

Document of
The World Bank

Report No: ICR00001004

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(TF-50706 BUL)

ON A

GLOBAL ENVIRONMENT FACILITY GRANT

IN THE AMOUNT OF US\$ 7.5 MILLION

TO THE

REPUBLIC OF BULGARIA

FOR A

WETLANDS RESTORATION AND POLLUTION REDUCTION PROJECT

June 23, 2009

Sustainable Development Department
Central Europe and the Baltic Countries Unit
Europe and Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective May 11, 2009)

Currency Unit = Bulgarian Leva (BGN)

BGN 1.00 = US\$ 1.45

US\$ 1.00 = BGN 0.69

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

BAP	Best Agricultural Practices
BTO	Back to Office Report
CAS	Country Assistance Strategy
CPS	Country Partnership Strategy
EC	European Commission
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EU	European Union
FTSF	Farmer Transition Support Fund
FY	Fiscal Year
GEF	Global Environment Facility
GEO	Global Environment Objective
GOB	Government of Bulgaria
IBRD	International Bank for Reconstruction and Development
ICA	Incremental cost analysis
ICPDR	International Commission for the Protection of the Danube River
ICR	Implementation Completion and Results Report
IP	Implementation Progress
ISR	Implementation Status and Results Report
KBPS	Kalimok - Brushlen Protected Site
LCC	Local Consultative Council
MoAF	Ministry of Agriculture and Forestry
MoEW	Ministry of Environment and Water
MP	Management Plan
M&E	Monitoring and evaluation
NGO	Non Governmental Organization
PA	Protected Area
PAD	Project Appraisal Document
PDO	Project Development Objective
PCU	Project Coordination Unit
PHARE	Poland and Hungary Aid for Restructuring of the Economies
PNP	Persina Nature Park
PSC	Project Steering Committee
PSR	Project Status Report
QAG	Quality Assurance Group
RIEW	Regional Inspectorate of Environment and Water
SA	Special Account

SDR	Special Drawing Rights
SFA	State Forestry Agency
SGP	Small Grants Program
TDA	Transboundary Diagnostic Analysis
TTL	Task Team Leader
UNDP	United Nations Development Program
WRPRP	Wetlands Restoration and Pollution Reduction Project
WWF	World Wildlife Fund

Vice President: Shigeo Katsu

Acting Country Director: Theodore O. Ahlers

Sector Manager: John Kellenberg

Project Team Leader: Anna Georgieva

ICR Team Leader: Anna Georgieva

REPUBLIC OF BULGARIA
Wetlands Restoration and Pollution Reduction Project

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A. Basic Information			
Country:	Bulgaria	Project Name:	Wetlands Restoration & Pollution Reduction GEF Project
Project ID:	P068858	L/C/TF Number(s):	TF-50706
ICR Date:	06/24/2009	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	GOVERNMENT OF BULGARIA
Original Total Commitment:	USD 7.5M	Disbursed Amount:	USD 7.5M
Revised Amount:	USD 0.0M		
Environmental Category: B		Global Focal Area: I	
Implementing Agencies: Ministry of Environment and Waters			
Cofinanciers and Other External Partners: EC-PHARE Government of Austria			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	02/18/2000	Effectiveness:	12/18/2002	10/31/2002
Appraisal:	02/22/2002	Restructuring(s):		
Approval:	06/13/2002	Mid-term Review:	06/01/2006	07/13/2006
		Closing:	09/15/2007	12/15/2008

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Satisfactory
Risk to Global Environment Outcome	Low or Negligible
Bank Performance:	Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Satisfactory	Government:	Not Applicable
Quality of Supervision:	Satisfactory	Implementing Agency/Agencies:	Not Applicable
Overall Bank Performance:	Satisfactory	Overall Borrower Performance:	Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
GEO rating before Closing/Inactive status	Satisfactory		

D. Sector and Theme Codes		
	Original	Actual
Sector Code (as % of total Bank financing)		
Central government administration	9	9
General agriculture, fishing and forestry sector	91	91
Theme Code (as % of total Bank financing)		
Biodiversity	25	25
Environmental policies and institutions	13	13
Other rural development	13	13
Pollution management and environmental health	25	25
Water resource management	24	24

E. Bank Staff		
Positions	At ICR	At Approval
Vice President:	Shigeo Katsu	Johannes F. Linn
Country Director:	Theodore O. Ahlers	Andrew N. Vorkink
Sector Manager:	John V. Kellenberg	Marjory-Anne Bromhead
Project Team Leader:	Anna Georgieva	Rita E. Cesti
ICR Team Leader:	Anna Georgieva	
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	Peter David Whalley	

F. Results Framework Analysis

Global Environment Objectives (GEO) and Key Indicators(as approved)

The Global Objective of the project is to demonstrate and provide for replication of reduction of transboundary nutrient loads and other agricultural pollution flowing into the Danube River and the Black Sea basins while at the same time conserving key target threatened species in the project areas through: (i) wetlands restoration and protected areas management programs, and (ii) support for stakeholders to adopt environmentally-friendly economic activities in the two project areas.

The Project Development Objective (DO) is that local communities and local authorities in the Persina Nature Park and Kalimok/Brushlen Protected Site areas adopt sustainable natural resources management practices.

Revised Global Environment Objectives (as approved by original approving authority) and Key Indicators and reasons/justifications

Objectives and indicators were not formally revised however a special effort was made to refine project monitoring indicators. During implementation some indicators were realigned to strengthen focus on critical Project deliverables and to make them more focused on intermediate outcomes. Some indicators were combined to avoid duplication and shortened. For example, two indicators were merged into one GEO indicator: "Improved agricultural practices in Belene and Kalimok and increased local awareness and support for biodiversity conservation" to strengthen the link between improved agricultural practices due to increased awareness. Two intermediate outcome indicators were added to monitor implementation the of SGP (Small Grants Program) and FTSP (Farmer Transition Support Fund), and namely "Implementation of small grants program for biodiversity conservation" and "Implementation of farmer transition support fund program". A detailed table comparing the indicators in the PAD and ISRs/ICR is shown in Annex 2 with explanations provided.

(a) GEO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Gradual improvement in ecosystem health of restored wetlands.			
Value (quantitative or Qualitative)	Marshes in Belene Island and Kalimok will further deteriorate and revert to reed beds.	Unique landscapes and habitats for important bird species protected. Nutrients in outflow waters reduced. Critical fish reproduction habitats restored.	N/A	Both targeted wetlands successfully restored. First test in Belene Island was of a preliminary test nature. Though it indicated reduction in nutrients further monitoring is

				needed to give indications of reduction figures and trends.
Date achieved	03/25/2002	12/15/2008	12/15/2008	12/15/2008
Comments (incl. % achievement)	Bird numbers of 22 species were found to increase and fish species increased from 2 to 10 in the first test flooding of Belene Island within 2 months. Kalimok marshes also successfully flooded in December 2008. Further gradual improvements expected.			
Indicator 2 :	Improved agricultural practices in Belene and Kalimok and increased local awareness and support for biodiversity conservation.			
Value (quantitative or Qualitative)	Conventional agriculture practices are common in the protected sites. The level of awareness about nature/biodiversity conservation and landscape protection is low.	Sustainable natural resources management adopted by local communities and local authorities in Belene and Kalimok.	N/A	Biodiversity conservation awareness raised (through participatory wetland restoration design, PA management planning, and implementation of the SGP). Best agricultural practices demonstrated and mainstreamed in local farming (through the FTSF).
Date achieved	03/25/2005	12/15/2008	12/15/2008	12/15/2008
Comments (incl. % achievement)	Achieved 100%. The project also succeeded in changing the local population's perception of wetlands as a source of crucial environmental and economic benefits.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Wetlands restoration investments made in Belene Island, Kalimok marshes and other priority sites restored to promote nutrient trapping.			
Value (quantitative or Qualitative)	Very preliminary concepts for the restoration of the two sites were available. Local stakeholders are not supportive of any	At least 2,300 ha of wetlands restored.	N/A	A total of 4,035 ha of wetlands restored: 2280 ha restored at Persina Nature Park and 1755 ha restored at

	wetlands restoration effort.			Kalimok Brushlen Protected Site.
Date achieved	03/25/2002	12/15/2008	12/15/2008	12/15/2008
Comments (incl. % achievement)	Achieved >100%. Exceeded the original target value by almost two times			
Indicator 2 :	Development of protected areas management plans in both sites in a participatory manner.			
Value (quantitative or Qualitative)	None	Management plans prepared and approved by MOEW.	N/A	MPs for both PAs prepared in a participatory manner. MP for KBPS approved by MoEW. MP for PNP awaiting approval by Council of Ministers.
Date achieved	03/25/2002	12/15/2008	12/15/2008	12/15/2008
Comments (incl. % achievement)	Achieved 100%.			
Indicator 3 :	Establishment of protected areas administrations with agreed operational rules and procedures.			
Value (quantitative or Qualitative)	Protected areas management capacity in PNP 17% and KBPS 17%.	Protected areas management capacity in PNP 90% and KBPS 90%.	N/A	Self-assessment for PNP - 75% and KBPS - 70%. Both PNP and KBPS have permanent professional staff and are fully equipped with boats, vehicles, monitoring equipment, etc.
Date achieved	03/25/2002	12/15/2008	12/15/2008	12/15/2008
Comments (incl. % achievement)	Progress was monitored using WWF M&E tracking tool developed for Protected Areas (see ICR Annex 2). Though subjective, this highly participatory self-assessment methodology where PA staff evaluated progress against 28 parameters helped build capacity.			
Indicator 4 :	Implementation of small grant program (SGP) for biodiversity conservation.			
Value (quantitative or Qualitative)	Zero	All projects implemented and budget used as planned.	N/A	55 small grant projects successfully completed. 23

				NGOs, 65 professionals, 5,500 students and 250 children took part in SGP.
Date achieved	03/25/2002	12/15/2008	12/15/2008	12/15/2008
Comments (incl. % achievement)	Achieved 100%.			
Indicator 5 :	Implementation of farmer transition support fund (FTSF) program.			
Value (quantitative or Qualitative)	Zero	FTSF projects implemented to demonstrate environmentally friendly agricultural practices.	N/A	7 FTSF projects successfully completed on environmentally friendly agricultural practices including organic farming, pasture management, and renewable energy in line with EU Best Agricultural Practices.
Date achieved	03/25/2002	12/15/2008	12/15/2008	12/15/2008
Comments (incl. % achievement)	Achieved 100%.			
Indicator 6 :	Strengthened planning and institutional capacity for protected areas management in both sites.			
Value (quantitative or Qualitative)	No management plans. Administration established in Belene but with weak capacity not matching the requirements of a NATURA 2000 site.	Adoption of protected areas management plans and establishment of effective administrations in both sites.	N/A	Functional administration in Belene. Innovative multi-stakeholder participatory approach to PA management in Kalimok. The management plans were prepared through consultations with residents and stakeholders.
Date achieved	03/25/2002	12/15/2008	12/15/2008	12/15/2008
Comments (incl. % achievement)	100%.Both sites designated as NATURA 2000 sites.Have facilities to monitor environmental impact of restorations. PAs capacity strengthened, administrations equipped, environmental monitoring programs developed and under implementation, staff trained.			

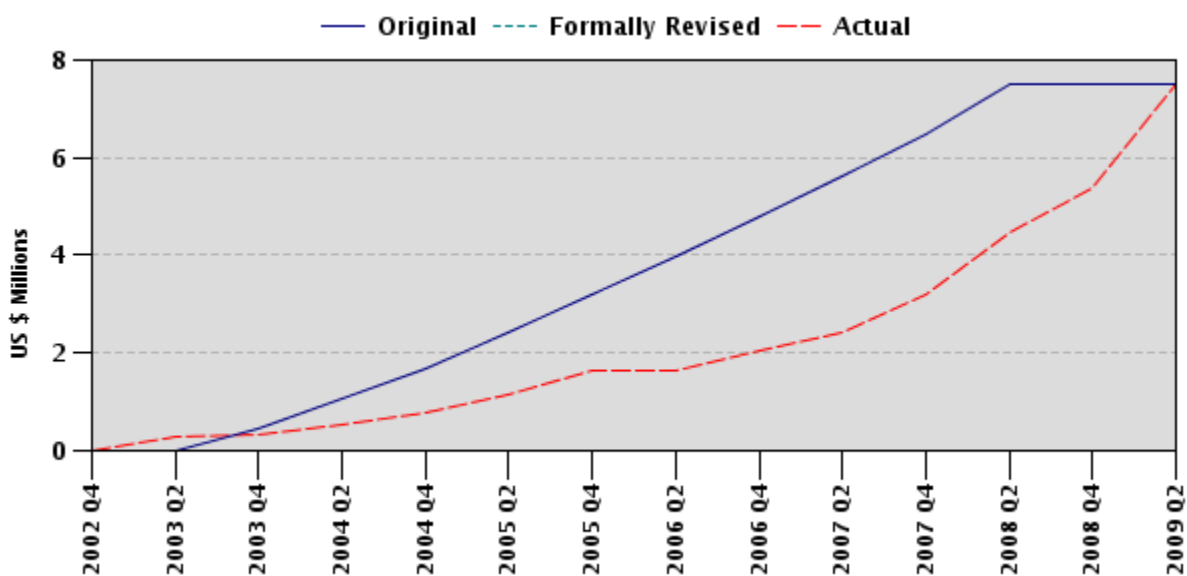
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	GEO	IP	Actual Disbursements (USD millions)
1	09/17/2002	Satisfactory	Satisfactory	0.00
2	11/27/2002	Satisfactory	Satisfactory	0.30
3	06/18/2003	Satisfactory	Satisfactory	0.33
4	12/09/2003	Satisfactory	Satisfactory	0.42
5	05/24/2004	Satisfactory	Satisfactory	0.78
6	10/14/2004	Satisfactory	Satisfactory	1.04
7	06/24/2005	Moderately Unsatisfactory	Moderately Unsatisfactory	1.65
8	01/24/2006	Moderately Unsatisfactory	Moderately Unsatisfactory	1.65
9	08/01/2006	Satisfactory	Satisfactory	2.06
10	06/12/2007	Satisfactory	Satisfactory	3.18
11	03/25/2008	Satisfactory	Satisfactory	4.67
12	07/11/2008	Satisfactory	Satisfactory	5.39
13	12/11/2008	Satisfactory	Satisfactory	7.50

H. Restructuring (if any)

Not Applicable

I. Disbursement Profile



1. Project Context, Global Environment Objectives and Design

1.1 Context at Appraisal

Sector issues. The Black Sea was undergoing severe environmental degradation from unsustainable natural resource management and loss of natural habitats within its watershed. The most serious long-term problem that faced the Black Sea ecosystem was an increase in nutrient flux in major rivers such as the Danube, according to in-depth analyses. The Danube River has over 300 tributaries and contributes approximately 60 percent of the nutrient load to the Black Sea. The Danube River basin is the most international basin in the world; it covers 801,463 sq. km across 19 countries and is home to over 81 million people. The northwestern shelf of the Black Sea at the Danube River delta has suffered particular deterioration of water quality, natural habitats, and fish populations due to the effects of eutrophication from high nutrient loads.

