

4.2.2. Introduction of Best Agricultural Practices through policy reforms

Phase 1 of the DRP saw the introduction and the agreement of a definition of BAP for the Danube River Basin (see above). This initial work agreed on six 'Strategic Aims' with 11 Objectives. The six Strategic Aims are to:

- Reduce pollution from mineral fertilisers and manure;
- Reduce pollution from pesticides;
- Improve compliance and enforcement of regulatory instruments for agricultural pollution control;
- Develop appropriate economic instruments for agricultural pollution control;
- Develop the capacities of agricultural extension services for agricultural pollution control;
- Promote organic farming and other low input farming systems.

Examples of Objectives include improving national research into the relationship between agriculture and pollution, and encouraging proper pesticide use. The Aims and Objectives are designed to encourage farmers to 'move up' the BAP hierarchy and adopt more demanding pollution control practices.

Phase 2 saw the extension of this approach with the testing of 15 BAPs identified as appropriate for the pilot farms selected (see below). 12 of these BAPs responded to issues of nutrient pollution and three to the use of pesticides.

4.2.3. Evaluating BAPs on pilot farms

Eight family farms (total area 472 ha with 288 animal units were selected for inclusion in the pilot assessment of BAPs in the Vojvodina region of Serbia. This was one of the potential pilot locations identified in the first phase of the DRP. The pilot farmers received significant assistance from the consultant and were involved in a number of training programmes both within the region and externally. Feedback from the farmers involved has been very positive about the new practices for pollution reduction and farming practices (e.g. soil analysis, use of slurry, financial losses due to poor manure handling, etc.).

It has been estimated that the application of the 15 BAPs on these pilot farms would reduce the release of approximately 14 tonnes of nitrogen, 2 tonnes of phosphorus and 160 kg of pesticides per year. The results and approaches have been disseminated throughout the lower Danube reaching thousands of farmers.

4.2.4. Agricultural Small Grant Projects

The DRP has supported a large number of NGOs within the Danube River Basin with projects that had a focus on agriculture. There have been 4 regional and 38 national grants awarded on a wide range of topics related to agriculture.

One of the most popular topics for projects was the appropriate interpretation and promotion of the concept of Best Agricultural Practice in the context of local/regional circumstances. Since good environmental awareness and technical knowledge form the basis of any sustainable farming system, the majority of NGOs chose to implement project activities related to the awareness raising and education of farmers about BAP - including organic farming which is one of the most highly developed forms of BAP. Typical activities and outputs included information materials, technical manuals, training courses, seminars, management plans and demonstration activities. In the regional projects, study tours were also used very effectively to exploit the benefits of transboundary co-operation and share experiences, good practices and innovation between farmers and agricultural advisers in different regions of the lower DRB.

Finally, since another important group of stakeholders regarding agricultural pollution control are local government officials, many NGOs encouraged their active involvement as participants and partners in local and regional activities.

4.2.5. Nutrient Model – MONERIS

MONERIS has been accepted as an important tool for estimating nutrient loads from diffuse sources and extensive use was made of the model results in the Danube River Basin Analysis. The DRP has provided an update of the model to reflect the catchment boundaries adopted for the WFD implementation within the Danube River Basin and to provide a recalculation based on new data provided by the countries through the P&M Expert Group. In addition the functionality of the model will be fully documented to ensure the transparency of its operation.

4.3. Industrial and Municipal Activities

Industrial activities are a potentially significant source of pollution within the Danube River Basin. The pollution sources are varied, from industrial discharges, accidents resulting in pollution, flooding of contaminated sites and leaching of pollutants, and phosphates from detergents discharged from wastewater treatment plants. In addition the options to enhance the operation of wastewater utilities through better financial controls can provide a means to reduce pollution. The DRP has conducted a variety of projects aimed at assisting the ICPDR to better understand the risk and providing tools to help reduce these risks in the future.

The DRP has been supporting industry-related projects through both phases of the Project and has produced fact sheets on some of the key outputs.

4.3.1. Development of Industrial Policy

The DRP identified the institutional and legislative base in Danube countries and provided an assessment of available legislation and policies for industrial pollution control and the best

available techniques to mitigate pollution across the whole Danube Basin. The Project reviewed those policies and identifies gaps between EU and existing and future legislation for industrial pollution control and enforcement mechanisms. A set of industry case studies examined the practical use of Best Available Techniques (BAT) for pollution reduction at industrial establishments.

