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IMPLEMENTATION COMPLETION REPORT
(TF-28614; TF-28660)

ON A GEF GRANT

IN THE AMOUNT OF SDR 3.1 MILLION

TO THE

GOVERNMENT OF ROMANIA

FOR

DANUBE DELTA BIODIVERSITY PROJECT

DECEMBER 20, 2000

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CURRENCY EQUIVALENTS

(Exchange Rate Effective September 30, 2000)

Currency Unit = Romanian Leu
0.0000413 Romanian Lei = US\$
US\$ = 24,129 Romanian Lei

FISCAL YEAR
2001

ABBREVIATIONS AND ACRONYMS

AR	-	Apele Romane SA
DDBR	-	Danube Delta Biosphere Reserve
DDBRA	-	Danube Delta Biosphere Reserve Authority
DDNI	-	Danube Delta National Institute
EBRD	-	European Bank for Reconstruction and Development
EPA	-	Environment Protection Agency
GEF	-	Global Environmental Facility
GIS	-	Geographic Information System
GOR	-	Government of Romania
IUCN	-	International Union for the Conservation of Nature (now World Conservation Union)
MWFEP	-	Ministry of Waters, Forests and Environment Protection
NGO	-	Non Government Organization
PMU	-	Project Management Unit
QAG	-	Quality Assurance Group
CAS	-	Country Assessment Strategy
WWF	-	World Wide Fund for Nature
USAID	-	United States Agency for International Development
EBRD	-	European Bank for Reconstruction and Development
WHO	-	World Health Organization
WWF	-	World Wildlife Fund

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<i>Project ID:</i> P008689	<i>Project Name:</i> ROMANIA GEF DANUBE DELTA BIODIVERSITY PROJECT
<i>Team Leader:</i> Doina Rachita	<i>TL Unit:</i> ECSSD
<i>ICR Type:</i> Core ICR	<i>Report Date:</i> December 21, 2000

1. Project Data

Name: ROMANIA GEF DANUBE DELTA BIODIVERSITY PROJECT
Country/Department: ROMANIA
Sector/subsector: VM - Natural Resources Management
L/C/TF Number: TF-28614; TF-28660
Region: Europe and Central Asia Region

KEY DATES

	<i>Original</i>	<i>Revised/Actual</i>
<i>PCD:</i> 09/20/1993	<i>Effective:</i> 09/25/1994	02/06/1995
<i>Appraisal:</i> 09/26/1993	<i>MTR:</i> 11/30/1997	05/25/1998
<i>Approval:</i> 08/26/1994	<i>Closing:</i> 06/30/2000	06/30/2000

Borrower/Implementing Agency: GOVERNMENT OF ROMANIA/MIN. OF ENVIRONMENT
Other Partners:

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2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

Outcome: S
Sustainability: L
Institutional Development Impact: H
Bank Performance: S
Borrower Performance: S

QAG (if available) ICR
Quality at Entry: S
Project at Risk at Any Time: No

3. Assessment of Development Objective and Design, and of Quality at Entry

3.1 *Original Objective:*

As stated in the SAR, the project aimed to protect Romanian Delta ecosystems, through contributing to the conservation of biodiversity within the Delta, strengthening the capacity of the Danube Delta Biosphere Reserve Authority (DDBRA), and the Danube Delta National Institute (DDNI), a research institute whose primary role is to conduct research on behalf of DDBRA. It enabled DDBRA and DDNI to monitor and manage protected areas effectively, working with local community groups to ensure sustainable resource use, and restore some wetlands to their natural conditions. The project was developed in association with three related GEF supported projects being developed in the region: the Ukrainian Danube Delta Biodiversity Project, the Danube River Basin Environment Program, and the Black Sea Management Project.

At the time of project preparation this objective was realistic, appropriate and important, and was in line with the 1994 CAS and 1992 Environmental Strategy Paper, which was prepared in collaboration with GOR, USAID, USEPA, WHO and EC-PHARE. Significantly, project preparation was undertaken in parallel with an EBRD Technical Cooperation Project supporting the establishment of the administrative structure and legal framework for DDBRA, Romania's first administrative structure for protected area management, and the preparation of a conservation management plan for the Danube Delta Biosphere Reserve. Additionally, EBRD had prepared a proposal for a loan to support socio-economic development among Delta communities based on eco-tourism, and provide water supply systems for four Delta villages. Consequently, the original project development objective complemented the EBRD initiatives by building capacity under the new institutional arrangements to implement the conservation management plan.

The objectives of the Romanian and Ukrainian Danube Delta Biodiversity projects were the same and the components designed to achieve the objectives were also similar. During implementation, common lessons learned in the two sister projects included the need for well-planned public awareness activities early in the project life and the need to guide sustainable use of natural resources with participation of local communities. Contrasts between the two Danube Delta projects were mainly due to specific country conditions, such as the existence of significant budgetary constraints in Ukraine, the existence of older and more experienced implementing institutions in Romania, and different approaches to wetland restoration in the two countries.

3.2 *Revised Objective:*

The development objective was not revised but, following the cancellation of the EBRD loan to support socio-economic development among Delta communities, the project objective was augmented under supervision to include working with community groups to enhance economic development that is linked with sustainable natural resource management and biodiversity conservation objectives.

3.3 *Original Components:*

1. **Institutional Strengthening of the Ecological Wardens Department (cost estimate at appraisal: US\$ 1.48 million)**, to support nature protection, surveys, public awareness and nature interpretation in the Delta, through the provision of equipment to enhance mobility and surveying, infrastructure and training. Overall, the design of this component was appropriate and supported achievement of the development objective by strengthening the institutional capacity of DDBRA through: (a) training of DDBRA warden and technical field staff; (b) providing equipment and vehicles needed for patrolling, monitoring and guiding; (c) establishing training facilities, visitor information centers, field stations, and (d) providing accommodation for DDBRA and DDNI staff. During implementation, the scope of this component was expanded to take advantage of new opportunities for warden department staff

to work with Delta communities to establish sustainable systems for management of Delta resources.

2. **Monitoring (cost estimate at appraisal: US\$ 0.64 million)**, through improved population and species inventories, ecosystems surveys, and development of an integrated database using GIS technology to provide the basis for development of resource management plans. Overall, the design of this component was appropriate and supported achievement of the development objective through strengthening the institutional capacity of DDNI to build on existing monitoring work by providing: (a) equipment for research, field monitoring, analysis of data, (b) technical assistance, (c) training, and (d) publications. The component also provided training, technical assistance and equipment to assist DDBRA to undertake its monitoring and management functions.

3. **Pilot Polder Restoration to Natural Conditions, and Reed Restoration Research (cost estimate at appraisal: US\$ 0.575 million)**. This component piloted different approaches to ecological restoration and management of Delta wetlands. Overall, the design of this component was appropriate and supported achievement of the development objective. However, lack of clarity of ownership / use rights among County Council, state/private enterprises and DDBRA and inadequate participation of key stakeholders in development of the restoration plan resulted in delays in implementing the component in some target areas.

4. **Ecosystems Restoration (cost estimate at appraisal: US\$ 1.18 million)**. This component was intended to support wetland restoration, through protection of a lake from direct inflow of nutrient and sediment rich Danube water; willow planting; village woodlots; pilot sturgeon propagation; protection of fish from the lake Razim irrigation intake; removal of some deteriorating metal structures for aesthetic enhancement; establishment of a small grants fund for research proposals with special focus on management of buffer zones. The initial design of this component did not adequately support achievement of project objectives and, consequently, was subject to significant redesign during project implementation.

5. **Public Awareness and Community Involvement (cost estimate at appraisal: US\$ 0.155 million)**, including support to the DDBRA wardens department to work with schools and local communities, support to the DDBRA in production of public awareness material, and support to local NGOs to enable them to expand their public awareness activities. This component focused on building the capacity of DDBRA to undertake public awareness activities, through providing: (a) training for the warden guides; (b) technical assistance; (c) equipment and materials; and (d) establishing collaborative arrangements with local NGOs. The initial design and scope of this component did not adequately support project objectives and was, consequently subject to further development and expansion during implementation.