Regional response. Growing concerns about pollution among the Danube River riparian countries led them to draw up the Convention on the Cooperation for the Protection and Sustainable use of the Danube River (1994). Similarly, the six countries bordering the Black Sea decided that a joint action was urgently needed, and signed the Bucharest Convention for the Protection of the Black Sea (1992). Both programs cite reducing nutrient loads as their priority.

Country context. The Transboundary Diagnostic Analysis (TDA) carried out under the Black Sea Environmental Program indicated that Bulgaria contributed a significant share of nitrogen (N) and phosphorous (P) to the Black Sea. Along the Bulgarian bank of the Danube, more than half the area is floodplain—about 1,280 sq. km. Over the years, the wetlands and floodplain have been drained or dyked to create arable land and to reduce malarial mosquito habitats. Now the wetlands area is about 10 percent of its original size at the turn of the century, reducing the capacity of its ecological function—water purification. Meanwhile, Bulgaria is one of the most biodiversity-rich countries on the Danube and ranks third among European countries for diversity of animals and plants. Bulgarian wetlands along the Danube provide essential spawning grounds for numerous species of fish and provide critical winter and feeding habitats for water birds migrating through the northwest shelf along Eurasia to Africa flyways.

The Government of Bulgaria recognizes that environmentally sustainable economic growth and effective natural resource management are a development priority. The country faces several challenges in its attempt to meet international commitments to reduce nutrients and conserve biodiversity. Primary among these is that water is a scarce resource in Bulgaria; per capita endowment is less than half the European country average; one-third of the country faces seasonal or permanent water shortages. In some rural settlements, the nitrogen content of drinking water exceeds safety standards. Water scarcity is aggravated by pollution, adverse hydrological changes, and the decline of quality and quantity of aquatic ecosystems. According to the TDA, Bulgaria is responsible for 7,500 tons of N and 720 tons of P that run into the Danube each year.

Properly functioning wetlands can retain and recycle nutrients found in surface water flows and offer cost-effective solutions to abate nitrogen and phosphorus loads and meet water quality standards. Therefore, Bulgaria's national plans had identified priority areas for wetlands conservation and restoration, including areas of international importance such as nesting sites for the globally endangered waterfowl and migratory birds that were later formally declared Natura 2000 sites when Bulgaria joined the EU. Multiple benefits of wetlands restoration would include: (i) decreased transboundary water pollution; (ii) conservation and restoration of the globally

significant wetland biodiversity habitats; and (iii) additional revenues from fishing and tourism for local communities living in economically disadvantaged regions of Bulgaria.

Rationale for Bank assistance. The Country Assistance Strategy (May 2002) defined Bank objectives in Bulgaria as: (i) reducing poverty and raising living standards, and (ii) supporting efforts for EU accession. The CAS operational priorities included sustainable environmental management, rural development, and building compliance with EU environmental directives. Restoring wetlands and introducing environmentally friendly farming practices were specifically referred to as priorities for Global Environment Facility (GEF) support.

Contribution to higher-level objectives

National Strategies. The Project directly supported implementation of the National Biodiversity Conservation Strategy (1994) and National Action Plan for the Conservation of the Most Important Wetlands (1995), under which Belene Island and the Kalimok/Brushlen Marshes were high priority for restoration. Belene Island is an internationally recognized breeding habitat for the endangered white-tailed eagle, and nesting herons, cormorants, glossy ibises, and spoonbills.

International Commitments. The Project helped Bulgaria foster compliance with its core obligations under Convention on Biological Diversity, the RAMSAR Convention, Convention on Cooperation for the Protection and Sustainable Use of the Danube River, Protection of the Black Sea Against Pollution, and the Odessa Ministerial Declaration on the Protection of the Black Sea Environment, among others. The Project was consistent with the Strategic Action Plan for the Protection and Rehabilitation of the Black Sea and was integral to the broader program under the GEF-co-financed Danube-Black Sea Strategic Partnership.

1.2 Original Global Environmental Objectives (GEO) and Key Indicators. The global environmental objective is to demonstrate and provide for replication of reduction of transboundary nutrient loads and other agricultural pollution flowing into the Danube River and the Black Sea basins while at the same time conserving key target threatened species in Project areas through: (i) wetlands restoration and protected areas management programs; and (ii) support for stakeholders to adopt environmentally-friendly economic activities in the two Project areas. In support of these objectives, the Project was envisaged to assist in: (i) the restoration of critical priority wetlands in the Danube River basin and piloting the use of riparian wetlands as nutrient traps; (ii) the establishment of comprehensive monitoring systems for water quality and ecosystem health; (iii) support for protected areas management planning in Persina Nature Park and Kalimok/ Brushlen Protected Site; (iv) strengthening capacity to protect and manage biodiversity and natural resources; (v) building public awareness of sustainable natural resources management and biodiversity conservation; and (vi) promoting and supporting entrepreneurial and agricultural activities within the Project region, which ensure the sustainability of natural resources and are compatible with biodiversity conservation objectives. These project objectives were achieved and sustainability of activities was provided for through EU and national funded programs.

Key performance indicators included: (i) gradual improvement in ecosystem health of restored wetlands; (ii) establishment of effective control structures and monitoring systems; (iii) adoption of Management Plans (MPs) for PNP and KBPS, based on broad stakeholder consensus and support; (iv) establishment of effective protected area (PA) administrations to implement MPs; (v) establishment of effective, replicable models of participatory and integrated management of wetlands; (vi) improved agricultural practices in PNP and KBPS; (vii) increased local awareness

and support for biodiversity conservation; (viii) increased dialogue on transboundary water quality and regional natural resources management issues.

1.3 Revised GEO and Key Indicators, and reasons/justification. Objectives and indicators were not formally revised, however, a special effort was made to refine project monitoring indicators. During implementation some indicators were realigned to strengthen focus on critical Project deliverables and to make them more focused on intermediate outcomes. Some indicators were combined to avoid duplication and shortened. For example, two indicators were merged into one GEO indicator: “Improved agricultural practices in Belene and Kalimok and increased local awareness and support for biodiversity conservation” to strengthen the link between improved agricultural practices due to increased awareness. Two intermediate outcome indicators were added to monitor implementation of the SGP (Small Grants Program) and FTSP (Farmer Transition Support Fund), and namely “Implementation of small grants program for biodiversity conservation” and “Implementation of farmer transition support fund program”. A detailed table comparing the indicators in the PAD and ISRs/ICR is shown in Annex 2 with explanations provided.

1.4 Main Beneficiaries. The primary targeted Project beneficiaries were PNP and KBPS private farmers and rural households. The wider array of Project beneficiaries included: (i) global-level: populations of other riparian and littoral states of the Black Sea benefiting from cleaner water and reduced transboundary pollution of the Danube River and the Black Sea, as would Bulgarians living downstream from restored wetlands; (ii) national-level: many citizens would broadly benefit from the improved ecosystem productivity within PNP and KBPS and the demonstration of improved agricultural productivity resulting from better agriculture practices; and (iii) local-level: local communities would benefit from increased fishing and cleaner water; farmers would benefit from more efficient agricultural practices, such as organic waste management, improved grazing practices, crop rotation, and organic product sales to raise local incomes; and institutions such as protected areas administrations/regional environmental inspectorates, would be strengthened.

1.5 Original Components. The Project comprised three components as outlined below.

Component 1: Wetlands Restoration. This was the most innovative aspect of the Project with high replication value throughout Bulgaria and the region. The component aimed to restore 2,340 ha of former marshes in two sites—Belene Island within PNP, and Kalimok/Brushlen Marshes within KBPS, to demonstrate using wetlands as nutrient sinks. The GEF funds would finance consultancy services to elaborate detailed engineering designs; conduct baseline surveys; and supervise construction and civil works, which would include building and rehabilitating small infrastructure to regulate wetlands water flows and allow controlled flooding to optimize nutrient trapping, biodiversity restoration, and fish production, and minimize risks to agricultural areas.

Component 2: Protected Areas Management. This component supported the next step towards sustainable resource management and protection within the PNP (21,700 ha) and KBPS (6,000 ha), including: (i) developing management plans for PNP and KBPS; (ii) implementing priority actions from these plans to manage the restored wetlands, including operation and maintenance of flood control infrastructure; (iii) establishing a contingency relief fund and a fund to help farmers transition to conservation-compatible economic activities; (iv) strengthening water quality and biodiversity monitoring; (v) conducting public awareness and environmental education programs, including small grants to promote biodiversity conservation; and (vi) strengthening land/water management institutions to ensure sustainability of restored sites and the surrounding landscape.

Component 3: Project Coordination, Management and Monitoring. This component supported the operation of a Project Coordination Unit (PCU) within the Ministry of Environment and Water (MoEW) to manage and monitor Project activities.

1.6 Revised Components. Project components were not revised. However during the Mid-Term Review (MTR), Government and the Bank agreed that the Project priority was restoring wetlands, and funds were reallocated from the Small Grants Program for Biodiversity Conservation and the Farmer Transition Support Program, since their objectives had been largely achieved, while the funding for restoration was not sufficient. The contingency relief fund was dropped because no private land had been included in wetlands restoration, hence no compensation funds were required.

1.7 Other significant changes. During implementation, the following adjustments were made to the Project:

After the Mid-Term Review in July 2006, Government requested and the Bank agreed to a reallocation of available grant resources to finalize wetlands restoration, which was the main project activity. Some US\$ 2.04 million was reallocated from the Small Grants Program for Biodiversity Conservation and the Farmer Transition Support Program to compensate for a funding shortfall created by US dollar depreciation over the course of project implementation, and a 30 percent increase in construction prices during the same period.

Additional Government funding. Despite the reallocation of project funds, there was still a budget shortfall of US\$1.2 million equivalent, or 66 percent of the original value of the GEF grant which was lost due to currency devaluation. This significant shortage of funds could have derailed critical Project deliverables, such as wetlands restoration. However, the Bulgarian MoEW made up the shortfall of US\$1.2 million equivalent through the State Enterprise for Financing Environment Project. This unprecedented gesture of Government commitment supported completion of wetlands restoration—the main Project activity.

Extended implementation period. The Project closing date was extended by nine months, from March 15, 2008 till December 15, 2008. The delay compensated for the slow project progress during early implementation, due to cumbersome administrative procedures, and ensured successful completion of construction works in the Kalimok area (see *Section 2.2*). These restoration works were seasonal in nature and construction was halted frequently when groundwater levels rose, during rainy weather, cold temperatures, and bird nesting periods; during 2008, these works could be carried out only in summer when meteorological and hydrological conditions were favorable.

The above changes did not require Board approval.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

Project environmental and development objectives were relevant. The GEO and PDO were clear and important for Bulgaria because they reflected priorities for environmentally sustainable rural development and biodiversity conservation and were consistent with Bulgaria's EU accession objectives at the time. The long-term Project effects include sustainable wetlands capacity to perform critical environmental functions, improved water quality, and increased rural incomes. Project objectives were to be achieved directly through Project-financed investments and

indirectly through demonstration impacts. The objectives were responsive to Recipient circumstances, which included: (i) sufficient locally available technical knowledge; (ii) successful outcomes of donor-financed conservation programs; and (iii) Project objectives were consistent with national programs and Bulgaria's international commitments. The Project addressed CAS priorities (see *Section 1.1* above), followed GEF Operational Program No. 8 (Water body-based) of the International Waters Focal Area, and was consistent with OP No. 2 (Coastal, marine, and freshwater ecosystems) of the Biodiversity Conservation Focal Area. The objective of the main project activity – wetlands restoration - was to contribute to nutrient reduction (except to increase in biodiversity). However, sufficient data on nutrient reduction have not been available during the project implementation period as the construction works for wetlands restoration were completed only in the end of the project. Regular nutrient reduction monitoring for a number of years will be necessary to show stable trends and unequivocal results.

The analytical foundation was solid. The Project built on international studies on regional transboundary water pollution including: (i) Trans-boundary Diagnostic Analysis of the Black Sea Environmental Program (1993-99); and (ii) Evaluation of Wetlands and Floodplain Areas in the Danube River Basin under the Danube Pollution Reduction Program (UNDP/GEF, 1999), which recommended 17 wetland/floodplain sites along the Danube for rehabilitation, based on their ecological importance, nutrient removal capacity, and role in flood protection, and two sites were selected for restoration under the Project. The Project also relied on studies co-financed by a GEF Project preparation grant. All these analyses informed Government design choices for the Project.