Based on updated information on legislation and national policies the Project has addressed these issues primarily in the non-accession countries. One of the key outputs has been the preparation of agreed road maps for the non-accession countries to assist with implementing industrial pollution control policies.

4.3.2. Elimination of phosphates in washing detergents

The study included: a review of existing legislation, policies, and voluntary commitments on the reduction of phosphorus (P) in laundry detergents across the EU and the Danube River Basin; the compilation and evaluation of data on P-containing detergents and production structures within the DRB; and an exploration of the feasibility of voluntary agreements to achieve a reduction in P in detergents across the DRB.

Only Germany and Austria are virtually P-free. The Czech Republic has recently introduced legislation to replace a voluntary agreement that had failed after an initial period of success. Slovenia has a high proportion of P-free detergents, but there are signs of a decreasing trend that should be monitored. Together these four countries account for about a quarter (26%) of the DRB population. The study has shown that voluntary agreements without legislative back-up are unlikely to succeed in DRB countries, as clearly demonstrated in the Czech Republic, where the initial success of a voluntary agreement between government and the industry association was eroded due to increasing sales of phosphate detergents by non-members of the association. Moreover, it is difficult to control imports of P detergents.

Current EU legislation (Detergents Regulation EC/648/2004, Article 16) provides a timely opportunity to review the situation and to harmonise it across Europe by introducing a ban or restrictions on phosphate detergents across the EU. However, unless EU legislation can be expected in the near future, it will be important to persuade DRB country governments of the need for national legislation.

While it is recognised that other actions, such as improved urban waste water collection and treatment, as well as ‘good agricultural practices’, are necessary complementary actions, there is scope for contributing to a successful resolution of the problem of eutrophication, by replacing P detergents with P free detergents, thereby reducing the total phosphate burden from detergents.

The UNDP/GEF DRP and ICPDR held a seminar on 25 January 2007 in Romania to inform stakeholders of the situation and to explore a way forward for P reduction in detergents. An output of the seminar is a recommendation for adoption by the ICPDR and countries of the Danube River Basin on P-reduction in laundry detergents.

4.3.3. Accident Prevention

Under this topic the DRP has supported a number of key activities. These included the application of a checklist methodology to assess pollution risks for large industrial complexes (e.g. refineries), the development of a methodology for the assessment of contaminated sites in flood risk areas, and activities in support of the Accident Early Warning System.

Refineries Pilot Project: The DRP has supported the development and application of a checklist methodology for assessing pollution risk from large industrial complexes, with the example used being oil refineries. The methodology developed was assessed and enhanced following two on-site training events for pollution control officers from across the basin. The first course was held at a refinery near Berlin and the second near Constanta. Following the training course in Constanta, the ICPDR Task Group responsible under the P&M Expert Group approved the approach.

Contaminated sites assessment methodology: The DRP has supported the development of a methodology to assess contaminated sites within flood risk locations. The so-called M1 and M2 methodologies utilise a checklist assessment approach and the finalised method has been tested on a contaminated site (oil refinery waste deposit near Constanta) and this methodology has been accepted by the ICPDR Task Group responsible under the P&M Expert Group. This work provided a number of recommendations for further developing the system and obtaining improved data on contaminated sites across the basin.

Accident Early Warning System (AEWS): The existing AEWS has been upgraded with standard forms and web-based communication solution for information exchange in emergency cases through 'Principal Incident Alarm Centres (PIACs), using the ICPDR web site. The new communication software was developed and successfully tested by national PIACs. A concept for calibration options for the Danube Basin Alarm Model (DBAM) and the outline for the DBAM calibration manual has been prepared. Finally the DBAM has been upgraded to be functional under the Windows XP operating system.

4.3.4. Tariffs and Charges

Given that costs for improving wastewater treatment are significant, many utilities need help in making the right price and investment decisions to pay for cleaner water. A DRP sub-project raised awareness among DRB policy makers and water and wastewater utility managers and made recommendations on possible reforms for improving operational effectiveness to reduce internal costs. It developed and disseminated financial tools to assist in making decisions about investing in extensions and expansions to utility services, for example adding nutrient removal capacity. The key one was a mathematical tool named 'ASTEC' to test the impacts of a range of simultaneous considerations on pricing. In order to demonstrate the practicality and to provide real examples of testing its products on the ground, the DRP project further has two demonstration sites - one in Croatia and the other in Romania. A report on best practices in water and wastewater tariffs setting was developed for the DABLAS Task Force.