6. **Regional Initiatives, Coordination and Management Assistance (cost estimate at appraisal: US\$ 0.19 million)**. Overall, the design of this component was appropriate and supported achievement of the project objective through providing: (a) support for establishing collaboration with conservation initiatives in the Ukrainian portion of the Danube Delta through exchange and joint training programs, and study tours for field and technical staff, and (b) technical assistance to support procurement of major packages during the initial stages of project implementation.

3.4 Revised Components:

1. **Institutional Strengthening the Ecological Wardens Department (final cost: US\$ 1.8 million)**. The scope of this component was further developed during implementation to build DDBRA's capacity to: (a) reform Delta capture fishery management by establishing a new licensing system for fishing boats; and (b) undertake economic appraisal of proposed development initiatives. This was achieved through

provision of technical assistance, training and equipment. The need for additional involvement of DDBRA in supporting reform of fisheries resulted from a Government Decision (G.D. no.516/September 1997) to transfer authority for management of fishery resources from State fishing enterprises to DDBRA. Formerly Delta fishermen were obliged to sell their catch to State fishing enterprises at a fixed rate. Following the transfer of authority, DDBRA initiated a system whereby fishermen were able to obtain competitive market prices for their catch through participating in free auctions. The provision of training on economic appraisal techniques, followed recognition of a need for DDBRA to be better equipped to provide guidance on the economic viability and sustainability of development initiatives in the Delta.

2. **Monitoring (final cost: US\$ 1.14 million).** The scope of this component was extended during implementation to support the excellent progress and implementation capacity of DDNI. The research and monitoring activity of DDNI benefited of additional field, laboratory, transportation and IT equipment, as well as of funds for technical assistance and training to match the intensive international cooperation of the institute.

3. **Pilot Polder Restoration to Natural Conditions, and Reed Restoration Research (final cost: US\$ 0.27 million).** Under supervision, following the spectacular success of reed regeneration and wetland restoration in Babina polder, some of the studies of reed restoration that were originally envisaged in the initial project design were considered unnecessary and were, consequently dropped from the project. Because of the confusion between administrative and ownership rights in early 1990's, the target polder area envisaged to be restored could not be achieved. At the time, polders were under different or combined authority among the Tulcea County Council, state-owned / private companies and the DDBRA. Approximately 7,000 ha of polders have been restored, compared to a SAR target area of 37,765 ha.

4. **Ecosystems Restoration (final cost: US\$ 0.81 million).** The following sub-components were subject to redesign during project implementation:

Willow planting - Since regeneration of willows occurs naturally adjacent to channels and river courses, the emphasis of this sub-component was adjusted to focus on establishing village managed plantations for production of fire wood in order to reduce pressure on natural forest ecosystems, while addressing the needs of local communities.

Pilot sturgeon propagation through establishment of a hatchery - Under supervision, the rationale for artificial propagation and release of sturgeon as the most effective means of conserving these species was called into question and the component redesigned to: (a) undertake assessment of the major threats to sturgeon populations (especially quantification and characterization of fishing pressure and the threats to critical habitats), and (b) develop a strategic regional collaborative plan for conservation of Danubian sturgeon.

Protection of fish from the lake Razim irrigation intake - A feasibility study undertaken under the project indicated that investments envisaged in the initial project design would not be justifiable due to their expense and inconclusive impact on conservation of Danube Delta biodiversity. Consequently, the project did not proceed to invest in fish fingerling filtering devices for irrigation inflows.

Removal of metal structures - Following an inventory of unsightly metal structures, DDBRA concluded that the cost of removal could be covered by private sector investors in scrap metal recycling. Consequently project funds were reallocated to other project components.

Small grants fund for research proposals with special focus on management of buffer zones - During

implementation, the focus of this sub-components was adjusted to give increased importance to exploring opportunities for socio-economic development for local communities living in the Delta, while reducing pressure on the natural resources.

5. **Public Awareness and Community Involvement (final cost: US\$ 0.24 million).** The scope of this component was expanded during implementation, to include the participatory design of a public awareness strategy and action plan for DDBRA, together with financing plan for its implementation.

3.5 Quality at Entry:

Project preparation predates the existence of the Quality Assurance Group (QAG) and a quality at entry assessment of this project was not, subsequently, undertaken by QAG. This ICR assigns a satisfactory quality at entry rating based on the consistency of project goals with the objectives of the CAS, Government priorities, the Bank's safeguard policies, the quality of design and risk assessment.

4. Achievement of Objective and Outputs

4.1 Outcome/achievement of objective:

The objective of strengthening the capacity of Danube Delta Biosphere Reserve Authority (DDBRA) and Danube Delta Research Institute (DDNI) to protect the ecosystems and biodiversity of the Danube Delta in Romania was achieved in a satisfactory manner. Under the project, the capacity of both institutions to address their mandates has been strengthened, through provision of field and office equipment, information technology, technical assistance and training. Additionally, the project assisted the implementing institutions to work together to identify development priorities for the Danube Delta based on economic and environmental sustainability; to develop strategic and operational approaches to biodiversity monitoring, wetland restoration and building public support and awareness of the needs and opportunities for conservation of Danube Delta ecosystems; work with local communities, and foster international cooperation in support of conservation objectives.

4.2 Outputs by components:

1. **Institutional Strengthening of the Ecological Wardens Department (final cost: US\$ 1.80 million). Rating: S.** Under this component the project provided training, equipment and infrastructure to strengthen the institutional and operational capacity of the DDBRA wardens department to manage activities taking place in the Delta in accordance with the DDBRA conservation management plan, and to contribute to ecological survey and research work. The component satisfactorily achieved the physical and institution building objectives anticipated in the SAR, which resulted in an expanded role and improved effectiveness of warden department staff.

Early in project implementation DDBRA established a new position for a training specialist who, with the support of with technical assistance and exposure to conservation management training programs in other countries, prepared a training and reference manual, and developed and implemented a program of in-service vocational training courses tailored to the needs of DDBRA warden and inspectorate field staff. The program included foundation courses for newly recruited staff, refresher and specialized courses for more experience staff, and instruction in foreign language skills, including English and French. The training manual included site specific reference material of relevance for each of the DDBRA's twelve subdistricts, and the newly established warden sections for ecological monitoring and guiding. On site training was augmented by study tours to protected area authorities in the United Kingdom, France, The Netherlands and Ukraine, providing warden department staff with exposure to a broad range of new experience, including guiding techniques, the role of visitor centers in ecological education, and hunting management in protected areas, etc.

In addition to training, this component financed the purchase of boats, vehicles; communication, field, and office equipment; built or renovated accommodation for technical staff, field posts, visitor centers, and watch towers, and provided signs and information panels. The scope of this component was further developed during implementation to build DDBRAs capacity to: (a) assist in reforming Delta capture fishery management by establishing a new licensing system for fishing boats; and (b) undertake economic appraisal of proposed development initiatives. Importantly, there has been a shift in focus of the role of warden field staff from enforcement to working with local stakeholders to assist them to manage resources sustainably. The impact of these investments includes improving relations with Delta communities, and increased effectiveness of warden department staff.

2. Monitoring (final cost: US\$ 1.14 million). Rating: HS. Under this component the project improved systems for inventory and periodic monitoring of species, populations and ecosystems; developed Geographic Information System (GIS) and information technology tools, and a hydrological model for the Danube Delta. Activities financed under this component were implemented and further developed in a highly satisfactory manner. Physical and institution building objectives anticipated in the SAR were exceeded, resulting in greatly improved understanding of the status and dynamics of Danube Delta ecosystems, allowing for development of effective resource management plans, and the establishment of institutional capacity to plan and implement ecosystem monitoring programs on a national and regional basis.