The Project design **incorporated lessons learned** from earlier operations in the sector, including the following: (i) *participatory preparation processes* to ensure key stakeholders were involved early on in formulating the Project concept, including representatives from the water, agriculture, and environment sectors, and local communities; (ii) *extensive public awareness* programs to disseminate Project information to stakeholders to inform their involvement and enable successful replication; (iii) *decentralized Project management responsibility* to build local capacity, ownership, and commitment; (iv) *incorporating pressing local socioeconomic issues* to successfully mainstream sustainable resource management into regional planning; and (v) early focus on *replication of outcomes and their sustainability* beyond the life of the Project.

The Project **technical design** was sufficiently linked to the GEO and PDO. Analysis of alternatives at appraisal was adequate. The selection of interventions and their scope and regional focus were appropriate and sufficiently substantiated. The design of **implementation arrangements** for the Project was adequate and ensured single-point responsibility for deliverables and budget control to the extent possible. In the early years of project implementation the corresponding administrative procedures in MOEW required to effect payments were cumbersome leading to some delays, however this also improved over time. A national Project Steering Committee (PSC) facilitated stakeholder coordination. Local Consultative Councils (LCCs) were established in both Project regions to support participatory implementation on the ground. The Project financed the PCU based in Sofia.

Appraisal expectations for Project outcomes were overly optimistic as they did not foresee the initial project implementation delays (due to cumbersome administrative procedures, land ownership issue and controversies over restoration design in the second site), and did not account for the longer period of time for the effects of wetlands restoration to be fully manifested. As the construction works for wetlands restoration were completed only in the end of the project (due to initial project delays), sufficient data on nutrient reduction during the project implementation period were not available. Overall, Project activities were reasonably aligned with Recipient

implementation capacity, although the Project was technically and institutionally demanding due to: (i) innovative activities related to wetlands restoration and mainstreaming sustainable farming and land management in agricultural practices; and (ii) the complex institutional setting, involving multi-stakeholder participatory arrangements for local implementation.

Government commitment was demonstrated by provision of additional financing for completing wetlands restoration, pro-active Project preparation, and timely delivery of documentation for appraisal. Project identification and preparation were highly participatory. Government worked diligently to facilitate coordination with national agencies, municipalities, NGOs, and local communities to ensure adequate arrangements for stakeholder involvement were established prior to implementation. During Project preparation, the Government supported broader efforts to address Project objectives, including the 1999 inter-ministerial declaration on wetlands in the Bulgarian Danube Basin, the 2000 Lower Danube Green Corridor Declaration, and the 2001 Declaration on Environment and Sustainable Development in the Carpathian and Danube Region, among others.

Assessment of risks. Critical Project risks at appraisal were rated as moderate. Identified risks and proposed mitigation measures (ref. *PAD Section F.2*) were adequate. Risks related to stakeholder support and involvement, identified at appraisal, were mitigated through the Process Framework and the participatory approach to wetlands restoration design. However, the operational complexities of participatory processes and stakeholder consultations (referred to in 2.2) that contributed to implementation delays were underestimated. The adopted PA Management Plans for the PNP and the KBPS were subject to extensive public consultations. Wetland restoration design physically excluded flooding and adverse impacts on private lands. Currency devaluation was not anticipated because the SDR and USD were considered stable currencies, and in any case, there was no currency choice. Risks mentioned in the PAD did not occur. It is not yet known whether the identified risk, “Nutrient stripping potential of wetlands not as great as originally expected,” was accurately assessed, as the full effects of restoration require longer term monitoring and will be evident only 10 years after the first flooding.

The Project was not subject to a Quality-at-Entry review by QAG.

2.2 Implementation

The Project was implemented successfully. During implementation, the Project was not formally restructured, nor were there any significant changes to the Project design. However, due to initial delays in implementing the Wetlands Restoration Component due to cumbersome administrative procedures, the Project was considered “at risk” from June 2005 to August 2006, during which time “Implementation Progress,” and “Progress Toward Achievement of the Development Objective” were rated Moderately Unsatisfactory. During the Mid-Term Review in July 2006, the Bank and Recipient agreed to change the emphasis on some activities (see *Section 1.6* above), which restored satisfactory implementation progress.

During implementation, reaching agreement among Project stakeholders was difficult on the wetland restoration design, especially for the second site in Kalimok. This activity was central to the Project, had significant potential impact on local livelihoods, and was crucial for building beneficiary Project ownership. Hence there was a clear need and commitment to develop technically and operationally sound restoration plans that were fully endorsed by authorities, municipalities, local communities, and NGOs. The operational complexity of participatory processes and stakeholder consultations, procurement delays, and wide dissemination of documentation required among government agencies, created an 18-month delay in developing an acceptable restoration design. To resolve design controversies, the Bank invited an independent

international expert to facilitate stakeholder consensus. The outcome confirmed the choice of a ‘controlled restoration’ option, which was the original design and satisfied the need for human safety and habitat restoration.

A misunderstanding about land ownership in Kalimok contributed to implementation delays in the early years and required Bank guidance to resolve. In 2003, by mistake, MoAF allocated land to landless local inhabitants in areas that were designated for restoration. However, as it turned out, the MoAF did not own the land and in any case, the land proved unsuitable for cultivation. The Bank followed up with discussions at the MoAF to clarify the issue and ensure ministerial support. During the MTR, the Bank social scientist played an important role in resolving this issue by visiting the site and seeking clarification with the regional structures of MoAF, which terminated the contracts with these landless farmers and substituted arable land in another area.

Overall, the following *positive* factors have contributed to successful Project implementation:

(i) *Participatory approach.* Extensive stakeholder involvement took place during design and implementation at the national, regional, and local levels, which created strong ownership and sustainable Project outcomes.

(ii) *Counterpart co-financing* was timely and adequate. As indicated in *Section 1.7* above, the overall co-financing provided by Government substantially exceeded amounts agreed at appraisal. In particular, Government compensated for the US\$1.2 million equivalent losses incurred by the devaluation of the GEF grant currency (see below).

(iii) *Effective Mid-term Review and proactive Bank supervision.* Bank and Government cooperation on the MTR was instrumental in timely attention to critical implementation issues. MTR outcomes included: (a) reaching consensus on the restoration design in Kalimok; (b) reaching agreement to focus on the main Project activity—wetlands restoration—and reallocate all available funding to this activity; and (c) streamlining administrative procedures for Project-related approvals and Ministerial clearances. Bank supervision was proactive and continuous and the Country Office-based Project task team provided essential guidance following the MTR, which helped ensure timely and effective Recipient responses to operational circumstances, and brought the project back to ‘Satisfactory’ implementation progress.

The following *negative* factors affected implementation, as well:

(i) *Devaluation of the GEF grant currency.* On January 13, 2005, the Grant amount, which had previously been recorded in Special Drawing Rights (SDR), was changed to US dollars due to a GEF operational policy shift. Devaluation of the grant currency (both SDR and US\$) since Project inception reduced the real value by approximately US\$1.2 million equivalent; the MoEW contributed sufficient resources to make up for this shortfall which allowed planned project activities to be completed.

(ii) *Cumbersome administrative procedures.* MoEW-established requirements for processing Project-related documentation were overly complex and created lengthy delays in the initial Project phases, due to required ministerial clearances for procurement and consultant payments. However, these issues were largely resolved following discussions between the Bank and the Government during the MTR. The Bank emphasized the limited timeframe for Project completion and intervened when delays occurred.

The Project was not reviewed by QAG for the quality of supervision.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

M&E design. The Project M&E design was appropriate but stronger on process orientation or institutional capacity development than shorter-term project outcome measurements. Indicators were based on the “logframe” model, without baselines or target values. During project implementation indicators were neither formally revised, nor changed in substance. However during implementation a special effort was made to refine indicators to avoid duplication (detailed explanation and table of indicators in the PAD and ISRs/ICR) is given in Annex 2).

According to the Monitoring Program prepared under the project, nutrient reduction monitoring would be carried out twice every year: in April-May and in September-October. Eighteen main indicators for monitoring are defined (e.g. phosphorous, nitrates) and the locations in the wetlands where the samples would be taken are identified. The monitoring would be carried out, using equipment provided by the PHARE program, by the Executive Environment Agency with the MOEW through its regional laboratories (in Pleven and Russe). The results would be analyzed by the Danube Basin Directorate and compared to baseline data collected in 2005. The biodiversity monitoring would be carried out by the PNP and by the Kalimok-Brushlen Association.

M&E implementation. The PCU was in charge of overall M&E and data collection appropriate to the indicators; each of the PNP and KBPS administration units, Regional Inspectorates of Environment and Water in Pleven, Veliko Tarnovo, and Rouse, local stakeholders, and project beneficiaries were responsible for reporting progress on project components.

Initially, during implementation there were delays in gathering baseline environmental data and establishing monitoring databases, but after the MTR in July 2006, the M&E framework was utilized regularly to inform Project decision making and resource allocations. In addition, the Bank phased out Project Status Report (PSR) and phased in Implementation Status and Results Reports (ISRs), which required regular updates of M&E information. This was a useful tool for the supervision team to provide the PCU with feedback and guidance on focusing its efforts.

The Project successfully established capacity to monitor the long-term environmental impacts of wetland restoration by providing protected areas (PAs) and RIEWs with critical monitoring equipment and staff training. Implementation of the nutrient reduction monitoring was tested directly after the construction completion and first test flooding in Belene. This monitoring was carried out as a first preliminary testing of the monitoring program on July 29-30, 2008. In the second site of Kalimok-Brushlen construction works were finalized in December 2008, a few days before the project closed, when a test flooding was done to test the hydraulic equipment. Therefore there are no sufficient nutrient reduction monitoring data available during the project implementation period. The reasons for this are the following: 1) Construction works for wetlands restoration were finalized in the end of the project so it was not possible to monitor the effects of the restoration before it was completed and 2) To identify stable trends and have unequivocal data on nutrient reduction several years of regular monitoring are needed because a) to establish trends regular continuous monitoring is needed and b) because for wetlands to be restored and for the full effects of wetlands restoration to be measured 10-15 years are needed. The monitoring challenge was not unique to this project. Subsequently the GEF agreed that individual projects would have a hard time demonstrating this at the Danube/Black Sea level; and later generation projects under the same Black Sea/ Danube Framework focus on measurement of local impacts, with a proxy method developed for extrapolating results to the wider basin. Nutrient monitoring in both sites in 2009 will be carried out and analyzed in July as May-April 2009 Danube water levels were deemed to be too high by the Executive Environment Agency. The biodiversity monitoring was easier to implement as nesting pairs of birds and increase of fish numbers were

easier to observe and document by the PNP. The regular hydro-chemical, hydro-biological, and biodiversity monitoring, initiated under the Project and supervised by the MoEW, is likely to be instrumental to inform decision making for future wetland restoration programs in the Danube River basin.

2.4 Safeguard and Fiduciary Compliance

The operation complied with applicable safeguard and fiduciary requirements. There were no deviations or waivers from Bank policies and procedures.

Safeguards. The Project triggered OP 4.01, Environmental Assessment, OP 4.12, Involuntary Resettlement, and OP 4.09, Pest Management. Throughout implementation, compliance with policies on Involuntary Resettlement and Pest Management was rated *Satisfactory*. Compliance with the Environmental Assessment policy was considered *Unsatisfactory* from September 2004 to June 2005; during this time, clarity was lacking regarding managing environmental impacts from the anticipated renewed construction of the Belene Nuclear Power Plant adjacent to some restored wetlands. Concerns were raised about potential discharge of hot water from the power plant, which would pose significant risks to wetlands environmental sustainability. Government provided an EIA for the power plant, which was satisfactory to the Bank. Otherwise, compliance with EA policy was rated *Satisfactory*.

No resettlement occurred. There were initial concerns that mosquito populations would increase after wetlands restoration, but the growing population of the sunbleak fish, which consumes mosquito larvae, contributed to the decrease of mosquitoes. The experience in Persina also showed that mosquito numbers decreased after restoration because the water in the wetlands is circulating and not stagnant. The PNP established that the main sources of increased mosquitoes are mainland farmers' storage of wastewater.

Fiduciary. Financial management throughout implementation was rated *Satisfactory*. Procurement implementation was satisfactory overall, but the Project Status Report (PSR) rating for "compliance with agreed procurement schedules" was downgraded to *Unsatisfactory* during late 2003-early 2004 due to delays in procuring restoration works. The Project was audited each year and subject to regular Bank procurement and disbursement reviews, which confirmed the adequacy of internal controls. The Project had no misprocurement, or qualified audits in any financial auditing reports.

2.5 Post-completion Operation/Next Phase

Project activities were fully integrated into beneficiaries' regular operations, including PAs, local communities, and MoEW territorial branches. Investments on the ground supported Project beneficiaries' core long-term functions and enjoyed strong local ownership, which means successful operation of the restored wetlands is likely to continue now that technical and staff capacity is established, an infrastructure and management regime is in place, and Government commitment, including budgetary allocations, is strong.

The MoEW will continue to monitor ecosystem health improvements of the restored wetlands (key Project GEO indicator) to collect data on actual environmental benefits and impacts of restoration. Arrangements for the environmental monitoring are established and functioning, and the required technical and staff capacity and procedures are in place.

Follow-up activities are highly desirable to replicate successful approaches to wetland restoration, support critical sector improvements, and utilize technical knowledge, institutional momentum, and stakeholder commitment raised by the Project. National and regional stakeholders have expressed interest in several follow-up activities, which could be financed from the national and EU sources (see *Annex 6*). Funding has been approved for the first follow-up Project, 'Kaikusha,' under EU life+ program.