4.4. Wetlands

Wetlands have a number of very important environmental and practical benefits for river basins including flood mitigation, ecological and habitat support and the potential to act as nutrient sinks. The DRP has been heavily involved in wetland programmes throughout the duration of the Project. These activities have included the development of methods to assess land use and assist with policy reforms, the evaluation of wetlands to remove/reduce nutrients and the preparation of guidance to assist decision makers, etc. These project activities have been supported by a number of pilot projects addressing nutrient reduction and land use policies. In addition the DRP has supported a number 27 National Small Grant Projects and 5 NGO campaigns with an emphasis on wetlands. The DRP has been working with World Bank support projects in Bulgaria and recently in Hungary to share experiences.

The DRP will hold a basin-wide workshop in the Danube Delta in April 2007. The intention is to bring together river basin managers and wetland managers to jointly discuss issues affecting wetlands and the WFD Programme of Measures.

4.4.1. Development of Wetland and Land-use Policies

This activity aims to help Danube countries prepare new land-use and wetland conservation policies and legislation in line with other legislation including the EU Water Framework Directive. It focuses on the protection or rehabilitation of wetlands and addresses common inappropriate land uses and subsequent impacts on ecologically sensitive areas and wetlands. A working methodology to assess land-use was developed in the first phase of the project and tested at three pilot sites in Croatia, Romania and Slovakia during the second phase. Sustainable land-use concepts aimed at reducing nutrient pollution in water bodies, especially through wetland conservation, were developed at each site and discussed with local stakeholders.

4.4.2. Nutrient reduction/retention by wetlands

This project component, the overall objective is to identify the benefits of wetlands as nutrient reduction/retention facilities and the contribution of wetlands in this role to the WFD Programme of Measures. This will be achieved by demonstrating the possibilities for optimizing such processes via integrated wetland management while still considering other benefits (e.g. biodiversity, water purification, etc.) and giving priority to the ecological needs of these ecosystems. Effective implementation would considerably improve the knowledge about nutrient removal through wetlands rehabilitation and would define the technical and economic parameters for efficient wetlands management.

The first success was the establishment of a literature database with more than 130 scientific reports, and a project database containing more than 50 projects within the DRB, dealing with wetland restoration or nutrient removal. The project also selected three pilot sites in Moldova, Romania and Ukraine and helped to develop and implement a wetland restoration programme including nutrient retention. These real world examples o highlight different aspects of nutrient removal and the importance including these aspects in wetland management concepts.

The final goal is to create guidelines for best practises in wetland restoration and to improve wetland management in the light of nutrient removal in the DRB. This guidance document for wetland and river basin managers will be finalized at the beginning of 2007.

4.4.3. Wetlands Small Grant Projects and Campaigns

Campaigns: Through its awareness raising activities, assistance for the Danube Environmental Forum (DEF) and small grants programme, the DRP supported various awareness raising campaigns at the local, national as well as regional level.

This included four NGOs initiating multi-stakeholder campaigns in the countries of Croatia, Serbia, Slovakia and Slovenia were supported in targeting specific environmental/pollution problems, especially wetlands.

DRP support was also geared to enhancing the DEF's 'International Wetlands Campaign' which encourages national water managers in the Danube Basin to better incorporate wetland protection into their national river basin management plans. This should also assist them in their efforts in developing measures to meet the EU Water Framework Directive.

Significant media outreach in relation to all campaigns was implemented.

4.5. Public Participation and Communications

The UNDP/GEF Project has had strong emphasis on public participation and awareness raising activities.

In a stakeholder analysis meeting carried out in 2003, ICPDR experts, members of governments, DRP, and NGOs defined first steps of a strategy to involve stakeholders in the implementation of the EU Water Framework Directive and how to define stakeholders at the Danube River Basin level. The important work done there was critical in identifying stakeholders and developing stakeholder involvement mechanism programmes and activities at the Danube River Basin level.

Communication activities were built in to the overall implementation of the Danube Regional Project. Targeted communication support and advice as well as capacity building efforts have been given to partners and contractors of the Project. In this way all activities of the project have used communication tools to enhance the results and dissemination of these to key stakeholders.