Baseline survey of Danube Delta ecosystems assessed the status and distribution of flora and fauna, identifying many previously unrecorded species. Baseline surveys provided information necessary to zone and manage Delta ecosystems and populations appropriately, prepare a red list of threatened Delta species, and design systematic monitoring programs targeting rare and selected indicator species of birds and fish. Additionally, under this component, DDNI undertook assessments of sustainable harvest levels for various commercial fish species and developed management plans for reeds and grazing resources. The GIS center established under the project is an international resource and asset. Overseas training, exchange programs and equipment enabled DDNI staff to build a comprehensive Delta database, undertake GIS analysis and prepare maps in accordance with management needs, including a vegetation map for the entire Danube Delta that was developed in collaboration with Ukraine. The hydrological model of the Danube Delta, which was developed in collaboration with the Dutch Government, allows for monitoring and management of water flow and quality throughout the Delta. This component has had a profound impact on Romania's capacity to monitor and manage the ecosystems and biological diversity of the Danube Delta and elsewhere. Capacity developed under this component is already being used to map and monitor wetland habitats throughout Romania, and contribute information and analysis to the international conservation arena.

3. Pilot Polder Restoration to Natural Conditions, and Reed Restoration Research (final cost: US\$ 0.27 million). Rating: S. This component piloted restoration of agricultural and fish polders to natural wetlands ecosystems. While lack of clarity of the legal status of ownership of some polders resulted in delay in achieving quantitative targets for restoration envisaged in the SAR (37,765 ha), restoration of Babina, Cernovka, Enisala and Popina polders (approximately 7,000 ha) is proving to be spectacularly successful. Ecological succession taking place in the restored polders has been monitored with the assistance of international conservation organizations, and studies have been undertaken to identify the most appropriate means of restoring remaining polders when consensus among stakeholders has been achieved. In particular, the social and economic impacts of different options for polder restoration have been assessed in consultation with local stakeholders and a plan for further restoration developed. As a result of these initiatives, it is likely that local communities will derive economic benefits from the restored ecosystems and will, therefore, support the restoration process, and that SAR targets will be achieved.

4. Ecosystems Restoration (final cost: US\$ 0.81 million). Rating: HS. The outcomes of this component include: reduction of eutrophication and biodiversity loss in some Delta lake complexes; improving relations between conservation authorities and Delta communities, together with greater focus, on the part of DDBRA and DDNI, on the needs and opportunities for conservation linked development; and the establishment of new skills and regional collaboration that will allow for sustainable management of sturgeon and other fisheries of the lower Danube and Black Sea coast.

Under the project, eutrophication, sedimentation and loss of biodiversity of Fortuna Lumina and other Delta lake complexes, was reduced through dredging and adjustment of waterflows in accordance with predictive recommendations of the hydrological model developed under the ecosystems monitoring component. Management of woodlots by Delta villages that are heavily dependent on Delta resources for fuelwood is being piloted. In the first instance, this has had the beneficial impact of further improving communications and relations between DDBRA and the target communities. Similarly, activities piloted under the small grants program, including eco-tourism, commercial production of medicinal herbs and handicrafts and, in particular, support for the newly emerging fishermen's associations, have focused on demonstrating how improving economic conditions for Danube Delta communities can be linked with sustainable use and conservation of Delta resources. Training in economic appraisal techniques, and improved ecosystem monitoring provided under the project will assist DDBRA and DDI to monitor the relative success and conservation impact of these initiatives in the medium term, with a view to prioritizing further support for conservation linked development in the Delta.

Important achievements have been realized under the sturgeon conservation subcomponent. The project introduced and applied skills in Rapid Rural Appraisal (RRA) to characterize and quantify the realities of the largely illegal sturgeon fishery. To compliment the information on fishing pressure provided by RRA, the project developed new capacity to monitor the seasonal movements of migratory sturgeon and assess the importance of critical ecosystems for spawning, feeding and overwintering. Assessment of the fishery and the migration were undertaken in collaboration with the countries that share the fishery (Bulgaria, Ukraine and The Republic of Yugoslavia), and led to development of a regional conservation strategy for sturgeon. Also, this activity led to the first gathering of the Danube River Commission (DRC) in ten years, which reviewed the draft strategy at a meeting in Belgrade in May 2000. Subsequent meetings of the DRC will now be held annually and the next DRC is scheduled to take place in Bulgaria in spring 2001. The regional Commission for sustainable management of Danube and coastal fisheries will facilitate implementation of the strategy. Skills, institutional capacity and collaborative mechanisms developed under this subcomponent could be used to develop and implement regional agreements for sustainable management of all Danube fisheries.

5. Public Awareness and Community Involvement (final cost: US\$ 0.24 million). Rating: S. Outcomes of this component include: improved facilities and materials for public awareness, including two new visitor centers, leaflets and posters; increased awareness on the part of Delta communities, especially teachers and schoolchildren of the needs and opportunities for conservation and sustainable development; collaborative arrangements with local, national and international NGOs in support of public awareness objectives; and a comprehensive strategy to build public awareness and support for conservation of the Danube Delta among key target audiences. During implementation it became apparent that public awareness activities financed under the project were insufficient to achieve significant impact. Consequently, project activities were augmented with professional guidance from the World Bank Resident Mission and technical assistance financed under the project to develop a public communications strategy for DDBRA. The strategy identifies and prioritizes information needs and target stakeholders, and proposes a strategic approach to addressing and financing these needs over the short and medium term.

6. Regional Initiatives, Coordination and Management Assistance (final cost: US\$ 0.24 million).

Rating: HS. Technical assistance, training, study tours and meetings of the Scientific Council that were financed under this component have supported establishment of arrangements for conservation of the Danube Delta in collaboration with Ukrainian authorities; bilateral arrangements with several international partners for assistance with key conservation initiatives; a regional protocol for conservation of the lower Danube; and international recognition of the quality and importance of the work of DDBRA and DDNI, as evidenced by DDBRA having been awarded the Diploma of the Council of Europe for ecological management of the Delta, and DDNI's increasing involvement in implementing international research contracts. Links with the adjacent Danube Plavny Reserve in the Ukrainian portion of the Danube Delta were established under the project through exchange visits and study tours, and are being consolidated through joint training courses for Ukrainian and Romanian warden staff. Benefits of improved relations include an agreement on management of a trans-boundary protected area, including collaborative monitoring and management of migratory birds and fisheries, and development of a vegetation map of the entire Delta. This bilateral initiative has been expanded under the recently declared lower Danube green corridor whereby the Ministry's of Environment of Bulgaria, Moldova, Romania, and Ukraine have agreed to conserve and manage wetland and flood plain habitats of the region. During project implementation, the international stature and recognition of DDBRA and DDNI as leaders in European wetland conservation has grown considerably.

4.3 Net Present Value/Economic rate of return:

As the project was financed with a grant under the GEF pilot phase, the economic rate of return was not calculated at the time of appraisal. While now an economic rate of return can not be precisely quantified and calculated, the following economic benefits have been identified: (i) increased fish production, in a natural regime, in former polders ecologically restored; (ii) viable alternative income generation activities which created the potential to reduce the pressure for fishing, as a result of the pilot projects implemented under the Small Grants Program (eco-tourism, fishermen association, handicrafts); (iii) increased responsibility and sustainability in using the natural resources, as a result of the economic reform supported by the project for direct licensing of private fishermen; if developed and supported by other measures, this would be the first step towards reduction of illegal fishing and thus increased budget revenues from resource and income taxes; (iv) direct benefits for the local population in terms of firewood from woodlots planted under the project, which would additionally reduce the pressure for wood-cutting in the secular protected forests.

Project preparation also pre-dates the GEF requirement for an Incremental Cost Analysis.

4.4 Financial rate of return:

Not applicable.