This Project has helped promote new projects in two ways. First, through projects under the two small grant programs, plus training stakeholders and beneficiaries, who acquired experience in project preparation; and second, through study tours and workshops that helped develop international contacts. Most grant program beneficiaries have applied for funding under EU and national programs. One example is an enterprise that produces ecobriquettes, which was established under the FTSF and expanded under a subsequent EU-funded project. Following stakeholders visits to the Donau Park in Austria, and Po Delta Park, useful contacts were established. As a result, links were established between the Project Network of PAs under the EU INTERREG Program and PAs in the Danube, and Bird Migration under EU LIFE+ involving the Po Delta and WWF Romania. (see *Annex 6*). The first follow-up project-'Kaikusha'- under EU LIFE+ program has been approved for funding. WWF Romania, in partnership with Persina Nature Park Directorate, applied to the EU LIFE+ program with a project to restore Kaikusha wetlands to conserve small cormorant and ferruginous duck habitats; implementation began in 2009, and two other replication projects are under consideration (Garvansko Blato, Pozharevsko Blato).

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design, and Implementation

Project objectives remain highly relevant in the present national, regional and global context. The PDO and GEO are in line with the FY07-FY09 Country Partnership Strategy for Bulgaria and address Bank sectoral operational priorities in natural resource management and protection, biodiversity conservation, and rural development. Development priorities critical for Bulgaria's growth and successful integration in the EU include conserving globally significant biodiversity, reducing polluting nutrient loads in the Danube River and their impacts on the Black Sea, improving and strengthening the healthy functioning of freshwater and wetland ecosystems, replicating good agricultural practices throughout the Danube River Basin, and fostering sustainable natural resource management. The original Project design and implementation arrangements remained relevant throughout implementation with no significant changes since appraisal in Recipient circumstances and operational environment. Implementation arrangements were functioning as planned and aligned with available capacity.

3.2 Achievement of Global Environmental Objectives

The Project GEO and PDO were achieved. Project deliverables *against specific GEO indicators* identified in the PAD are summarized below.

GEO Indicator 1: Gradual improvement in ecosystem health of restored wetlands (definition of this indicator is shortened compared to the text in the PAD and explained in Annex 2).

The Project piloted wetland restoration on 4,035 ha of former marshes (2,340 ha were originally planned) and brought under improved management and protection at least 27,700 ha of protected areas (PNP and KBPS) with globally significant biodiversity habitats. In April 2008, wetland restoration works and test flooding were completed on Belene Island; test nutrient reduction

monitoring was conducted to test the nutrient reduction monitoring system. Two months after the flooding the PNP reported an increase of key indicator species, and an increased diversity and quantity of bird and fish species. According to PNP reports, after the flooding by June 2008, 10 new fish species entered the restored area. Nesting pairs of the ferruginous duck increased from 5 to 50, and mallard ducks from 16 to 400. Some rare bird species have returned, including the purple heron and glossy ibis. In June 2008, the restored Belene wetland site was officially opened. At end-2008, wetland restoration at the Kalimok-Brushlen site was completed and the first test flooding took place in December 2008. Belene Island and Kalimok-Brushlen Protected Site have been designated 'NATURA 2000' sites and included in Bulgaria's submission to the European Commission. Management Plans have been developed to ensure the sustainable long-term operation of the wetlands, and to meet EU requirements for management plans at Natura 2000 sites.

A full assessment of environmental improvements exceeds the Project implementation period because several years of data are needed, especially on nutrient retention. Therefore, it is important for the Recipient to monitor environmental benefits and impacts continuously to collect data that will be useful to future projects. The Project succeeded in establishing monitoring capacity to track long-term environmental impacts of wetland restoration by providing PAs and RIEWs with critical monitoring equipment, monitoring programs, and staff training.

GEO Indicator 2: Improved agricultural practices in Belene and Kalimok and increased local awareness and support for biodiversity conservation (definition of this indicator is different from the PAD and consists of merged indicators as indicated in the table in Annex 2).

The Project helped farmers transition to environmentally friendly agricultural practices. In the two restoration sites, the FTSF program successfully implemented seven 'Best Agricultural Practices' demonstration projects. Grants of US\$5.3 to US\$47.1 thousand supported activities in organic farming (4 projects), production of the packaged fuel (1 project), pasture restoration (1 project), and manure management (1 project). Grants enabled farmers to adopt organic fruit production and three farmers became certified organic producers. One project established an enterprise utilizing waste material from the wetlands (harvested reeds, discarded wood, etc.) to produce charcoal briquettes and other packaged solid fuels, which will help remove nutrients from the wetlands and provide a renewable energy source for local people. All of these projects will help reduce regional nutrient and pesticide pollution and improved farmers' incomes by opening new organic markets. The FTSF program provided a catalyst for farmers' ability to apply for funding from national and EU sources, including the Structural Funds Program for Development of Agriculture and Rural Areas.

Through the Small Grants Program (SGP), the Project supported 55 small projects in a wide range of local initiatives promoting biodiversity conservation at both restoration sites with more than US\$150,000. Grants ranging from US\$200 to US\$9,600 supported individuals and local organizations for activities in environmental education, eco-tourism and public conservation events, which increased public awareness and support for biodiversity conservation and sustainable natural resources management among local stakeholders, and strengthened community partnerships for conservation. The SGP involved 23 NGOs, 65 leading local experts, nearly 5,500 students, and 250 children. Some local participants who completed projects are applying for further funding through EU programs, using experience and skills developed under the SGP.

A key Project success has been engaging local stakeholders throughout the restoration program. The highly participatory approach helped overcome local people's initial skepticism about the Project. This skepticism was evident during the meetings with local people and authorities during

project implementation. The idea to restore wetlands that were considered an “evil”, a useless wasteland that was drained in previous times (before 1989) , is quite innovative. By the end of the Project, local communities, including mayors and ministries, were highly supportive of Project activities and many local participants were seeking additional funds to expand wetland restoration. This was evident during the meetings in the end of project implementation. The greatest evidence is the fact that the wetlands were restored – this would not have been possible without the support of authorities and the local population. The fact that local stakeholders are now engaged in other wetland restoration projects also speaks for itself. The participatory development of Management Plans for the PNP and KBPS contributed greatly to these results, as well as the many international exchanges, participations in workshops and study tours. Through such activities stakeholders could see how wetlands are used in other countries – their environmental and economic benefits.. Project outcomes, deliverables against outcome indicators and outputs by components are detailed in *Annex 2*.

3.3 Efficiency

This Project included a GEF grant, counterpart funding from the Recipient Government and municipalities, and donor co-financing from Poland and Hungary Aid for Restructuring of the Economies (PHARE) and the Government of Austria. Because this Project emphasized wetlands restoration and biodiversity conservation, rather than revenue generation, no economic and financial analyses were carried out during Project appraisal, but the PAD included analyses of incremental costs and cost-effectiveness for removing nutrients. Project investments were efficient. Underlying considerations for the assessment are in *Annex 3*.

3.4 Justification of Overall Outcome Rating

Satisfactory. The Project was highly relevant in Bulgarian and global development contexts, implemented efficiently, and fully achieved its objectives. The Project, one of very few in the Bank’s Bulgarian portfolio that targets wildlife habitat restoration, created important environmental benefits, including the return of rare species such as the white-tailed eagle, the ferruginous duck, and Dalmation pelican; fish populations also returned and increased, including wild carp, sunbleak, and weather fish. Before the Project, the public viewed wetlands as an environmental eyesore but the Project succeeded in changing that perception to a realization that wetlands provide crucial environmental and economic benefits.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development. The PAD provided an accurate social analysis recommending the right interventions for the Project (see section on mosquitoes in 2.4). Project activities have already generated significant social and economic benefits, which are expected to continue to develop. A direct benefit of wetland restoration will be increased fish spawning, which will raise the level of fish stocks in the Danube River, improving fishing and opportunities for environmental tourism in the region. Establishing environmentally sound farming techniques and organic certified crops have potential to increase agricultural product value and revenue for farmers. A notable Project success was establishing an enterprise that recycles waste materials such as straw, hemp, and reeds from the wetlands to produce fuel briquettes, and its operations were expanded using EU funding. The PAs have increased capacity to expand ecotourism potential such as bird watching due to the substantial increase of rare bird species. However, the Project’s most important achievement has been the turnaround in perception of wetlands among local and central authorities. Wetlands used to be seen as mosquito-ridden wastelands that needed to be drained. The Project made local people aware that wetlands are not only a beautiful wildlife habitat, but also contribute to sustainable

development and economic growth. The environmental and economic benefits of wetlands include their role as a buffer against floods, especially important due to climate change. The attitude of local authorities and inhabitants to wetlands restoration changed from skepticism to support which was clearly expressed during the meetings with the Bank team. This support made the restoration possible. Changed perception, study visits, and grant programs helped community organizations and other Project stakeholders to strengthen capacity enough to pursue new funding opportunities with potential to continue and expand their work.

(b) Institutional Change/Strengthening. The Project supported the following long-term institutional improvements: (i) significantly strengthened PNP and KBPS, increasing their operational effectiveness through training, provision of facilities, monitoring equipment, and boats; (ii) increased capacity among government entities (MoEW, SFA, RIEWs, etc.) for participatory decision making and implementation, and effective stakeholder coordination; and (iii) provided stakeholders with capacity building and training to replicate activities for wetland restoration and biodiversity conservation along the Danube River Basin. Lessons learned and experiences were shared among participants through study tours and exchange visits to Italy, Romania, Austria, Greece, and several international conferences. Staff of MoEW and MoAF were trained under the Project, including in wetlands management. During the project closing workshop, the International Commission for the Protection of the Danube River commended the Project for institution building results. Two staff from the PCU remained to work in the area, including in the PNP.

(c) Other Unintended Outcomes and Impacts. The Project was a mechanism for stakeholders to seek new funding opportunities arising from wetlands restoration, biodiversity conservation, heightened awareness, and pollution reduction. New projects are seeking to expand restoration activities in Bulgaria and participate in broader international conservation initiatives.

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

On November 17, 2008, the World Bank and MoEW hosted a final stakeholder Project workshop in Sofia with participants from MoEW, Council of Ministers, SFA, PNP and KBPS, mayors, NGOs, and local stakeholders. Participants discussed Project achievements, lessons learned, and proposed follow-up activities. Key workshop findings are in *Annex 6*.

4. Assessment of Risk to Development Outcome.

Low. Most Project environmental and development outcomes are related to the successful operation of the restored wetlands in the Belene Island and Kalimok-Brushlen areas. Overall, Project outcomes are expected to be sustainable in the long term as the primary Project technical and institutional deliverables are: (i) aligned with and supportive of Government sectoral policies; and (ii) fully mainstreamed into regular governmental operations and responsibilities. At Project completion, arrangements and institutional responsibilities for continued operation of the restored wetlands were clearly delineated. Ensuring Project sustainability is also likely a Government priority due to Bulgarian obligations as an EU Member State to maintain the ecological network. Sustainability is also confirmed by ongoing efforts to replicate Project results and follow-up. Specific considerations for applying individual risk criteria are summarized in *Annex 2*.

5. Assessment of Bank and Recipient Performance

5.1 Bank

(a) Bank Performance in Ensuring Quality at Entry. *Satisfactory.* Overall, Bank performance in identifying, preparing and appraising the Project was satisfactory and the resulting Project was highly relevant to Bank and country priorities. The Bank conducted appropriate analyses of current biodiversity issues and recommended participatory processes among key stakeholders, which was key to reaching agreements on sensitive issues regarding biodiversity conservation and wetland restoration. The Bank correctly focused efforts on strengthening physical and human resources for working with critical wetlands and ensured satisfactory quality-at-entry, as teams collaborated proactively on all issues that arose during preparation.

The innovative nature of Project activities made Project preparation challenging for the Bank and the Recipient so Project start-up was relatively slow and required extensive support from a large multi-disciplinary Bank team. The Recipient had to learn and adapt to Bank policies and requirements and develop operational procedures for Project implementation arrangements, including technical oversight, procurement planning, and financial management, among others.

(b) Quality of Supervision

Satisfactory. Since Project inception, Bank supervision maintained a strong *focus on development impact* and achieving Project environmental and development objectives. Implementation problems were identified and addressed adequately and proactively in a timely manner. Guidance for the Recipient and follow-up on agreed actions were adequate. The Bank helped solve problems such as the final decision on the restoration design in the second site by involving an independent internationally recognized expert during the MTR. The expert and the Bank team consulted with all stakeholders to achieve consensus on an optimum design. Government confirmed their decision to proceed with controlled restoration, which respects both restoration of habitats and human safety. The rejected option was completely breaking down the external Danube dyke, which was unacceptable to the authorities and local people.

Supervision inputs and processes were appropriate. The Bank was responsive to Recipient circumstances. Shortly before the MTR, task team leadership was transferred to the country office and enabled more frequent supervision support, effective communication, and continuous dialogue, which improved implementation progress, resolved outstanding issues on restoration design, and clarified land ownership uncertainties in the restored area. When the Recipient found Project implementation challenging, dialogue with the Bank, plus Bank technical assistance supported the Recipient with an appropriate skill mix from the Bank multidisciplinary team. Bank staff time in the field, supervision mission timing and frequency, and critically timed technical guidance were adequate. When financial management and procurement oversight were decentralized to the Bulgaria Country Office ensuring closer supervision and more effective communication, Bank guidance was also more efficiently provided.

Fiduciary and safeguards aspects of the Project were supervised properly. Project performance reporting was satisfactory. As Project completion neared, the Bank and the Recipient reviewed specific requirements for adequate transition arrangements to support continued Project operations and sustainability of Project results.

(c) Justification of Rating for Overall Bank Performance

Satisfactory. Throughout implementation, the Bank provided technical and administrative guidance. The Project fully complied with all applicable policies and procedures.

5.2 Recipient

(a) Government Performance

Satisfactory. Overall, Government demonstrated strong Project ownership and commitment to achieving Project environmental and development objectives, and actively supported sector policies consistent with the Project objectives. Government-level stakeholder involvement was adequate and required inter-ministerial and donor coordination and was reasonably effective. All Project-related fiduciary responsibilities were met. Project budgetary co-financing was sufficient and timely; Government also provided substantial additional financing of US\$1.2 million equivalent for a Project budget shortfall due to devaluation of the GEF grant currency. These additional resources were critical to ensure successful Project completion.