In cooperation with the ICPDR, the DRP has been developing and producing the quarterly magazine Danube Watch. A large number of targeted information materials, brochures, reports, photos and press releases have been developed and widely distributed.

The project has worked together with the ICPDR to initiate and develop the concept of the Danube Day that has been a major success and excellent communication tool for the Danube River Basin.

In addition to the specific support provided to local community-based projects (small grants) as well as the support to develop the DEF network, a third large project was added to enhance access to information and public participation in environmental decision-making

This project focused its activities in the five Danube countries, Romania, Bulgaria, Croatia, Serbia, and Bosnia and Herzegovina.

The primary objectives of this activity were to strengthen mechanisms and the capacities of governmental official and NGOs to facilitate greater public access to information to be able to address priority sources of pollution. Pilot projects were implemented in all countries and lessons learned and experiences have been communicated and discussed with all Danube countries.

Implementation of this project has been done in cooperation with the Regional Environmental Center (REC), New York University of Law as well as Resource for Future (RFF).

4.5.1. Small Grants Programme

The Small Grants Programme has been the DRP's main vehicle for engaging local stakeholders and the public. In total, 120 National Grants and 10 Regional Grants were distributed to NGOs in 11 countries in the Danube River Basin. Projects were monitored and evaluated by the DRP through regular reporting and site visits. Implementation of the grant projects have been done in cooperation with the REC.

Projects covered four main subjects; agriculture (e.g. promoting eco-farming methods), land-use/wetlands (e.g. restoration of flood plain forest), municipal (e.g. household waste management) and industry (e.g. promoting best available practices).

Activity examples range from the direct reduction of nutrient pollution through wetland vegetation absorption, to raising the awareness of urban consumers about the contributions made by laundry detergents to nutrient pollution. In the end, many activities resulted in direct

reductions in nutrients at the local level, for example small scale waste water treatment plants or projects focused on changing agricultural practices and the reduced use of fertilizers.

Distribution of National Small Grants

Country	Agricultural Discharge	Industrial Discharge	Land Use + Wetlands	Municipal Discharge	Number of projects
Bosnia & Herzegovina	5	2	2	4	13
Bulgaria	4	1	4	2	11
Croatia	4	3	1	2	10
Czech Republic	3	2	3	3	11
Hungary	5	4	4	4	17
Moldova	2	-	1	5	8
Romania	5	-	2	-	7
Serbia & Montenegro	4	3	-	5	12
Slovakia	2	-	6	6	14
Slovenia	2	-	1	5	8
Ukraine	2	3	3	2	9
Totals	38	18	27	37	120
Percentage	31 %	16 %	23%	30 %	100%

The 10 regional projects had the following themes:

- Reduction of nutrients and toxic pollutants by identifying barriers and building bridges of communication among the stakeholders in the river Hernad in Hungary and the river Sebes-Koros in Romania;
- Increasing public participation in the management and planning of the Sava River Basin;
- Promoting best agricultural practices to reduce pollution generated from farming in the Lower Danube;
- Promoting the ecological, health and financial advantages of re-usable diapers and environmentally friendly washing agents in Slovenia and Croatia;
- Addressing nutrient and toxic pollution in the Sub-basin of the Morava, Mura and Ogosta rivers;
- Building cross-border cooperation for nutrient reduction in the Prut basin;
- Support and promote ecological agriculture in the production areas located in the Danube basin (Czech Rep., Serbia and Montenegro and Slovakia);
- Danube-Elbe-Oder Canal; grass-root campaign to prevent loss of wetland; and
- Networking the river coalitions for a healthy watershed (Croatia, Romania and Hungary).

4.6. Institutional Strengthening

4.6.1. ICPDR

Danubis: The ICPDR Information System Danubis is one of the most important tools for the ICPDR. It provides information to the public, facilitates the sharing of documents and data among experts. Following previous GEF projects, that were contributing to the Danubis launch, the DRP supported further development activities. Besides technical improvements of the system, the major output from the user point of view was the Danubis Survey which resulted in providing computer equipment to the countries as well as a series of capacity building trainings for users at the national and regional levels.