4.5 Institutional development impact:

The project aimed to strengthen the institutional capacity of DDBRA and DDNI to monitor and manage the natural ecosystems of the Danube Delta in a sustainable manner. It has significantly improved ability of DDBRA and DDNI to make effective use of financial and human resources, and has build sustainable institutional capacity that is already benefiting national and regional initiatives. Currently the staff of both implementing agencies are well trained technically and managerially and have strong professional motivations to serve the Delta. The project was implemented by a non stand-alone Project Management Unit (PMU); the staff of the PMU concomitantly maintained their positions in DDBRA and DDNI, acting in both capacities, so the experience gained in implementing the project will be fully incorporated in the future activities of the two institutions, the project being fully sustainable from this perspective. As a result

of the experience, training and equipment gained under the project, the DDNI has accessed other international research grants and projects and has been nominated national coordinator for wetland research and for the Danube River Green Corridor Project.

5. Major Factors Affecting Implementation and Outcome

5.1 Factors outside the control of government or implementing agency:

Factors beyond the immediate control of Government that affected implementation and outcome of the project included:

(a) **The prevailing economic environment and impacts of the transition, leading to unsustainable use of Delta fish resources and deteriorating relations between Delta communities and DDBRA:** Restructuring and closure of industries that provided most employment in the towns near the Delta (Tulcea, Braila and Galati), led to large scale unemployment, increasing economic dependency on the illegal use of Danube Delta resources, and the emergence of a vibrant black market for fish. At the same time, State fishing enterprises employing fishermen maintained low acquisition prices for fish in order to be able to cover inefficiencies. During the first years of project implementation, legal marketing channels, via State owned fishing enterprises, paid a price that was only a small fraction of the price available on the illegal free market. Consequently, in order to survive, Danube Delta fishing communities turned to the black market. This development undermined the relationship between Delta communities and DDBRA field staff who were obliged to try to enforce an inappropriate and unwelcome law, and resulted in uncontrolled and excessive use of Delta fish resources.

(b) **International interest and support for conservation initiatives in the Danube Delta:** Collaboration and technical support provided, in particular, by the Dutch RIZA (i.e., the General Directorate of Public Works and Water Management, which provides technical assistance in water resource management and wetland conservation worldwide), and interaction with the international conservation community, provided moral and substantive support for project implementation, and increased DDBRA and DDNI's awareness of the Delta's international profile and the importance of their roles in conserving its biodiversity.

5.2 Factors generally subject to government control:

Factors generally within the control of Government that impacted on project implementation include:

(a) **Reform of the Delta capture fisheries:** Following the change of Government in 1996, the process of dismantling and privatizing the State fishing enterprises began and DDBRA commenced working with Delta fishing communities to pilot community based fishermen's associations, and introducing free market auctions for fish. The process of supplanting the uncontrolled illegal fish harvest and market may take several years, nevertheless DDBRA has embarked on a process that will lead to regulation and sustainable management of Delta fish resources by the communities that depend on them, increased prosperity for Delta fishermen, improved relations between DDBRA and Delta communities, and increased opportunity for DDBRA to conserve Delta resources in collaboration with local stakeholders.

(b) **Budgetary constraints and public service levels of remuneration:** Public service pay scales were inadequate to cover the cost of living for DDBRA staff who did not also have access to economic support from family or other forms of income, and provided little incentive for staff to stay in the service of the authority. This led to a high turnover of technical and warden staff, and reduced the

impact of training and technical assistance provided under the project.

(c) **Lack of clarity of ownership/use rights for abandoned fish and agricultural polders** led to delays in implementing the polder restoration program. The issue of clarification of ownership rights is now being overcome. DDBRA undertook an economic and social valuation of polder restoration, in order to prove the environmental, economic and social benefits to all stakeholders and to gain political and local acceptance for polder restoration. Consequently, the Tulcea County Council indicated it will allow restoration of abandoned polders under its administration and the first achievement was general agreement and actual restoration of the Popina polder in mid 2000. According to present plan, developed and agreed by all stakeholders, it is estimated that 45% of the target polder areas will be restored by 2002, and 90% by 2004.

5.3 Factors generally subject to implementing agency control:

Factors subject to implementing agency control that influenced project outcome include the **innovative institutional arrangements for project management**. The absence of a discrete PMU had both positive and negative outcomes. Early in implementation, supervision encountered some instances where lack of clearly assigned responsibility for project tasks had led to delayed follow up on agreements and next steps. On the positive side, the absence of a PMU ultimately led to mainstreaming of project activities in the management plans of both DDBRA and DDNI.

5.4 Costs and financing:

At US\$ 4.4 million, GEF financed project costs were 8% less than the US\$ 4.8 million estimated at appraisal. This reduction was caused by the gradual depreciation of the SDR against the US\$. During implementation, costs of some components were adjusted in accordance with changing priorities and needs. The cost of public awareness activities was increased by 34% due to recognition of the urgent need to build awareness and support for project activities among key Delta stakeholder groups, and develop a prioritized communications strategy to support conservation of the Delta. Unexpectedly rapid progress in developing and using facilities and systems financed under the project justified a 75% increase in investments in building the institutional capacity of DDNI under the ecosystem monitoring component. New opportunities in international cooperation, leading to adoption of treaties and agreements for management and conservation of shared resources, led to a cost increase of 23% of this project component. Increases in resource allocation to high performing activities were derived from a corresponding reduction in allocations to components where the need for project financing had diminished. These included ecosystems restoration, where costs were reduced by 36%, and polder restoration, where costs were reduced by 55%. There were no major delays in disbursement. After completion of the full program, 98.35% of the grant was disbursed and US\$ 65,720 represented savings which were cancelled from the grant amount.

6. Sustainability

6.1 Rationale for sustainability rating:

The rationale for sustainability of project activities is supported by GOR's commitment to consistent provision of budgetary support for DDBRA recurrent costs and project activities; decentralization of management functions and institutional capacity; revision and strengthening the legal framework for conservation management of the DDBR, and the intention to explore provisions for revenue generation from economic activities taking place in the Delta; and recent ratification of international conventions focused on conservation of the lower Danube region.

From the outset, project design decentralized and mainstreamed project management functions to DDBRA, thereby building capacity for institutional sustainability. Project implementation built on this local

administrative foundation to equip and train implementing agency teams of technical, field and administrative staff who are professionally motivated to continue to pursue longer term project goals in accordance with strategic approaches developed under the project (e.g., for ecosystem and species monitoring, building public support and species conservation initiatives). Additionally, the project developed the institutional capacity to assess the technical, economic and environmental sustainability of proposed conservation and development initiatives, and to build stakeholder support for actions through incorporating workshops and consultations as part of the routine management planning process for the DDBR.

Project implementing agencies are now further exploring opportunities to ensure the social sustainability of economic development activities, and to link these with conservation of Delta ecosystems. This has been greatly assisted by changes in the allocation of rights to manage and market Danube Delta fish resources that have taken place during implementation and that have been supported by project activities. Important developments include the replacement of state owned fishing enterprises with community based fishery resource management organizations, and provision of legal access to free market prices for fish. The growing development of ecotourism is further consolidating the linkage between sustainable incomes for Delta communities and conservation of natural and biological resources.

6.2 Transition arrangement to regular operations:

Regarding future financial sustainability, GOR is demonstrating commitment to providing DDBRA recurrent costs and continuing environmental restoration works initiated under the project and, for example, have provided US\$0.5 million for polder reconstruction in the year 2000. Additionally, DDNI's capacity for commercial sustainability has been greatly developed under the project and is demonstrated by their being awarded contracts for various independent research assignments. Regarding future legal arrangements for management of the Delta, Ordinance 112/2000 modifies the legal framework for DDBR, and strengthens the administrative functions of DDBRA through harmonizing its role with local Environmental Protection Agencies. DDBRA is now exploring opportunities for retaining revenues derived from fines and taxes on natural resources, including fishing and tourism permits, so that they can be used to support environmental management and conservation activities. DDBRA is also exploring the possibility of developing income generation activities, such as guided tours, publications, etc. With support from Romania's second GEF biodiversity project, the Biodiversity Conservation Management Project (BCMP), MWFEP is now beginning a national initiative to review and harmonize all sectoral policy and legislation that has potential impact on biodiversity. This will further strengthen and consolidate the legal basis for conservation of the Delta and provide for financial sustainability of protected area management, including Government budgetary support and local generation of revenues for use in conservation. Objectives of the Danube Delta Biodiversity Project will be further supported by activities to be financed under the World Bank/GEF strategic partnership, which aims to reduce pollution burden on the Danube and Black Sea Basins.