(b) Implementing Agency Performance

Satisfactory. The PCU within the MoEW comprised qualified technical professionals and administrative staff who demonstrated a high degree of dedication during Project preparation and implementation. The MoEW provided active and continuous Project leadership and focused on achieving Project environmental and development objectives. Strong MoEW commitment was essential for Government to mobilize substantial additional co-financing. The Project was prepared and implemented in a highly participatory manner, which was crucial for successful completion. The Project ‘at entry’ was ready for implementation; its technical and institutional designs were relevant; and anticipated counterpart co-financing and stakeholder participation were secured. Implementation arrangements were sound and aligned with objectives, design, and available capacity. Project administration of fiduciary issues was satisfactory.

Most implementation issues were addressed punctually; except during early implementation when delays occurred in MoEW Project-related document processing, reaching consensus on restoration designs, and addressing land ownership issues. However, during the MTR, these matters were resolved. Project design was innovative for Bulgaria, which required a steep learning curve for the Recipient during Project preparation and early implementation because public support had to be secured for the restoration. Administrative procedures and processing arrangements for implementation of several activities had to be streamlined, which resulted in a relatively slow start up for the Wetland Restoration Component.

(c) Justification of Rating for Overall Recipient Performance

Satisfactory. Overall, Recipient performance is considered satisfactory given the high level of Government commitment, substantial funding for execution, satisfactory performance of line agencies, high level of results, and high sustainability of impacts generated.

6. Lessons Learned

Key lessons learned from the Bulgaria Wetlands Restoration and Pollution Reduction Project are summarized below.

1. *Participatory implementation.* Participatory approaches to wetland restoration design were critical for Project success, which hinged on changing people’s perceptions of wetlands, and gaining the full support for restoration among authorities and stakeholders. PA Local Consultative Councils and public awareness campaigns effectively supported stakeholder involvement. The established panel of experts was instrumental in providing independent assessments that balanced the best interests of local stakeholders and Government. Skepticism about wetland restoration among stakeholders transformed into strong support through their early involvement in planning and decision making processes. The KBPS adopted innovative management arrangements—a group of diverse stakeholders was formalized into a management

team, resulting in strong local commitment to the Project. For community-level investments that affect multiple local interests, the participatory approach establishes strong Project ownership and effective cooperation among local stakeholders. However, participation lengthens implementation time—sometimes one to two years—and the participatory approach requires more focused public awareness activities. In hindsight, the project should have included a comprehensive and professional Public Awareness Campaign.

2. *Small grant programs.* Linking Small Grants and Farmer Transition Support Programs to the broader objective of wetlands restoration was highly beneficial to local communities to ensure: (i) commitment to common goals; engagement with the main restoration activity and (ii) raising public awareness of environmental and conservation issues. If well targeted and managed, the community-level grant programs financing local initiatives on the ground can be effective to engage diverse local stakeholders (communities, farmers, etc.) with the main Project activity and to foster stronger public commitment to the Project objectives.

3. *Wetland restoration and Project benefits.* The Project region had lost over 80 percent of its floodplains and wetlands and restoring these is a significant environmental achievement. This Project focused on wetlands potential to reduce nutrient loads; however, the wider environmental benefits, especially for conservation of biodiversity and reproduction of bio-resources such as fish and birds, have produced additional benefits. The Project achieved more than wetlands restoration, it also improved PA management beyond the restored sites and implemented programs to help farmers reduce adverse environmental impacts from agricultural activities. Farmers adopted measures consistent with Best Agricultural Practices, which could further reduce nutrient releases, and other beneficiaries applied for similar projects funded by the EU and national programs.

4. *Monitoring and Evaluation.* A full assessment of environmental improvements, following restoration of habitats such as wetlands, often requires more time than the Project implementation period. As wetlands restoration was completed only towards the end of the Project, sufficient detailed monitoring to provide indisputable evidence of nutrient reduction was not available during project implementation. Preliminary PNP data revealed substantially increased fish and bird breeding two months after the first flooding, but several years of data would be necessary to confirm results for nutrient retention/reduction. Therefore, it is important that the Recipient commits to continue monitoring Project impacts for 10-15 years so future projects can benefit from useful data on wetland restoration effects. One of the main lessons learned is that for future similar projects an achievable realistic framework is provided to allow for the longer-term effects of restoration.

5. *Bank supervision impact.* The Project MTR was critical to help the Recipient resolve implementation issues on finalizing restoration design and initiating construction works. Bulgarian country office staff provided proactive and close supervision through daily interaction with counterparts and this was essential to the turnaround in Project performance, overcoming initial delays, and implementing key Project activities in full. The Bank team skills mix helped establish effective Project dialogue and close working relationships with beneficiaries, which enabled the Recipient to maintain focus on development objectives, mobilize additional resources, and successfully complete the Project.

7. Comments on Issues Raised by Recipient/Implementing Agencies/Partners

(a) **Recipient /implementing agencies.** No issues are raised in the Recipient's completion report (summarized in *Annex 7*). The Recipient's comments on the ICR in *Annex 7* express appreciation for the project and the cooperation with the Bank.

(b) Co-financiers No comments received on the draft ICR from EC-PHARE and the Government of Austria.

(c) Other partners and stakeholders The International Commission for the Protection of the Danube River has confirmed the significant value and regional importance of the completed Project and their comments are presented in Annex 8.

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in US\$ million equivalent)

Components	Appraisal Estimate (US\$ millions)	Actual/Latest Estimate (US\$ millions)	Percentage of Appraisal
Wetland Restoration	5.02	7.68	153
Protected Areas Management	7.37	5.05	69
Project Coordination, Management and Monitoring	0.89	0.87	98
Total Project Costs	13.28	13.60	102

(b) Financing

Source of Funds	Appraisal Estimate (US\$ millions)	Actual/Latest Estimate (US\$ millions)	Percentage of Appraisal
GEF	7.50	7.50	100
Government of Bulgaria	2.91	3.54 ¹	122
Municipalities	0.15	0.10	67
EC: PHARE	1.59	2.21	139
Government of Austria	0.38	0.25	66
Other	0.75	--	--
Total	13.28	13.60	102

¹ This includes USD 1million, which is part of additional GOB financing to compensate losses due to GEF Grant currency devaluation; GOB will pay the remaining BGN 1 mln (or USD 0.6 mln) for wetlands restoration one year after completion of works (according to Bulgarian legislation).

Annex 2. Outputs by Component

I. Key Project outcomes are summarized below.

Environmental:

- *Reduced water pollution.* Reduction of nutrients (nitrogen and phosphorus) in the Danube River through retention by the established wetlands. This will benefit the Danube River and contribute to overall reduction of nutrients discharged to the Black Sea with concomitant beneficial environmental impacts. The Project was an important initiative within the GEF Danube/ Black Sea Strategic Partnership and the Investment Fund for Nutrient Reduction. This was the first of two wetland investments receiving support from the Fund. For this outcome to be manifested 10-15 years are needed to establish the effects of wetlands restoration. In fact the first flooding in Kalimok-Brushlen was carried out a few days before project completion.
- *Biodiversity and habitat conservation.* Restored wetlands and other areas within the strengthened PNP and KBPS provide globally significant biodiversity habitats, primarily avian, and crucial reproductive habitats for natural bio-resources (aquatic and terrestrial). Biodiversity monitoring carried out after wetland restoration has already revealed increases in diversity and populations of aquatic and bird species.
- *Flood buffering.* Restored wetlands will now provide buffering for any flood waters and reduce adverse impacts from flooding in the lower Danube River Basin.
- *Groundwater recharge.* Restored wetlands improve groundwater conditions through recharging aquifers, which will mitigate droughts and benefit agriculture in the region.
- *Environmental awareness.* Public awareness of environmental issues was increased through targeted education and training, which is likely to curtail future environmentally detrimental or unsustainable practices and activities.
- *Environmentally sustainable agriculture.* Organic and environmentally friendly farming practices that the Project introduced will reduce nutrient and agrochemicals discharges into the Danube River.

Socio-economic:

- Increased *eco-tourism potential* of the region will generate revenue.
- Improved Danube River fishery stocks will enhance *fishing opportunities* and revenues.
- Public awareness of environmental values and benefits will increase the likelihood that *future anthropogenic pressure and damage (including pollution) will be reduced.*
- *Business opportunities based on sustainable use of resources from the wetlands.* The Project supported initiatives such manufacturing charcoal briquettes from reeds harvested from the restored wetlands.
- Improved farming techniques and the development of organic certified crops created potential for *increased value of agricultural products and revenue for farmers.*

Institutional:

- Persina Nature Park and KBPS are central to Bulgarian biodiversity conservation in the Project regions and their *operational effectiveness was significantly strengthened*. They were expanded to incorporate the restored Belene wetland and KPBS. Detailed Management Plans, covering the two protected areas, were prepared and adopted through multi-stakeholder participatory processes. PNP and KBPS were provided with equipment and staff training that will ensure increased protection of critical habitats, improved environmental and biodiversity monitoring, and effective public outreach and cooperation among local communities. Restored wetlands were integrated into the national PA system with clearly defined functions and operational requirements.
- The Project strengthened capacity of governmental authorities such as MoEW, SFA, RIEWs to *effectively establish and maintain public dialogue* among stakeholders, and *prepare and implement participatory and transparent programs for environmental protection and conservation*. Participatory development and implementation of the wetland restoration design and PA Management Plans were instrumental for this.
- Completed Project activities are of significant value and offer potential for *replication in other regions of the Danube River Basin*. The Project was a catalyst for several follow-up initiatives addressing wetlands restoration and biodiversity conservation. Support for PA networking programs fostering cooperation among wetland PAs within the Basin will create opportunities and strengthen the interest and capacity for further restoration projects in the region. Stakeholders including municipalities, NGOs, communities, and farmers, have increased their capacity to seek other funding, including from the EU, to continue to replicate sustainable wetland management and agricultural practices.

II. Project deliverables against the specific outcome indicators identified in the PAD are detailed below.

Project monitoring indicators were not formally revised, nor were changed in substance. However, during project implementation a special effort was made to reassess and refine indicators. To avoid duplication some indicators were combined and shortened. Two new intermediary outcome indicators were added to monitor the SGP and FTSF.

PAD	ISR and ICR	Comment
1. Gradual improvement in ecosystem health of restored wetlands, as measured through essential ecological indicators, i.e., nutrient removal (measured through the percentage reduction in nutrient loads in water in-flow and out-flows); critical biodiversity habitat (evidenced by increased species diversity and population numbers of key indicator species); critical fish reproduction habitat (measured through the increased fish diversity and population numbers, especially those of high economic value).	GEO Indicator 1: Gradual improvement in ecosystem health of restored wetlands	The definition was shortened but the Project continued measuring what was originally intended. The reported data for this indicator refers to restoration works, completion and increase in number of aquatic species. As stable trends in nutrient reduction would

		only be observed 10-15 years after restoration, the pilot nutrient reduction measurements were not considered indicative of impact.
6. Improved agricultural practices in Persina Nature Park and Kalimok/Brushlen Protected Site, resulting in measurable nutrient reduction. 7. Increased local awareness and support for biodiversity conservation, marked by the increased participation of local communities in protected areas management and conservation activities and increased public knowledge of the importance of the restored wetlands and protected areas ecosystems.	GEO Indicator 2: Improved agricultural practices in Belene and Kalimok and increased local awareness and support for biodiversity conservation.	Two indicators – Nos. 6 and 7 in the present table from the PAD column were merged to strengthen the link between improved agricultural practices due to increased awareness.
3. Adoption of Protected Areas Management Plans for Persina Nature Park (21,700 ha) and Kalimok/Brushlen Protected Site (6,000 ha), based on broad stakeholder consensus and support and combining socio-economic development and conservation objectives.	Intermediate Outcome Indicator 2: Development of protected areas management plans in both sites in a participatory manner.	The wording of this indicator was shortened without any change of the meaning.
4. Establishment of effective protected area administrations, capable of implementing the Protected Areas Management Plans in close collaboration with other local institutions and communities.	Intermediate Outcome Indicator 3: Establishment of protected areas administrations with agreed operational rules and procedures.	This indicator was shortened without any change of the meaning.
	Intermediate Outcome Indicator 1: Wetlands restoration investments made in Belene Island and Kalimok marshes restored to promote nutrient trapping.	This indicator was added to improve monitoring on the main project activity –wetlands restoration.
	Outcome Indicator 4: Implementation of SGP.	This indicator was added to monitor activities under SGP.
	Intermediate Outcome Indicator 5: Implementation of FTSF	This indicator was added to monitor activities under FTSF.
	Intermediate Outcome Indicator 6: Strengthened planning and institutional capacity for protected areas management in both sites	This indicator combines PAD indicators 2 and 4.
2. Establishment of effective control structures and monitoring systems; staff knowledgeable in		This indicator from PAD is covered by

their operations and maintenance		indicator 6 in ISR/ICR.
5. Establishment of effective, replicable models of participatory and integrated management of wetlands in areas with mixed land use and ownership patterns.		This indicator was dropped as it seemed somewhat redundant given that the project investments themselves were the replicable models being established. In any case the project did achieve this objective and went beyond this as replication examples have occurred stemming from these models as indicated in the ICR.
8. Increased dialogue on trans-boundary water quality and regional natural resources management issues through partnerships with Bulgarian and regional scientific communities.		This indicator was tracked but is not quantifiable for reporting purposes. The international contact and dialogue are ongoing with numerous exchange visits with neighboring countries such as Romania, study tours to several EU countries, participation in international workshops and the closing workshop with international participation.

Intermediate Outcome Indicator 1: Wetlands restoration investments made in Belene Island and Kalimok marshes restored to promote nutrient trapping.