The support from the DRP is being focused on internal working area and analytical work has been carried out. The assessment identified several deficiencies from the user point of view, related mainly to the clarity and consistency of the information available in the system. Therefore, follow-up activities are now planned, with a focus on improvement of the system structure, overall orientation and, system and user administration. Additional features will be implemented to support the administrative tasks of the secretariat.

Capacity building: In addition to the capacity building implemented under each technical activity, the capacity building activities of the project focused mainly on the level of the ICPDR and its structures and secondly on the national level.

The project supported country participation at high-level ICPDR meetings and to the expert group meetings. This was important to assure that country representatives could participate and thus bring the country and expert input to the work of the ICPDR. This support was phased out as the countries were able to take on the financial commitments for ICPDR meeting participation.

Support was given to the ICPDR Secretariat and the Expert Group Chairmen on facilitation and communication skills. An Open-Space Workshop on ICPDR Further Development was also held, aimed at identifying of challenges for optimizing ICPDR working arrangements and structures. The workshop led to the successful restructuring and streamlining of the ICPDR instructional set-up including Expert Groups and their Terms of References.

4.6.2. Danube Environmental Forum (DEF)

The DRP has worked to build and strengthen the DEF regional NGO network and to establish a Regional Secretariat to coordinate its widespread, multi-country activities and projects.

The DEF is now the umbrella organisation for the largest network of NGOs in the Danube Basin with 174 member organisations and national focal points in all 13 Danube countries.

The DRP has been working together with the NGOs to develop and implement activities related to protection and improvement of the Danube and its tributaries using tools such as small grants, communications, awareness raising and institutional development. Various publications have been produced in all national languages and various targeted trainings have been held in all Danube countries.

The DEF is an observer to the ICPDR and its expert groups and has now an excellent opportunity to use its capacities and network to be involved and influence stakeholders on important Danube issues.

4.6.3. Support for the ICPDR/Black Sea Commission co-operation process

The status of the ecosystems of the Black Sea is largely affected by nutrients and hazardous substances discharged within the wider Black Sea Basin, and to a large extent by the riverine inputs into the overall Black Sea, including the Danube River. The long-term goal in the wider Black Sea Basin is to reduce the nutrients loads and hazardous substance discharges to permit Black Sea ecosystems to recover to conditions similar to those observed in the 1960s; an intermediate goal is to avoid that the loads of nutrients and hazardous substances discharged into the Black Sea exceed the mid -1997 levels.

A Memorandum of Understanding, which constitutes a framework for implementing common strategic goals, was signed by both Commissions in 2001. The DRP, together with the BSERP, facilitated the re-establishment of the Joint Technical Working Group (JTWG), the objectives of which is to create a common understanding and agreement on the changes over time to the Black Sea ecosystem, to report on the results, and provide to both commissions recommendations on strategies and practical measures. Within the framework of the JTWG, the list of indicators of Black Sea ecosystems was developed and regular reporting on pollution loads from Danube commenced.

The first ever report on improving the understanding of the Danube River's impacts on the status of the Black Sea was developed and presented to both the commissions in 2005.

4.6.4. Inter-ministerial Co-ordination Mechanisms

Effective inter-ministerial coordinating mechanisms (IMCM) for the development, implementation and follow-up of national policies, legislation and projects for nutrient reduction and pollution control is a necessary prerequisite for strengthening a regional approach for solving transboundary problems. The DRP assisted the countries to effectively address pollution prevention and control issues which require decisions and activities in more than one government ministry in order to reinforce the development and implementation of and compliance with national policies and legislation. Based on the results of an updated analysis of IMCM and agreed work plans in participating countries, the project carried out specific workshops/trainings and other appropriate targeted activities supporting establishment or strengthening of the IMCM focusing primarily in lower Danube countries.

4.6.5. Phase-Out of the Danube Regional Project

It is important that prior to the DRP close by mid-2007, the ICPDR is in a position to sustain the programmes and activities supported by the DRP that it views to be central to its mission. An "Exit Strategy" has been developed and agreed with the ICPDR, which identified for the ICPDR the financial and technical gaps that will open once the DRP has ended, and recommended actions to make up for the drop in technical and financial assistance. The strategy focuses on core activities that were reviewed, and recommendations were provided on how they can be carried forward the gradual transfer of responsibilities from the DRP to ICPDR countries, expert groups and Permanent Secretariat has already started.

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