7. Bank and Borrower Performance

Bank

7.1 Lending:

Identification (Rating - S): Bank involvement in the project followed preparation of the Romania Environment Strategy (1992), undertaken in close collaboration with the Romanian authorities, which emphasized the importance of the Danube Delta as a wetland of global importance, and included conservation of Romania's natural heritage as a priority. GOR established the Delta as a Biosphere Reserve in 1991, and created DDBRA, as the first protected area management authority in Romania. Prior to establishment of DDBRA, with the exception of scientific reserves for academic research purposes, there were no institutional mechanisms for protected area or buffer zone management in Romania.

The Romanian authorities worked closely with IUCN, which helped organize a workshop to identify conservation management priorities for the Delta. Project identification followed this workshop. Following the workshop, EBRD also identified a project that was to be financed with loan funds. The EBRD project was to focus on sustainable economic activities and on preparation of a management plan. Regarding priority for GEF under the pilot phase, the project was also seen as providing a link between the Danube River Basin Environmental Program and the Black Sea Management Project, and was justified in GEF operational programs for both the biodiversity and international waters programs. The Initial Executive Project Summary therefore proposed support for a water model as well as for the activities which were eventually retained.

When it was initially identified, the project was to be a larger project covering the whole delta, to be jointly implemented by Ukraine and Romania. The Ukrainian and Romanian authorities both indicated that they would prefer separate projects that would be linked through informal technical coordination and cooperation mechanisms. Experience has shown this approach to have been appropriate and successful. Cooperation has been built through project implementation with staff from both sides of the Danube now participating in joint training programs and technical cooperation activities. Including formal coordination in the project design would have been unwelcome and may have used project funds less effectively.

Preparation (Rating - S): Bank preparation should be seen in the context of the IUCN report and the technical assistance and project preparation assistance also being undertaken with EBRD support at the time. EBRD supported preparation of a conservation management plan for the Danube Delta with a high degree of local participation, and preparation of a project focusing on: (a) development of economic activities for local communities; (b) improved drinking water supply; and (c) a new building, equipment and TA/training for the DDBRA. The GEF project team worked closely with the EBRD project team and the Romanian authorities to coordinate project activities, and jointly participated in several workshops.

Preparation of the GEF project was financed through a project preparation advance of US\$ 150,000, which was executed by MWFEP. A portion of the preparation grant was allocated to preparing water modeling activities that were not financed under the project, since the value added and cost of the water model remained uncertain, and the initiative risked becoming an academic rather than operational exercise. However, the GEF grant financed the equipment used to obtain hydrological data, while the DDNI obtained from RIZA the licence for the hydrological modelling. The preparation team focused on allocating resources for training warden department staff, better monitoring and information management, restoration of wetlands, pilot ecosystem restoration and public awareness. In retrospect this practical focus of project activities was appropriate and successful. Since social aspects were the focus of the EBRD project preparation, formal social assessment was not carried out under the GEF project preparation. The project was assigned an environmental category C rating since its impact on the environment was clearly positive.

Appraisal (Rating - S): At the time, the overall budget for preparation and appraisal of GEF projects was limited. As a result, design of some components was better than others. The wardens' training component was well designed, as was the monitoring and information technology component, and the wetland restoration component. A strong feature of project preparation and, subsequent implementation, was that it sought and brought in support from other specialized organizations. For example, WWF Germany through the Auen Institute provided technical support to polder restoration, and Birdlife International, worked with the Romanian Ornithological Society on designing some of the bird monitoring programs. A key decision made jointly with the Romanian authorities was to place responsibility for project implementation with DDBRA in Tulcea, rather than with a separate PIU in Bucharest. This approach "institutionalized" project ownership right from the start. A second key decision, shortly before Board approval, was to appoint an

ex-minister from the area with skills in public administration as the Chairman of DDBRA.

7.2 Supervision:

Continuity of supervising staff and a Bank supervision team that consistently included a combination of relevant technical expertise with Bank procedural and administrative skills was a key determinant of project success. Formal project supervision was undertaken on a semi-annual basis with more frequent follow up on the part of resident mission and headquarters staff as needed. Quality of supervision was enhanced by the delegation of task management in the resident mission, which allowed increased and efficient responsiveness to client needs. The core supervision team, which included skills in biodiversity conservation and natural resource management, was augmented when necessary with additional expertise in areas such as fisheries and wetland management, public communications, procurement and financial management. Continuity of supervision allowed for development of good working relations between Bank and counterpart teams, and to collaborative and innovative restructuring of project activities as new information and opportunities became available. The quality of Bank supervision of this project has been subject to review by QAG and found to be satisfactory.

7.3 Overall Bank performance:

Rating - S.

The Bank's performance was satisfactory throughout preparation and implementation. Given the resources and experience available at the time, the project was well prepared. Project objectives and design were relevant and appropriate, and information provided in the project documents on project activities, budget and implementation arrangements proved to be a valuable reference to the client in implementing and adjusting project activities with the support of consistent and close Bank supervision. During implementation, the Bank provided assistance with procurement issues, contributed to technical discussions leading to re-focussing and strengthening of some project activities in accordance with the steadily evolving conditions in the Delta, and facilitated partnerships with international organizations. The Bank provided continuous supervision of the project by an appropriately qualified technical specialist and by resident mission based task managers, thereby providing for informal interaction between the client, other stakeholders and the Bank as necessary.

Borrower

7.4 Preparation:

Rating - S.

The borrower (MWFEP) prepared the project in a timely fashion, and made the appropriate decisions regarding decentralization of project management to the DDBRA, and close involvement of concerned stakeholders. Both the Danube Delta Biosphere Reserve Authority and the Danube Delta National Institute, as well as the Tulcea municipal authorities, participated in preparation and there was a strong sense of local ownership. Participation of local community stakeholders in project preparation was addressed through work connected with the parallel development of the EBRD project.

7.5 Government implementation performance:

Rating - S.

Government was consistently and constructively supportive of project implementation. Having committed to decentralized implementation arrangements, Government involvement in the daily and operational aspects of project management was deliberately minimized, leading to local ownership and successful development of institutional capacity of the implementing agencies. Counterpart funding was generally provided in a timely manner.

7.6 Implementing Agency:

Rating - S.

Project implementation was generally undertaken in accordance with agreed workplans and schedules. There were no significant lags in disbursement and project objectives were achieved in a satisfactory or highly satisfactory manner. Although, at that time, the implementing agencies had little experience with Bank operations, they managed the procurement and consultant supervision process in a satisfactory and timely fashion. Both implementing agencies demonstrated a flexible and innovative approach to project implementation, and were ready to experiment with new technical approaches to ecosystem and wetland restoration, and to the involvement of NGO and local stakeholder groups in the development of project activities.

7.7 Overall Borrower performance:

Rating - S.

The recipient's performance was satisfactory. Project funds were disbursed in the agreed five year period, legal covenants were continuously enforced and, with the inclusion of adaptations as necessary, the project was implemented largely as planned. The two implementing agencies adapted well to the changes, challenges and opportunities made available by the project. DDBRAs role was expanded from monitoring and protection to include ecological restoration and management, and working with local communities to raise awareness of the needs and opportunities for conservation of Delta biodiversity and landscapes, and for sustainable management of Delta natural resources. DDNI's capacity to provide research and analysis to support DDBRAs expanded planning and management functions increased dramatically during project implementation. DDNI is now routinely involved in undertaking similar tasks in support of national and international conservation and resource management initiatives.