The PAD had envisaged that the Project would restore 1,200 ha of wetlands at Belene Island, an area which has now become part of Persina Nature Park; following an investment of US\$2.8 million and the work of 70 local workers, some 2,280 ha were restored. Trial flooding of Belene Island was completed in April 2008, and preliminary results show that nutrients have been reduced, and avian and aquatic biodiversity has increased significantly. Especially as regards nutrient reduction monitoring, these first results were of a very preliminary “test” nature. Only

10-15 years after the completion of the restoration works it will be possible to make consistent assessment of the nutrient reduction potential.

At KPBS, 1,755 ha have been restored, exceeding the PAD estimate of 1,100 ha, using more than 80 local workers and investment of US\$5.3 million. The first flooding of this site took place in December 2008.

A total of 4,035 ha of wetlands have been restored, exceeding the PAD estimate of 2,300 ha. The Project supported a local industry that recycles reeds from the restored site into charcoal briquettes and pellets for fuel. This process will decrease nutrient loads by removing reeds from the Danube River that would otherwise decay and release nutrients back into the environment.

Intermediate Outcome Indicator 2: Development of protected areas management plans in both sites in a participatory manner.

A key Project outcome has been local stakeholder engagement throughout the restoration program. The highly participatory approach transformed local inhabitants' initial skepticism about the Project to enthusiasm and cooperation. By the end of the Project, local communities, supported by mayors and ministries, were highly supportive of the activities and many were actively seeking additional funds from national and EU sources to replicate wetlands restoration.

Management Plans for both the Persina Nature Park and the Kalimok-Brushlen Protected Site were developed using a participatory process with a wide range of local and national stakeholders. The Management Plan for the KBPS was approved by the MoEW and is now under implementation. The Management Plan for the PNP was cleared at the ministerial level and its selected activities are under implementation. As of May 25, 2009 the PNP Management Plan was awaiting the required formal approval by the Council of Ministers of the Government of Bulgaria.

Intermediate Outcome Indicator 3: Establishment of protected areas administrations with agreed operational rules and procedures.

Progress was monitored with a special M&E tracking tool developed for Protected Areas,² which was a participatory assessment methodology that evaluated progress against 28 parameters covering PA functional capacities, effectiveness, and operating environment characteristics that included budgeting, staffing, conservation measures, community involvement, and M&E. Progress was assessed collectively by Project staff and management of the two restoration sites. Although this capacity assessment is subjective, it demonstrates progress and integration of participatory M&E tools and processes into the Project and PA management. This self assessment also contributed to building Project ownership among PA managers and staff.

The self assessment was carried out twice per year throughout implementation and the summary score was expressed in percentages. At Project effectiveness, management capacity of Persina Nature Park and Kalimok-Brushlen Protected Site was estimated to be 17 percent. Site restoration, management plans development, equipment procurement, visitor center construction in Belene, and training increased PNP management capacity estimates to 65 percent, and KBPS to 61

² "Reporting Progress at Protected Areas Sites: A Simple Site-Level Tracking Tool Developed for the World Bank and WWF," WWF and The World Bank, Sue Stolton, et al., March 2003. This tracking tool was adapted for the Wetlands Restoration and Pollution Reduction Project.

percent. Both PA management teams recognized that additional Ministry resources are still required to achieve their goal of 90 percent. Apart from this self-assessment, the actual Project outcome in strengthening PA administrations in physical and institutional Project deliverables, fully meets appraisal targets (see *Section 1.2* above), therefore, Project progress is considered satisfactory.

The PNP was expanded to include the restored Belene wetland and operates under overall management of the State Forestry Agency. Wetland restoration at KBPS was managed by a stakeholders association that included MoEW, SFA, municipalities, and NGOs, to strengthen participatory approaches and local ownership. When restoration was completed, responsibility for operating the site was assigned to the Regional Inspectorate for Environment and Water in Russe, under MoEW. Sustainability arrangements for long-term operation of the restored wetland sites are summarized in *Section 4* below.

Intermediate Outcome Indicator 4: Implementation of Small Grant Program for biodiversity conservation.

The Small Grant Program (SGP) to support local initiatives promoting biodiversity conservation was implemented successfully. The program financed 55 small Projects at both restoration sites with a total budget exceeding US\$150,000 thousand. Grants from US\$200 to 9,600 were provided to individuals and local organizations for activities in environmental education, eco-tourism and public conservation events, which were critical to increase public awareness and support for biodiversity conservation and sustainable natural resources management among local stakeholders, and strengthen community-level partnerships for conservation. The SGP involved 23 NGOs, 65 leading local experts, 5,500 students, and 250 children. Some local participants who completed projects are seeking further funding through EU programs, utilizing the experience and skills developed under the SGP.

Intermediate Outcome Indicator 5: Implementation of Farmer Transition Support Fund program.

The Farmer Transition Support Fund (FTSF) was established to assist local farmers to adopt environmentally sustainable agricultural practices. The program successfully implemented seven demonstration projects under the Best Agricultural Practices (BAP) concept in both restoration sites. Grants from US\$5,000 to US\$47,000 supported activities in organic farming (4 projects), production of packaged fuel (1 project), pasture restoration (1 project), and manure management (1 project). Grants enabled farmers to transition to organic production of fruits and three farmers became organic-certified producers. One project established an enterprise to recycle wetlands waste materials such as harvested reeds and waste wood to produce briquettes and other packaged solid fuels, which will reduce nutrients from the wetlands and provide a renewable energy source for local people. All these projects reduced nutrient and pesticide pollution in the region and have strengthened farmers' economic potential by opening organic markets. The FTSF program was also a catalyst for farmers' abilities to apply for future funding from national and EU sources, including the National Program for Development of Agriculture and the Rural Regions.

Intermediate Outcome Indicator 6: Strengthened planning and institutional capacity for protected areas management in both sites.

The Project has strengthened PNP and KBPS operational capacity by providing staff training and critical equipment such as water quality monitoring instruments, boats, vehicles, and furniture. Both restored sites now have an established conservation system, functioning administrations,

and PA Management Plans. The PA administrations have the capacity to implement conservation activities and undertake required environmental monitoring.

Both sites established institutional arrangements for participatory PA planning and management. Multi-stakeholder consultative and collaborative processes used to develop wetland restoration design and Management Plans resulted in public support for proposed conservation measures. Key stakeholders including MoEW, SFA, municipal officials, community members, and NGO representatives, participated in study tours and training that increased their involvement in PA management, and capacity for international cooperation, on issues of sustainable wetland management. Municipalities at both sites provided strong support to the PAs.

The PNP is fully staffed with qualified experts, two of whom have been transferred from the Project Coordination Unit. The PNP administration together with the visitor center is located in a new building built and equipped under the Project with the support of the municipality. The PNP operates under the SFA. In KBPS the wetland restoration was managed by a multi-stakeholder “association” (see above), which was supplied with the necessary equipment and provided by the municipality of Tutrakan with the office building. The KBPS is administered by the Regional Inspectorate for Environment and Water under MoEW.

III. The Wetlands Restoration and Pollution Reduction Project was implemented through three main components.

Component 1 Wetland Restoration

This component addressed physical restoration of the two wetland areas at Belene Island now within the Persina Nature Park and the KPBS. These significant restorations offer elements for replication within Bulgaria and throughout the Danube River Basin.

Restoration comprised detailed engineering designs, baseline surveys, and civil works for the two sites. Civil works included construction and rehabilitation of infrastructure such as sluices, canals, protected dykes, culverts for regulation of water flows through the wetlands at the Belene Island and Kalimok-Brushlen marshes, allowing for controlled flooding to optimize nutrient trapping, biodiversity restoration, and fish production and minimize risk of impacts to agricultural areas.

During Project appraisal, restoration was anticipated for 2,300 ha of wetlands (1,100 ha at Belene Island; 1,200 ha at Kalimok-Brushlen). The Project almost doubled planned restoration area, successfully restoring 4,035 ha (2,280 ha at Belene Island and 1,755 ha within the KPBS).

Project activities focused on restoring wetlands to achieve environmental benefits, including nutrient retention and enhancing biodiversity in the region. The Project also provided potential economic benefits from eco-tourism and increasing the fish stocks. In addition to planned benefits, the restored sites also offer potential to buffer flood waters and help recharge of groundwater. After the first flooding of Belene Island encouraging signs appeared—an initial decrease in nutrients, and increased numbers of birds and fish were recorded. Further work is needed in the next flooding of both sites to validate these initial findings.

Project outcomes are very likely to result in the development of additional restoration programs in the region. For example WWF Romania in partnership with Persina Nature Park Directorate applied to the EU LIFE+ program with a project for the restoration of Kaikusha wetland for conservation of small cormorant and ferruginous duck habitats; implementation began in 2009.

Component 2 Protected Areas Management

This component supported strengthening management of the Persina Nature Park and the KPBS. Key activities included:

- Capacity building for the two protected areas administrations included supplying equipment needed to operate and maintain the restored wetlands and the two park administrations; refurbishment of offices, construction of new administrative buildings and visitor centre at Belene;
- Training courses on wetlands restoration and management, protected areas management, for local authorities, local communities, and NGOs. The Project organised study tours and field visits to exchange experiences in protected areas, wetlands management, and sustainable development;
- Developed a baseline monitoring program and implementation assistance;
- Established a Farmer Transition Support Fund (FTSF) to help farmers adopt economic activities compatible with conservation objectives and sustainable use of natural resources. This resulted in seven successful projects;
- Public awareness program involved over 5700 students and children.
- Implemented a Small Grant Program for activities that promote biodiversity conservation and environmental education that resulted in 55 successful projects.
- Developed a communications strategy.

Linking the small grants and FTSF to larger restoration activities provided a focus on the wetlands restoration for local communities.

Extensive training provided by the Project yielded a significant number of future projects and proposals that were initiated in the region. Future activities under development originated from all main stakeholder groups. This Project has been a catalyst for increasing interest in the environment and attracting future resources to the region for environmental and social-economic development activities.

Component 3 Project Coordination, Management and Monitoring

This component supported a Project Coordination Unit within the Ministry of Environment and Water (MoEW) to manage Project activities. The PCU office was within the MoEW in Sofia, and a Project officer was located at the Persina Nature Park and the KPBS. The PCU provided Project administration services, including procurement, financial management, and disbursement.

IV. Project outcomes are expected to be sustainable over the long-term. Specific considerations for the applicable sustainability risks criteria are summarized below.

Technical. Wetlands restored and facilities constructed under the Project have been tested and are functioning well. Responsibilities for operation and maintenance are clearly defined and assigned to relevant government authorities (PNP under MoAF for the Belene Island, and Regional Inspectorate of Environment and Water under MoEW for the KPBS). The required technical and staff capacity is in place.

Social. The Project benefited from strong stakeholder support and involvement (Government, community organizations, NGOs, and farmers), which created a favorable social environment for its post-completion operation. The related risks identified at appraisal were mitigated through implementation of the Process Framework and a participatory approach to restoration design. The adopted protected area Management Plans for the PNP and the KBPS were subject to extensive

public consultations. Wetland restoration design physically excluded flooding and adverse impacts on private lands. No unresolved issues remain related to the land and property ownership or access to resources.

Environmental. Monitoring has indicated that the Project is generating expected environmental benefits. Monitoring arrangements are likely to be sustainable over the long term and the results on specific environmental impacts will allow authorities to undertake relevant adjustments in the wetlands operational regime.

Government ownership and commitment. Strong Government commitment at preparation and implementation was demonstrated by: (i) continuous leadership of MoEW (and MoAF) on Project technical issues, and (ii) substantial additional Government financing to the Project, which suggests that ownership risk is low. The Project supports implementation of long-term Government policies in environment and rural development, which are critical to the high-priority agenda of successful EU integration. Budgetary financing for the operation of the restored wetlands is channeled through the MoEW (for the KBPS) and MoAF (for the PNP) under the standard procedures.

Other stakeholder ownership. Sustainable Project operation is likely to generate high-value environmental and economic benefits for civil society and private-sector stakeholders. Environmental benefits include reduced water pollution, increased biodiversity and abundance of bio-resources, reduced impact of flooding on agriculture, and improved groundwater conditions. The Project successfully initiated environmentally sustainable economic activities and demonstrated to stakeholders the potential for revenue-generating opportunities that functioning wetlands would provide (eco-tourism, commercial fishing, organic farming). Active stakeholder involvement in Project implementation and the demonstrated interest in its long-term benefits suggest that the ownership and commitment to Project objectives will be maintained.

Governance and institutional support. The restored wetlands are now part of the legally established protected areas, which are fully integrated into the national system of protected areas with clearly defined legal grounds, functions, and operational requirements. Thus, the Belene wetland became part of the PNP under MoAF (responsible for all nature parks in the country), and the Kalimok-Brushlen wetland is part of the KBPS under MoEW (managing all Bulgaria's protected sites). Specific operational procedures for the PNP and the KBPS are detailed in their statutory documents and in the PA Management Plans adopted under the Project.

Annex 3. Economic and Financial Analysis

This Project was financed by GEF grant, national counterpart funding (Government of Bulgaria and municipalities), and donor co-financing (PHARE and the Government of Austria). During Project appraisal, no economic and financial analysis was carried out for the Project because the Project emphasized wetlands restoration and biodiversity conservation, as opposed to revenue generation. The PAD included an incremental cost analysis and an analysis of cost-effectiveness for the removal of nutrients (ref. *PAD Sections E 1, E 2, and PAD Annex 4*).

Project investments were *efficient*. Key considerations underlying the assessment are below.

1. *Leveraged financing*. The Project was effective in leveraging significant co-financing from Government, local communities, and donors. The Project Global Environmental Objective (GEO) was achieved within the originally estimated incremental cost.

2. *Cost of nutrients removal*. The PAD indicated that the Project would be cost-effective in reducing nutrient loads in the Danube River and the Black Sea. At appraisal, the expected total cost-effectiveness ratios were estimated at US\$1.3 to US\$5.0 per kilogram of nitrogen and US\$28.9 to US\$46.2 per kilogram of phosphorous removed annually. The actual nutrient removal could not be assessed at Project completion, because restored wetlands have only been in operation since 2008, and available monitoring data were insufficient to substantiate such analysis. This assessment, to be conducted at a later stage of operation, would be based on outcomes of the follow-up monitoring program and would be critical to guide further restoration activities. However, given that within the original Project budget 4,035 ha of wetlands were actually restored, instead of the expected 2,340 ha, it is highly likely that Project investments were efficient for the purposes of nutrients removal.

3. The following factors contributed to Project efficiency. The Project served as a catalyst for *increased government financing* for wetland restoration as the MoEW provided additional financing to complete restoration. The PNP and KBPS were strengthened and empowered to deliver *improved conservation services per unit of their operating cost*. The Project also supported the development of *revenue earning opportunities for these PAs*, including ecotourism and the provision of related services to visitors. The FTFSF program (organic farming, production of packaged fuel, etc.), which are likely to be sustainable in the long term. The Project also was a catalyst for further investments in wetland restoration and biodiversity conservation. Project *management costs were reasonable* and did not exceed the appraisal estimate (see *Annex 1*).

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending/Supervision/ICR			
Jocelyn Albert	Sr. Environment Specialist	LCSSD	TTL
Rita E. Cesti	Sr. Rural Development Specialist	LCSEN	TTL
Anna Georgieva	Sr. Operations Officer	ECSSD	TTL
Bogdan Constantinescu	Sr. Fin. Management Specialist	ECSPS	Fin. Management
Vladislav Krasikov	Sr. Procurement Specialist	ECSPS	Procurement
Radhika Srinivasan	Sr. Social Scientist	ECSSD	Social
Blaga Djourdjin	Procurement Analyst	ECSPS	Procurement
Marea Hatzios	Senior Environmental Specialist	ECSSD	Senior Environmental Specialist
Robert Robelus	Senior Environmental/Social Specialist	ECSSD	Senior Environmental/Social Specialist
Julian Lampietti	Lead Program Coordinator	MNSSD	Social Development Specialist
Naushad Khan	Senior Procurement Specialist	ECSPS	Procurement
Daria Goldstein	Counsel	LEGEC	Counsel
Nicholay Chistiakov	Senior Financial Officer	LOAG1	Disbursement
Sohaila Wali	Program Assistant	ECSSD	Program Assistant
Adelina Dotzinska	Program Assistant	ECCU5/7	Program Assistant
Egli Ilic	Finance Analyst	LOADM	Disbursement
Stefan Schwager	Environmental Specialist	ECSSD	Safeguards
Stan Peabody	Lead Social Specialist	ECSSD	Safeguards
Isabel Braga	Senior Environmental Specialist	LCSD	Peer Reviewer
Stephen Lintner	Senior Adviser	QUACU	Peer Reviewer
Kerstin Canby	Consultant	ECSSD	Environment
Mirela Mart	Consultant	ECSPS	Financial Management
Emanuela Montanari Stephens	Consultant	ECSSD	Environment
Ulrich Zeidler	Consultant	ECSSD	Environment
Peter Whalley	Consultant	ECSSD	Water Management
Serguei Milenin	Consultant	ECSSD	Environment
Johan Boelts	Consultant	ECSSD	Economist

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY00	8.37	35.01
FY01	16.16	86.07
FY02	27.48	162.66
Total:	52.01	283.74
Supervision/ICR		
FY03	13.34	73.72
FY04	14.29	35.46
FY05	12.55	67.75
FY06	20.87	42.25
FY07	17.56	52.63
FY08	16.52	46.80
FY09	7.03	52.60
Total:	102.16	338.20

Annex 5. Beneficiary Survey Results

Two surveys were conducted (in 2005 and 2008) on project impacts through interviews with stakeholders. The last project mission in November 2008 included meetings and interviews with project beneficiaries who shared their experience with implementing project under the SGP and FTSP, described in the November 2008 aide memoire. Diverse projects were implemented under both programs that helped project beneficiaries apply for new projects funded from other sources, and had demonstration results by introducing new practices e.g. organic farming, renewable energy production. Project beneficiaries expressed their satisfaction from the participation in the SGP and FTSP.

Annex 6. Stakeholder Workshop Report and Results

The World Bank and the Ministry of Environment and Water hosted a final workshop on the Wetlands Restoration and Pollution Reduction Project in Sofia on November 17, 2008, with the following objectives.

- To share the design, development, implementation, operation and impact of the restoration of the wetlands;
- To draw on experiences and lessons learned to improve future Bulgarian and international projects;
- To demonstrate the Project's positive development impact on the environment and local people.

Participants at the workshop included participants from the Ministry of Environment and Water, Council of Ministers, State Forestry Agency, mayors, Persina Nature Park, and Kalimok/Brushlen Protected Site representatives, NGOs, and local communities.

The workshop recognized that completing this Project was a significant achievement, as are the resulting environmental benefits from the nutrient retention that accrue to the Danube River Basin, and the Black Sea. The *environmental achievements* include the following:

- Nutrient reduction and retention potential of the restored wetlands. These benefits were further enhanced with a Project-supported local enterprise that harvest reeds to convert into eco-briquettes for heating fuel;
- Increased biodiversity. Even after the first test flooding of the Belene Island site in April 2008, 10 more fish species were found to have entered the wetland from the Danube, and manifold increases numbers and species of birds were observed;
- Potential for flood mitigation created by reconnecting former wetlands in the Danube River Basin;
- The Small Grants Program and the FTSP support to farming activities will have long-term benefits. These programs significantly improved environmental awareness among local communities, especially children, and introduced organic and environmentally sustainable farming practices.

Workshop participants presented detailed reports on Project benefits to a wide range of governmental and non-governmental stakeholders, and identified *important lessons* for future activities, including the following:

- Importance of strong team work between the Bank and Government beneficiaries;
- Benefits of early local stakeholder involvement in planning and decision making transformed initial mistrust of restoration benefits into strong support;
- Establishing a panel of experts to provide independent assessment that considered the best interests of local stakeholders and Government;
- Implementation should begin rapidly so on-the-ground changes are quickly seen by local and national stakeholders after the scheme is approved.

Key successes of the Project were seen as:

- Global importance of completing the largest wetland restoration project in the Danube River Basin;
- Strong and continuing commitment demonstrated by the Government of Bulgaria;
- Excellent Bank/ Government collaboration;

- Increased local stakeholder awareness and capacity to implement environmental projects that enabling local people to continue beneficial activities with support from national and EU funds;
- National interest in replicating Project activities elsewhere in Bulgaria;
- Inclusion of restored sites in a ‘Network of Protected Areas’ throughout the Danube River Basin, where experiences can be shared and replicated.

Follow-up activities. Project activities at PNP and KBPS were fully completed and all assets and deliverables were transferred to the responsible beneficiaries for the regular operation, which is likely to be sustainable. However, follow-up donor-financed projects are highly desirable to replicate successful approaches to wetland restoration in other regions along the Danube. Such operations would support critical sector improvements, and utilize the technical knowledge, institutional momentum, and stakeholder commitment raised by the Project. Therefore, national and regional stakeholders (MoEW, SFA, municipalities, NGOs, and farmers) have expressed interest in follow-up activities, which could be financed from national and EU sources, and could help foster transboundary cooperation on sectoral issues among Danube River basin neighboring countries.

The first follow-up Project, ‘Kaikusha,’ under EU LIFE+ program has been approved and will help develop feasibility studies to restore the Kaikusha Marshes in the Danube River basin. This wetland area would support protection and restoration of endangered bird species habitats, including the cormorant and the ferruginous duck. The proposal was prepared jointly by the WWF Danube Carpathian Program and the PNP Directorate.

The following proposals are under preparation and likely to replicate and advance successful approaches developed by the completed Project:

- (i) Network of Protected Areas under EU LIFE+ linking the restored sites with other protected areas in the Danube River basin (transboundary);
- (ii) Bird Migration under EU LIFE+ involving the Po Delta and WWF Romania (transboundary);
- (iii) Restoration of three wetland sites in Bulgaria (Garvansko Blato, Pozharevsho Blato and Malak Preslavets) with EU structural funds.

Annex 7. Summary of Recipient's ICR and/or Comments on Draft ICR

Below is the summary of the Government of Bulgaria Project completion report.

Introduction

In 1992 the Bucharest Convention for the protection of the Black Sea against pollution was signed (and ratified in early 1994) as a joint and urgent action of the six countries bordering the Black Sea. An additional impetus to the Bucharest Convention was given in 1993 by the Odessa Ministerial Declaration on the protection of the Black Sea environment, also endorsed by Bulgaria. The Government of Bulgaria also signed the Convention on the cooperation for the protection and sustainable use of the Danube River in 1994. Nutrient reduction is the highest priority issue for both programs.

Bulgaria is one of the most biodiversity-rich countries on the Danube. It is the third richest European country from the point of view of animal and plant diversity. The National Biodiversity Strategy (1994) as well as the National Action Plan for the conservation of the most important wetlands (1995) had identified priority areas for conservation and restoration of wetlands, including areas of international importance such as nesting sites of the Ferruginous Duck and the endangered Dalmatian Pelican. In its efforts to develop a wetlands strategy consistent with EU directives on habitats and the protection of wild birds, the Government had faced opposition from some local community members who did not always appreciate the importance of wetlands for conserving globally significant biodiversity, for maintaining water quality, flood control and a variety of other environmental services. In general, public opinion had favored the draining of wetlands for other land uses - Government's policy from the 1950s to the 1980s.

Activities related to nature protection are regulated by the Environmental Protection Law, Forestry Law, the Protected Areas Law (PAL), and the Hunting Law. While the PAL stipulates procedures to prepare protected areas management plans, development of these plans will require integration of biodiversity conservation with economic development with a participatory planning process. Similarly, in order to gain acceptance from poor local communities to reduce pressure on nature resources, there is a clear need to identify and implement alternative income generating activities, to undertake awareness raising programs, and to have park administrations proactively foster sustainable economic activities within the Project region.

The Government of Bulgaria has demonstrated a commitment for improving nature protection and water quality. The Bulgarian Parliament adopted a new Water Act that reflects to a large extent the requirements of the EU Water Framework Directive.

The Government recognized the multiple benefits of wetland restoration: first, as a way to decrease trans-boundary pollution; second, as a mean of preserving globally significant biodiversity; and third, as a possible source of revenue for local communities living in the poorer regions of Bulgaria. By restoring the spawning grounds for fish, the expectation is that the local fishing industry will make a comeback.

The WRPRP had extended and deepened the ongoing Government actions by addressing the following issues:

- Undertaking an innovative and high-impact wetland restoration program which combines conservation of biodiversity values, nutrient reduction, and sustainable management and use of aquatic resources.

- Developing opportunities for promoting protected areas management and sustainable use of natural resources that is politically and financially justified and socially sustainable.
- Developing capacity of farmers to use environmental-friendly agriculture practices and resources management.
- Building national, regional and local capacity in assisting the GOB in meeting its international obligations on trans-boundary pollution and biodiversity conservation.
- Fully integrating interventions that address trans-boundary pollution and global benefits with efforts towards complying with EU environmental acquis, in particular those requirements related to EU Water Framework Directive and Directives on Habitat and Protection of Wild Birds.
- Moving towards compliance with EU environmental acquis.

Project Activities and Outcomes

Sub-component	Result
Component A. Wetlands Restoration	
1. Restoration of Belene Island and Kalimok, Brushlen Marshes	This sub-component supported the elaboration of detailed design and supervision of civil works. It also provided for the construction and rehabilitation of an infrastructure needed for the restoration of wetlands on Belene Island and Kalimok/Brushlen, including sluices, channels, protective dykes, access roads, and improvement of irrigation/drainage conditions. The construction works were fully completed and the first flooding was successfully implemented.
2. Restoration of Additional Sites	Several additional wetlands within the Danube floodplain were identified as important wildlife habitats and restoration priorities during the preparatory phase of the Project. The Ministry of Environment and Water is expected to mobilize additional funding necessary to initiate studies for a similar restoration in these wetlands under the Operational Program “Environment”.
Component B. Protected Areas Management	
1. Protected Areas Management Planning	Protected areas management plans were prepared under the EU PHARE Program through the parallel Project for Institutional Strengthening, Administrative Capacity Raising and Integrated Management Planning in Persina Nature Park and the Kalimok/Brushlen Protected Site. The management plans for the two protected areas (Kalimok/Brushlen, and Persina Nature Park) were prepared with the involvement of the local communities and authorities.
2. Supporting Protected Areas Management Activities	
a) Management and Maintenance of Restored Wetlands and Associated Protected Areas	Consistent with the Project Appraisal Document, these activities relate to the management and maintenance of restored wetlands to allow for optimisation of nutrient trapping and biodiversity conservation. The delay in the implementation of restoration works necessitated the change in the deadlines for implementation of these activities splitting them for each of the two Project areas. The Project supported the monitoring and operational activities in the restored wetlands on Belene Island.
b) Establishing a Contingency Relief Fund	The restoration works are implemented, and include an inner protection dike and a parallel drainage channel to protect the arable land, so the contingency compensations fund is no longer required.
c) Establishing a Farmer Transition Support Fund	The Farmer Transition Support Fund (FTSF) program was aimed to assist local farmers in transitioning to environmentally-friendly agricultural practices and in changing the cropping patterns where necessary. The FTSF