8. Lessons Learned

Key lessons from the perspective of the Bank and the recipient include:

- (a) Allocation of responsibility for project management to the staff of existing institutional structures, rather than establishing a separate Project Management Unit, provided for sustainability. Additionally, decentralization of responsibility for project management to the site level implementation unit built ownership and capacity. Both aspects of implementation arrangements - internal project management unit and decentralization - were innovative at the time of project preparation, and both proved to be successful and instrumental in securing project success.
- (b) With the support of quality supervision, project success was not significantly hampered by the relatively low cost of preparation, or the absence of subsequently developed Bank and GEF processing requirements that, had they existed at the time of preparation, would have greatly increased the cost and time of project preparation.
- (c) Continuity in the Bank supervision team, which consistently included a mix of relevant technical expertise and Bank administrative know-how, contributed to improved relations between the Bank and client, and allowed for evolution of project activities and successful implementation.
- (d) Project design should not rely on related but unconfirmed operations to undertake activities that could significantly influence project success. In the case of the Danube Delta Biodiversity Project, the related operation was a proposed EBRD investment loan that was to address socio-economic aspects of development in the Delta. The EBRD loan did not eventuate.

- (e) To minimise resistance to change and gain public support, a professionally designed public communications strategy and action plan should be developed and implemented early in the project cycle, in order to build awareness and necessary support for project activities among key stakeholder groups.
- (f) Early in the project cycle, participatory techniques should be used to undertake socio-economic assessment of existing and potential uses of reserve resources and develop community based strategies for developing conservation-linked sustainable resource use. In this regard, skills in RRA, cost benefit analysis, communications and conflict resolution are of fundamental importance for protected area management.
- (g) Performance indicators should be prescribed as one of the objectives of baseline assessments of ecosystems, socio-economic parameters, and other underlying factors affecting use of natural resources. Subsequently, wherever possible, implementation should be periodically measured against meaningful impact indicators.
- (h) Collaboration for conservation and environmental management across international boundaries can be effectively fostered by parallel but independent projects.
- (i) Interaction between existing and new client implementation teams for World Bank projects can greatly contribute to the quality of project design (lessons learned from the perspective of Romania's second GEF biodiversity project team are in Annex 8)

9. Partner Comments

(a) Borrower/implementing agency:

The Danube Delta is an important wildlife habitat, the second largest delta in Europe, covering 580,000 ha. It has the largest number of birds of any South Europe wetland, being a key area for passage of migrants and wintering birds, when the number of winter wildfowl may exceed 2 million. Over 320 species of birds are of European importance, of which 12 are globally endangered. People have used the natural resources of the Delta for over 7,000 years. The Delta is an economic resource, encouraging activities like navigation, commercial fishing, tourism, reed harvesting. In the last century the wetlands have been degraded. There are several reasons for decline, such as the interference in the natural hydrology cycle by the construction of canals, dikes, polders, and dams upstream, the embankment of the Danube flood plain, ill-conceived attempts at intensive agriculture, fish farming, forestry development, inappropriate harvesting methods, pollution, overfishing and uncontrolled tourism.

9.1. Project Objective and Components

The project aimed to protect the Romanian Delta ecosystems. This objective was achieved through the following 6 components:

- (a) Strengthening the wardens department.** This component focused on improving the capacity of DDBRA through the provision of equipment to enhance mobility and surveying, infrastructure and training, in order to support nature protection, surveys, public awareness and nature interpretation in the Delta;

- (b) **Ecosystems monitoring.** Through improved population and species inventories, ecosystems surveys, hydrological monitoring and development of an integrated database using GIS technology to provide the basis for development of resource management plans;
- (c) **Polder restoration.** Pilot restoration of polders to natural condition with impact and hydrological monitoring, of abandoned polders together with applied research into reed restorations;
- (d) **Ecosystem restoration.** Additional pilot wetland restoration, including protection of a lake from direct inflow of Danube river, willow planting, village woodlots, pilot protection of fish fingerlings from an irrigation pumping station intake, removal of some deteriorating metal structures for landscape enhancement, sturgeon recovery, and small grants fund for research proposals;
- (e) **Public awareness.** A component including support to the DDBRA in the production of public awareness material, support to wardens to work with schools and local communities, and support to local NGOs to enable them to expand their public awareness activities; and
- (f) **Management and co-ordination.** Assistance with co-ordination of activities between Ukraine and Romania, and limited technical assistance with project management, especially with procurement and disbursement.

9.2. Project outcomes

The project had positive and satisfactory outcomes with respect to human resources development, improved biodiversity and utilisation of the relevant data by the DDBRA:

- (a) **Institutional strengthening.** DDBRA staff are better trained and equipped to fulfil DDBRA's mandate of improved management and protection of the biodiversity;
- (b) **Improved biodiversity management.** A better protection and management of the biodiversity in the Danube Delta Biosphere Reserve has been ensured;
- (c) **Participation of local stakeholders in sustainable development.** A greater involvement of local communities and of NGOs has been achieved.

9.3. Evaluation of the Bank's, of the borrower's and of other partners' performance

(a) Bank's Performance

The Bank's performance was satisfactory throughout preparation and implementation. The project was well prepared: the project design was fully appropriate to the project objectives, and the recipient was comfortable with the level of detail on project activities, budget, and implementation arrangements found in the project document. Starting early in implementation, the Bank provided assistance with procurement, focused on human resources development activities that were useful in implementing the project and preparing the recipient for the operational phase, and assisted with facilitating partnerships with international organisations interested in the project. The Bank was responsive to the additional supervision needs not foreseen during preparation, by accessing trust funds for technical assistance and training. The project was constantly supervised, from launching through completion, by a technical specialist, by a highly qualified resident mission staff member and by other experienced resident mission staff, familiar with the needs of the project and of Romania.

(b) Recipient's Performance

The recipient's performance was satisfactory. The project was disbursed over a five-year

period, and the legal covenants were continuously enforced. The project was implemented as planned, with several adaptive changes made in consultation with the Bank. The principal beneficiaries of the project were the Danube Delta Biosphere Reserve Authority and the Danube Delta National Institute. The DDBRA staff performed well in adapting their previous mandate of monitoring and protection functions that were typical of a strictly protected area, to include wetland management and public education and involvement. The DDBRA was assisted by MWFEP, and by the PMU. The performance of the MWFEP was satisfactory in facilitating all aspects of the project. The PMU's efforts and results in procurement and as facilitator of project implementation were excellent, particularly in the context of the country's extensive regulations and procedures.

9.4. Key Lessons Learned

The key lessons learned from the Recipient perspective are the following:

- (a) Well-planned public awareness activities are needed early in the project in order to get the public involved in a meaningful way.
- (b) Future projects should seek ways to simplify requirements and procedures early in project implementation, in order to avoid progress delays.
- (c) Payments and disbursement should be done on time, following the stipulations of the Grant Agreement.
- (d) Continuity in PMU activities and responsibilities should be ensured along the project life.
- (e) Continuity in supervision responsibility contributes greatly to the relationship between the Bank and its client.

9.5. Proposed arrangement for future operation

- (a) Sustainability.** The main stakeholders' commitment to continue the project activities is strong and key benefits of the project will continue to be achieved in the operational phase with financial support from the government. In addition, DDBRA is seeking ways and promoting legislation to implement mechanisms for partial self-financing, such as revenues from fines, taxes on resources, fees paid by visitors, donations, applications for small grants, etc.
- (b) Future Operations.** The recipient has identified the following activities to be developed in the operational period from 2000 to 2003: DDBRA infrastructure and resource management, wetland restoration, research and monitoring, public awareness, regional and international cooperation, tourism and development of alternative activities.

The following activities have been identified as next steps:

- (i) Strengthening the wardens department:
 - Involve the local communities in control and supervision activities;
 - Involve the wardens in data collection for maintaining the data base, to be used in the evaluation of the evolution of the ecosystems and in the DDBRA management.
- (ii) Ecosystems monitoring
 - Use the experience gained in the project for other GEF projects e.g. Lower Prut River,

Danube River Green Corridor, Biodiversity Conservation Management and Agricultural Pollution Control;

- Provide resources for supporting the long term DDBR ecosystems monitoring program;
- Improve the telecommunication facilities for improving data exchange between DDBRA and DDNI;
- Improve the system to access the hydrological data base from AR;
- Establish a Protocol for cooperation between DDBRA and AR regarding hydrological monitoring data access.

(iii) Polder restoration

- Finalize restoration works in Fortuna, Dunavat, Holbina areas (7,745 ha). Ecological restoration is essential for the sustainable development of the delta and the coastal zone.

(iv) Ecosystem restoration

- Replicate the plantation of other woodlots, in other parts of the Danube Delta, with a view to meet all the needs of the population in the area;
- Replicate the pilot projects for eco-tourism, fishermen association, medicinal plants and handicrafts, to ensure alternative occupations and sustainable resource use;
- Implement the sturgeon conservation strategy. The Danube Fishery Commission member states should enforce the measures referring to: participatory management and licensing system, breeders protection, conservation of genetic diversity and monitoring of capture.

(v) Public awareness

- Intervene at the local and national levels to modify the Curricula dedicated to the schools operating in DDBR and in the surrounding area, in view of developing environmental protection education in the area;
- Cooperate with local NGOs and organize field classes for children, focusing on specific cases from the delta; in addition, identify and attract the necessary funds to implement the component of the Strategy referring to environmental protection education.

(vi) Management and coordination

- Organize a working group for establishing bylaws/ regulations for the bilateral Biosphere Reserve Romania-Ukraine;
- Continue technical and research regional cooperation;
- Participate in the new Danube Green Corridor Project;
- Participate in international convention activities (Ramsar, Bonn, Berne);
- Identify alternative foreign financing sources.

(b) Cofinanciers:

(c) Other partners (NGOs/private sector):

10. Additional Information

There is no additional information

Annex 1. Key Performance Indicators/Log Frame Matrix

Outcome / Impact Indicators:

Indicator/Matrix	Projected in last PSR ¹	Actual/Latest Estimate
Increased capacity of DDBRA warden department staff to address expanded role in field conservation	Key performance indicators were not identified at appraisal	DDBRA warden department staff provided with facilities, equipment and training that is now being used effectively in an expanded role that includes monitoring, public awareness and community outreach
Improved capacity of DDNI to undertake ecosystems monitoring, research and analysis in support of conservation management	7,300 out of 37,765	Completed inventory of Delta ecosystems, periodic monitoring systems in place and being implemented, fully functioning GIS center undertaking analysis in support of DDBRA management needs and other national and international conservation initiatives
Restoration of agricultural and fish polders to natural wetland ecosystems; control of sedimentation and eutrophication of delta wetlands, and conservation of Danubian sturgeon		Approximately 19.3 % of SAR targets for polder reconstruction completed, and a plan in place to restore 100 + 45% of SAR targets by 2002, and 90% by 2004. Control of sedimentation and Eutrophication in 265,420 ha of Delta ecosystems; and a region conservation plan for sturgeon adopted.
Improved public awareness of needs and opportunities for conservation of Delta ecosystems and biodiversity		Public awareness strategy prepared and being implemented
Improved international collaboration in support of regional conservation initiatives		Bilateral Romanian/ Ukrainian Danube Delta biosphere reserve established, and international program for conservation of lower Danube region ratified

Output Indicators:

Indicator/Matrix	Projected in last PSR ¹	Actual/Latest Estimate
Number of DDBRA wardens department field staff trained, and training system in place	Key performance indicators were not identified at appraisal	Ninety DDBRA warden department staff trained, and receiving periodic refresher and skills upgrading training; role of warden department expanded to include data collection, public awareness and working with local communities
DDBRA warden department equipment and infrastructure provided and being used for conservation management		Boats, vehicles, infrastructure provided in accordance with agreed targets and being used to address DDBRA mandate
GIS information technology system established and operating in support of ecosystem monitoring and management program		Functioning GIS center established within DDNI (equipment provided, 3 staff trained). GIS outputs being utilized by management include maps of soils, vegetation and ecosystems, hydrological complexes, critical habitats, tourism, etc. DDNI is also being contracted to undertake GIS analysis for other national and international conservation initiatives

Baseline ecosystem surveys completed and periodic monitoring systems in place	Baseline surveys of flora and fauna completed; red data book prepared; periodic monitoring of Delta ecosystems, breeding, migratory and endangered bird species on going and influencing conservation management planning
Ecological reconstruction of agricultural and fish polders	
Eutrophication and sedimentation of lake and canal complexes reduced	Civil works and dredging of 300 km of channels resulting in control of sedimentation and eutrophication of approximately 265,400 hectares of Delta lake and wetland complexes
Small grants program implemented resulting in improved knowledge, awareness and participation of Delta communities in sustainable resource management	Small grant funded feasibility studies of sustainable development options completed and pilot projects in ecotourism, community based fisheries management and handicrafts production and marketing being implemented
Conservation of Danubian sturgeon	Strategic plan for regional conservation of Danubian sturgeon prepared and international collaborative mechanism to support implementation of the plan established.
Improved public awareness and support for conservation initiatives	Public awareness strategy, action and financing plan completed; two visitor centers established and operating; over 40 teachers and 1,500 schoolchildren in the Delta have been provided with instruction and promotional materials
Regional collaboration in support of conservation	Bilateral Romanian/ Ukrainian Danube Delta biosphere reserve established, involving regular joint staff training, information sharing and exchange programs; DDBRA/DDNI participation in international collaborative program for conservation of lower Danube region; and various bilateral arrangements in support of wetland conservation locally and internationally
End of project	

Annex 2. Project Costs and Financing

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

Project Cost By Component	Appraisal Estimate US\$ million	Actual/Latest Estimate US\$ million	Percentage of Appraisal
Strengthening of the Warden's Department	1.50	1.80	1.09
Ecosystem Monitoring	0.65	1.14	1.72
Polder Restoration	0.57	0.27	0.46
Pilot Wetland Restoration	1.17	0.81	0.68
Public Awareness	0.16	0.24	1.5
Management and Coordination	0.19	0.24	1.26
Total Baseline Cost	4.24	4.50	
Physical Contingencies	0.42		
Price Contingencies	0.14		
Total Project Costs	4.80	4.50	
Total Financing Required	4.80	4.50	

Project Costs by Procurement Arrangements (Appraisal Estimate) (US\$ million equivalent)

Expenditure Category	ICB	Procurement Method ¹		N.B.F.	Total Cost
		NCB	Other ²		
1. Works	0.00 (0.00)	0.60 (0.50)	0.50 (0.50)	0.00 (0.00)	1.10 (1.00)
2. Goods	0.00 (0.00)	0.00 (0.00)	2.00 (1.90)	0.00 (0.00)	2.00 (1.90)
3. Services	0.00 (0.00)	0.00 (0.00)	1.20 (1.20)	0.00 (0.00)	1.20 (1.20)
4. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.50 (0.40)	0.00 (0.00)	0.50 (0.40)
5. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
6. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Total	0.00 (0.00)	0.60 (0.50)	4.20 (4.00)	0.00 (0.00)	4.80 (4.50)

Project Costs by Procurement Arrangements (Actual/Latest Estimate) (US\$ million equivalent)

Expenditure Category	ICB	Procurement Method ¹		N.B.F.	Total Cost
		NCB	Other ²		
1. Works	0.00 (0.00)	0.00 (0.00)	0.73 (0.68)	0.00 (0.00)	0.73 (0.68)
2. Goods	0.00 (0.00)	0.00 (0.00)	1.64 (1.57)	0.00 (0.00)	1.64 (1.57)
3. Services	0.00	0.00	1.71	0.00	1.71

	(0.00)	(0.00)	(1.71)	(0.00)	(1.71)
4. Miscellaneous	0.00	0.00	0.42	0.00	0.42
	(0.00)	(0.00)	(0.34)	(0.00)	(0.34)
5. Miscellaneous	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
6. Miscellaneous	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Total	0.00	0.00	4.50	0.00	4.50
	(0.00)	(0.00)	(4.30)	(0.00)	(4.30)

^{1/} Figures in parenthesis are the amounts to be financed by the Bank Loan. All costs include contingencies.