Sub-component	Result
	<p>was administrated by the PCU Local Grant Officers. The FTSF was launched first on the territory of Kalimok/Brushlen Protected Site in April 2005. The implementation of the Farmer Transition Support Fund Program covered the total of seven demonstration Project s most of which within the KBPS territory. 4 successful Project s in the field of organic farming were implemented including Project s on: the development of a small scale enterprise for processing of reed and straw for the production of eco-briquettes, the restoration of 20 ha pasture, and the construction of a manure management platform for composting of manure in a dairy farm. The local farmers in the two areas had demonstrated their willingness to participate in the program. The only problem was the lack of skills in writing quality Project applications and the limited capacity for Project management leading to a need of additional training and using of consultants services. Most of the beneficiaries have applied under EC SAPARD program in order to ensure the sustainability of their Projects.</p>
<p>d) Providing Support for Eco-Business Development</p>	<p>This activity was aimed to support local entrepreneurs in developing “green business”. The Rouse Business Support Centre managed the implementation of this sub-component. The most attractive for the local population was the small loans program. Limited numbers of small loans were provided to agricultural producers at the total amount of BGN 41,500 on the territory of Kalimok/Brushlen PS. The loans were used for the renovation of two greenhouses in Goliamo Vranovo village, the purchasing of a cereals processing machine in Staro Selo village and the renovation of a quail farm in Brushlen village.</p>
<p>3. Monitoring Program</p>	
<p>a) Design and Supervision of Monitoring System</p>	<p>A comprehensive environmental monitoring program was developed with the financial support of the PHARE program. A simplified modification of the environmental monitoring program as part of the Persina NP and Kalimok/Brushlen PS management plans was also developed (Program I of the Management Plan).</p>
<p>b) Procurement and Installation of Monitoring Systems</p>	<p>Specialized monitoring equipment for the two park administrations, as well as for the regional laboratories, the Danube River Basin Directorate, and the Regional Inspectorates of Environment and Water in Pleven, Veliko Tarnovo and Rouse was procured.</p>
<p>c) Baseline Environmental Monitoring</p>	<p>The baseline monitoring started in 2004 based on the prepared comprehensive environmental monitoring program. The baseline surveys on habitats and small mammals on the two Project sites were conducted by PCU consultants. Average winter counting of birds had been regularly conducted on annual base. Hydro-chemical and hydro-biological monitoring of the water quality of the Danube River and the marshes within the two sites as well as the ground water in the existing wells had also been carried out. After the first flooding of Belene Island an increase in the diversity of fish species had been registered. In the course of the baseline monitoring carried out in 2006 and 2007 only four species were found, resulting in only two species by the end of 2007. Besides in the Danube river, around the Belene Island 31 species had been observed which could potentially enter the island after the opening of sluices. In July 2008 following the first flooding of the restored wetland 15 species of Danube fish had entered it and successfully spawned there.</p>

Sub-component	Result
	With regards to birds – a sufficient increase in their number had been registered after the restoration was completed. The water status also improved.
4. Public Awareness and Environmental Education	
a) Small Grant Scheme for Biodiversity Conservation	<p>The Biodiversity Conservation Small Grants Program was established to support activities that promote biodiversity conservation and the first call for Project proposals was announced in April 2004.</p> <p>The PCU ensured the effectiveness of SGP's operations through:</p> <ul style="list-style-type: none"> • engaging a wide variety of stakeholders, including individuals, civil and commercial entities, local associations, municipalities, mayor offices, museums, schools and kindergartens. • encouraging innovative partnerships – about 85% of Projects were implemented by partner organizations. • conducting monitoring and supervision. <p>The Projects funded by SGP succeeded in their goal of promoting public awareness and understanding of biodiversity conservation and sustainable natural resources management across a broad spectrum of stakeholders within the two Project territories by activities such as:</p> <ul style="list-style-type: none"> • newspaper articles and other media as well as publications and exhibitions. • videos and other visual materials had been prepared and aired in various venues. • posters, brochures, manuals, analysis of lessons learned and other publications had been distributed. <p>Outcomes</p> <ul style="list-style-type: none"> • Communities had increased their interest in sustainable natural resource management. • Issues of wetlands biodiversity had been addressed. • Conservation of traditional knowledge was effectively combined with new natural resource management methodologies. • Multiplier effects had been generated by involving new communities and stakeholders. • Communities had become involved in broader environmental education actions with public and private institutions in order to provide continuity for SGP initiatives. <p>Fifty-five small grant Projects had been successfully implemented on the two Project sites under the Small Grant Program for Biodiversity Conservation. The main part of those Projects was targeted at raising public awareness for biodiversity conservation. The execution of the program involved 23 NGOs, about 65 leading experts, nearly 5 500 students and about 250 kids from the kindergartens.</p>
b) Environmental Education and Training Program	<p>The actions undertaken had been aimed at the preparation of public awareness raising program for the local stakeholders and communities.</p> <p>The dissemination of information about the completed Project activities and the benefits from them was carried out mainly via the Project web site. Other Project promotion opportunities were the publications in Bulgarian magazines and newspapers, participation in TV programs, preparation of press releases, etc.</p>
5. Nutrient	The Bulgarian Government developed a new Strategy for Integrated Water

Sub-component	Result
Reduction Strategy Guidelines	Resources Management, which is in compliance with the EU Water Framework Directive (WFD). This strategy addresses the role of the wetlands.
6. Strengthening Capacity of Institutions Involved in the Management of Natural Resources within Protected Areas	
a) Support to Institutional Development	
Technical Assistance and on Job Training	The support for all types of training was carried out with GEF funding, and the training programs were prepared with the aid of PCU consultants. The capacity of both protected areas administrations has increased as a result of Project's trainings. The participants had the opportunity to learn a lot and to make international contacts.
Equipment, Vehicles and Supplies for Park Administrations	The Project has supplied the protected area administrations with the basic office equipment and land and river vehicles, as follows: <ul style="list-style-type: none"> • In Persina Nature Park – 4 working places have been equipped with software, 2 printers, 1 copier, 1 fax/phone, 1 mobile phone, 2 binoculars, 2 watching tubes, 1 digital camera, 2 digital photo cameras, 2 GPS devices, 1 off road pick up truck, and 1 outboard engine boat. • In Kalimok/Brushlen PS – 3 working places have been equipped with computers and software, 1 printer/copier, 1 fax/phone, 1 mobile phone, 1 binocular, 1 watching tube, 1 digital movie camera, 1 digital camera, 1 GPS device, 1 off road pick up truck, 1 outboard engine boat, complete office furnishing and equipment, including heating and air conditioning devices.
Construction/Renovation of Park Administration Buildings	During the May 2003 Bank supervision mission it was agreed that this additional activity should be undertaken. The detailed designs for renovation of the park administration offices at Tutrakan and Belene were elaborated and approved. The civil works were completed according to the schedule. With the financial support of the Project the construction works in the new building were completed by June, 2006.
b) Provide Incremental Operating Expenses	The Project supported the operation of KBPS Administration based on the Memorandum of Understanding signed by MoEW and KBPS Association. The Project repaired and refurbished the Association's premises and supplied them with office and monitoring equipment to facilitate their functioning. The Project also financed the operational expenses of the Association on a decreasing basis.
Managing Control Structures in Restored Wetlands	The Project supported the management of the restored wetlands on Belene Island by providing financing and expertise for the implementation of the monitoring activities.
Monitoring System	The monitoring of water quality for the restored sites is conducted on a regular basis and according to adopted monitoring programs by the Regional Laboratories under the Executive Agency on Environment and Water. The monitoring of species and habitats for Persina Nature Park is implemented by experts hired by PNP according to the monitoring programs in the Protected Area Management Plan.
Component C: Project Coordination, Management and Monitoring	
1. Support for Overall Project	A Project Coordinating Unit (PCU) was established under the supervision of the MoEW. The PCU comprises a central office in Sofia and two local

Sub-component	Result
Coordination and Management	offices, one in each protected area. The local offices are located in the town of Belene for the Persina NP, and in the town of Tutrakan for the Kalimok/Brushlen Protected Site.
2. Monitoring and Evaluation	A system for the monitoring and evaluation of the Project implementation was prepared and adopted in 2004.
3. Financial Auditing	The financial management of the Project was satisfactory. The financial management system maintained adequate level of security and comprised the instrument for the preparation of the quarterly Project management reports (PMRs) for the Bank. The PCU financial activity had been annually audited by an independent auditor, acceptable to the Bank and unqualified audit opinions with no material internal control issues had been issued at every report. The Project activities had also been subject to regular audit by the MoEW Internal Control Directorate and Bulgarian National Audit Office. No material issues had been observed.

Summary of Achievements

- The restoration of the wetland on Belene Island is completed and the first flooding was done in April 2008. The initial results are positive;
- The restoration of the Kalimok marshes was also completed with the additional financing provided by the MoEW;
- The capacity of PNP Directorate and KBPS Association substantially increased;
- The regional laboratories, the Regional Environment and Water Inspectorates and Administrations of PNP and KBPS were equipped with the necessary up-to-date equipment;
- The new Visitor Center for PNP was constructed in Belene;
- The small grants program for raising awareness in biodiversity conservation has been implemented successfully financing a total of 55 Projects for the amount of USD 150 258;
- The farmer transitions support fund has also provided successful financing to 7 Projects with a demonstration effect amounting to USD 151 137;
- The strategy for development of eco-tourism in the Danube River Region was developed, and the first activities were implemented in Tutrakan;
- The Protected Areas Management Plans for the two sites have been developed with financing under EU Phare Program based on a broad participatory approach. The management plan for KBPS is approved and under implementation;
- Excellent cooperation has been established with all Project stakeholders, partners and donors;
- Capacity of local governments, institutions, NGOs and farmers to apply for funding under the EU programs LEADER⁺, LIFE⁺, and Operational Program “Environment” was built up;
- A long-term cooperation with the partners from Po Delta Park in Italy and from Danube National Park in Vienna, Austria were established as a result of the organized study tours;

- The Persina Nature Park and Kalimok/Brushlen Protected Site became members of the Network of the Protected Areas along the Danube River. This granted them the opportunity to be involved in joint Projects funded with the EU funds;
- Commitment of the Government of Bulgaria to provide financial support for maintenance and operation of the control structures in the restored wetlands was declared.

Lessons Learned

1. Initially in the course of the Project implementation difficulties were encountered which were gradually overcome due to the mutual efforts and co-operation. Project implementation has greatly improved in the last years and has progressed well thanks also to the guidance and leadership of the Bank team.

2. In compliance with the GEF Public Involvement Policy the key stakeholders including villagers and their representatives in local government, the MoEW and MoAF staff as well as private sector representatives were involved in the Project implementation. The process of convincing the local stakeholders of the benefits from the implementation of such a large scale Project requires a specific approach and a longer period of time and hard work. We consider that even at the expense of the registered delay in the restoration works with the time dedicated to ensuring stakeholders cooperation, the Project has achieved significant progress.

The participatory approach applied by us in the planning process, in the development of Communication Strategy and Danube Region Eco-Tourism Development Strategy and in the preparation of the Protected Areas Management Plans achieved the expected results. The two Grant Schemes also have achieved positive effect. Therefore we consider that finally the Project is fully supported by the local communities which are now well aware of the benefits from its implementation.

3. The knowledge and skills gained in the course of the Project implementation could serve as a base for applying under the EU programs. Definitely the efforts for raising the local stakeholders' capacity should continue.

4. One of the basic lessons learned in the course of the Project implementation is that when designing future Projects which involve a large number of stakeholders with serious impact on their activities and life it would be appropriate to provide for a longer period of local communities groundwork and convincing with the benefits of Project completion.

5. Another lesson learned is that the controlled restoration is a step in the right direction and is allowing large-scale experimentation and studying of nutrient trapping processes.

Comments of MOEW on Draft ICR

1. Comments from the **Ministry of Environment and Water** (from Mr. Shteryo Nozharov – Director of the Investment Policy, Public Procurement and Climate Change Department)

“I would like to express my best wishes to your organization for continuance of supporting environmental projects like the successful one “Wetlands Restoration and Pollution Reduction Project”.

The project strengthened the capacity of the most important governmental authorities- MoEW, RIEW, SFA to establish and maintain public dialog for development of number of initiatives connecting with wetlands restoration and biodiversity conservation. The public awareness of the values and benefits of the natural environment will reduce the occurrence of the environmentally detrimental or unsustainable practices and activities.

Bank supervision maintained a strong focus on development impact and achieving project environmental and development objectives. The Bank’s team provided the appropriate skill and knowledge for the support of the project. Staff time in the field, the timing and frequency of supervision missions, and the technical guidance provided by the Bank at critical times was completely adequate and professional.

I hope I can contribute to further enhance the advancement of international understanding for all environmental projects supported by your institution.”

Annex 8. Comments of Co-financiers and Other Partners/Stakeholders

1. Comments from the International Commission for the Protection of the Danube River (from Mr. Philip Weller – ICPDR Executive Secretary)

“The completion of the restorations at Belene Island and Kalimok – Brushlen is a historic occasion for the whole Danube River Basin. The Danube has lost over 80 percent of its natural floodplains and wetlands in the past, and this Project is an example of the possibilities that exist to undo the damages done to the environment and the opportunities to restore important natural functions and values of wetlands.

Under the EU Water Framework Directive all the countries of the Danube River Basin are developing a Danube River Management Plan that recognizes the importance and need for such restoration work. The reconnection of former wetland habitats will assist with achieving the WFD goal of good ecological status.

The success of this Project undertaken by the Ministry of Environment and Water, with the support of the World Bank and GEF, sets a clear example of what can be achieved through national and international co-operation and funding, and hopefully will act as a catalyst for other restorations in Bulgaria and throughout the Danube River Basin.”

Annex 9. List of Supporting Documents

1. Project Document (PAD) - Report No. 24147-BUL of May 17, 2002
2. GEF Trust Fund Grant Agreement TF 050706-BUL of June 20, 2002
3. Project Environmental Impact Assessment – Report and Summary (Sofia, 2002)
4. Supervision reporting: BTOs, Aide-Memoires, Letters to the Recipient, PSRs/ISRs
5. Recipient’s Implementation Completion Report (original)

MAP