^{2/} Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to (i) managing the project, and (ii) re-lending project funds to local government units.

Project Financing by Component (in US\$ million equivalent)

Component	Appraisal Estimate			Actual/Latest Estimate			Percentage of Appraisal		
	Bank	Govt.	CoF.	Bank	Govt.	CoF.	Bank	Govt.	CoF.
Strengthening the Warden's Department				1.64	0.16				
Ecosystem Monitoring				1.12	0.02				
Polder Restoration				0.26	0.01				
Pilot Wetland Restoration				0.80	0.01				
Public Awareness				0.24	0.00				
Management and Coordination				0.24	0.00				
TOTAL	4.50	0.30		4.30	0.20		95.6	66.7	

The separate Bank and Government contribution for each component was not estimated at appraisal.

Annex 3: Economic Costs and Benefits

Not applicable to GEF projects.

Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating	
	Count	Specialty	Implementation Progress	Development Objective
Identification/Preparation	1	Natural Resources Economist	S	S
	1	Biodiversity Specialist	S	S
	1	Environmental Specialist	S	S
	1	Financial Analyst	S	S
	1	Water Management Specialist	S	S
	1	Ecologist	S	S
Appraisal/Negotiation	2	Natural Resources Economist	S	S
	1	Environmental Specialist	S	S
	1	Biodiversity Specialist	S	S
	1	Water Management Specialist	S	S
	1	Procurement/Financial Management Specialist	S	S
	1	Regional Procurement Advisor	S	S
	1	Project Cost Specialist	S	S
Supervision	4	Economists	S	S
	1	Biodiversity Specialist	S	S
	2	Environmental Specialist	S	S
	2	Financial Management Specialist	S	S
	3	Procurement Specialist	S	S
	1	Public Affairs Officer	S	S
	1	Water Management Specialist	S	S
ICR	2	Biodiversity Specialists	S	S
	1	Economist	S	S
	1	Public Affairs Officer	S	S

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US\$ (,000)
Identification/Preparation	41.4	110.0
Appraisal/Negotiation	58.8	147.7
Supervision	87.1	231.1
ICR		
Total		488.8

Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	Rating				
<input type="checkbox"/> <i>Macro policies</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Sector Policies</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Physical</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Financial</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Institutional Development</i>	<input checked="" type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Environmental</i>	<input checked="" type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
 <i>Social</i>					
<input type="checkbox"/> <i>Poverty Reduction</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Gender</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Private sector development</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Public sector management</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA

Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

6.1 Bank performance

Rating

- ☐ Lending
- ☐ Supervision
- ☐ Overall

☐ HS ☒ S ☐ U ☐ HU
☐ HS ☒ S ☐ U ☐ HU
☐ HS ☒ S ☐ U ☐ HU

6.2 Borrower performance

Rating

- ☐ Preparation
- ☐ Government implementation performance
- ☐ Implementation agency performance
- ☐ Overall

☐ HS ☒ S ☐ U ☐ HU
☐ HS ☒ S ☐ U ☐ HU
☐ HS ☒ S ☐ U ☐ HU
☐ HS ☒ S ☐ U ☐ HU

Annex 7. List of Supporting Documents

Danube Delta Biosphere Reserve Authority Progress Reports 1-10

Danube Delta Biosphere Reserve Authority Public Awareness Strategy

Danube Delta Biosphere Reserve Authority Public Awareness Strategy Financing Plan

Developing Self-Sustainability of the Danube Delta Danube Delta Biosphere Reserve Authority

The Danube Delta-Home for People and Nature

Danube Delta Biosphere Reserve Research Institute

Additional Annex 8. The Perspective of Romania's GEF Operational Phase Biodiversity Project Team

LESSON LEARNED ON DANUBE DELTA STUDY TOUR 22 -28 MAY 1999

Activities	Lessons	Action plan for the BC Management Project
Institutional framework	<ul style="list-style-type: none"> Clearly defined institutional framework improves management activities 	<ul style="list-style-type: none"> Legislation for the establishment of PAs define clear objectives and responsibilities for PMAs
Staff policy	<ul style="list-style-type: none"> Staff stability ensure efficiency in management activities Activity milestones are respected if staff members are properly assigned for tasks Trained staff have efficient activity 	<ul style="list-style-type: none"> Establish adequate financial mechanisms for the PMA to ensure possibilities for compensation and incentives for the staff Clear responsibilities for all staff members and well defined deadlines Establish appropriate training programs for PMA staff and park rangers
Community outreach	<ul style="list-style-type: none"> Local people informed about the project and PAs objectives support management activities Communities involved in park management processes help identify management solutions Trained PA staff in communication techniques improves links between PMA and local communities 	<ul style="list-style-type: none"> Initial workshop to inform local communities about the project and PAs objectives Local communities will have representatives in Consultative Committees Training for PMA staff and for rangers in communication techniques Special sub-component targeting local communities to be developed in the Public Awareness Strategy at the sites
Participative mechanisms for PA management	<ul style="list-style-type: none"> Stakeholder constituency improves the efficiency of management activities 	<ul style="list-style-type: none"> Establish scientific and consulting committees and involve them in management decision processes
NGO involvement	<ul style="list-style-type: none"> NGO involvement improves management activities related to public awareness, community outreach, eco-tourism. 	<ul style="list-style-type: none"> Identify local and national NGOs willing to help accomplishing PA management objectives

Public awareness strategy	<ul style="list-style-type: none"> • Well managed public awareness activities increase the support of stakeholders and reduce delays in project activities caused by misunderstandings 	<ul style="list-style-type: none"> • Well established public awareness strategy focused on key stakeholders • Promotional materials with clear objectives, topics and key information
Information centre	<ul style="list-style-type: none"> • Clearly defined objectives for information centres improve presentation and displaying possibilities of informational materials • Well designed and presented information help raising public awareness on PA objectives 	<ul style="list-style-type: none"> • Involve public awareness specialists in the design of the visitor centres/information points • Monitor visitors opinion and consider suggestions
Coordination between management and research activities	<ul style="list-style-type: none"> • Good linkage between research and management activities reduce costs and time allocated to activities which benefit on research results 	<ul style="list-style-type: none"> • Research contracts focused on practical issues for PA management • Consider research results in management planning/decision
Biodiversity monitoring	<ul style="list-style-type: none"> • Establishment of adequate biodiversity monitoring system leads to valuable database for management decisions 	<ul style="list-style-type: none"> • Use competitive international expertise to establish biodiversity monitoring strategy • Train PMA staff and rangers for data collection
GIS use in decisional processes	<ul style="list-style-type: none"> • Quality information used to establish GIS improves information offered for planning and management • Use of GIS in management decisions improves management activities 	<ul style="list-style-type: none"> • Use of competitive GIS for the establishment of a complete biodiversity database • Procure competitive information needed for GIS • Proper use of GIS information in management activities
Equipment for field activities	<ul style="list-style-type: none"> • Adequate field equipment improve performances in field activities (rangers activity, monitoring) 	<ul style="list-style-type: none"> • Develop strategy for financial sustainability and allocate enough resources for field equipment
Project management	<ul style="list-style-type: none"> • Respecting procurement procedures reduces contracting times for project items 	<ul style="list-style-type: none"> • Establish clear procurement schedule and responsibilities

Project impact monitoring	<ul style="list-style-type: none"> • Well defined monitoring indicators help to improve project activities 	<ul style="list-style-type: none"> • Establish appropriate monitoring indicators and update them periodically
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