Project Name	Romania-Agricultural Pollution Control
Region	Europe and Central Asia Region
Sector	Other Environment
Project ID	ROPE66065
Borrower(s)	GOVERNMENT OF ROMANIA
Implementing Agency	Address MINISTRY OF WATERS, AND ENVIRONMENTAL PROTECTION Address: B-dul Libertatii, 12, Sector 5, Bucharest, Romania Contact Person: Mr. Petru Lificiu, Secretary of State Tel: 40-1 410-0219 Fax: 40-1-410-0219
Environment Category	B
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1. Country and Sector Background

The Black Sea, a critical regional resource and one of Europe's newest seas, has been relatively stable until recent times. During the past decades, however, the Black Sea suffered severe environmental damage, mainly due to coastal erosion, eutrophication, insufficiently treated sewage, conversion of wetlands, increased nutrient run-off from agriculture, introduction of exotic species, and inadequate resource management all of which led to a decline of its biological diversity, loss of habitat and long-term ecological changes. Black Sea Environmental Program (BSEP) Studies revealed that 58% of the total nitrogen and 66% of the total phosphorous flowing in dissolved form into the Black Sea come from the Danube river basin. More than half of all nutrient loads into Danube River originate from agriculture, about one fourth from private households and about 10 - 13% from industry. Romania is the largest contributor of nutrients to the Black Sea as its entire territory drains into the Black Sea. Total nutrient emissions in surface water in 1994 were about 284 - 306 kilo tons nitrogen/year and 39 - 40 kilo tons phosphorous/year. About 44% of the total nitrogen (N) input stems from agriculture, while municipal waste water accounts for 11 - 12% and industry for 9 - 10%. In the case of phosphorous (P), the role of agriculture is even greater, accounting for about 58% of total emissions, followed by industry with 20.6% and municipal waste water with 11.4%. Groundwater pollution with nitrate (NO3) and microbial organisms from agriculture has a major social significance from the point of view of drinking water supply for rural settlements in Romania.

2. Objectives

Project Development Objective: The overall project development objective is to increase significantly the use of environmentally-friendly agricultural practices in the project area and thereby reduce nutrient

discharge from agricultural sources in Romania to the Danube River and Black Sea. In support of this objective, the project will assist the Government of Romania to: (i) promote the adoption of environmentally-friendly agricultural practices by farmers' associations, family farms and individual farmers in the Calarasi Judet (county); (ii) promote ecologically sustainable land use and management in the Boianu-Sticleanu Polder, and ecological restoration of the neighboring Calarasi-Raul Polder to act as a filter and reduce the nutrient discharge to the Danube; (iii) strengthen national policy and regulatory capacity; and (iv) promote public awareness and mechanisms for replicability. The project, envisaged as a demonstration activity in the Calarasi county in the southern part of Romania, along the lower Danube, may provide replicable lessons for introduction of similar practices in other districts of Romania as well as other Black Sea Riparian Countries.Project Global Environmental Objectives: The global environmental objective of the Project is to reduce, over the long-term, the discharge of nutrients (nitrogen and phosphorous) and other agricultural pollutants into the Danube River and Black Sea through integrated land and water management of the Calarasi region and ecological rehabilitation of two agricultural polders. The project is the first of its kind under the umbrella of the Black Sea/Danube Strategic Partnership - Nutrient Reduction Investment Fund under which riparian countries would be eligible for GEF funding for projects that would control or mitigate nutrient inflow to the Black Sea. The proposed project is one of the Bank's early efforts in mainstreaming environmental considerations into agriculture and is expected to serve as a model for similar operations to be replicated in the other littoral countries under the umbrella of the Strategic Partnership Program.

3. Rationale for Bank's Involvement

The principal value added of GEF support for the Project comes from providing additional funds to address trans-boundary water problems in the Black Sea. GEF funds will help reduce the barriers to farmers adopting environment-friendly agricultural practices and allow the Government to consider scaling-up the program. Without GEF support to coordinate these activities, Romania might undertake a series of small activities in different parts of the country to address the issues. It would lack a mechanism to coordinate the financing, approaches and geographical targeting of activities. In addition, the Project would lack sufficient resources to develop capacity (national and local) to promote and accelerate the program, to demonstrate the holistic approach to controlling nutrient loads and to undertake a public outreach program. GEF will also leverage funds from donors by stimulating a program to coordinate activities, increase coverage and generate a larger impact.

4. Description

The project will support both Judet level as well as National level activities. In the Calarasi Judet, the project will support activities at two levels: first at the Judet level, and, second, in seven comunas around Lake Galatui. Calarasi is one of the poorest agricultural counties of Romania, characterized by intensive farming, lack of running water, absence of a sewage system, contaminated drinking water wells (both nitrites and bacteriological levels in water are above maximum acceptable standards) as well as poor livestock management practices. Traditionally livestock is maintained near the house without an organized system to collect and store manure. The lack of efficient manure management

practices is significant in terms of Romanian surface and groundwater pollution and nutrient run-off to the Danube River and Black Sea.Component 1: Activities in the Calarasi Judet (US$9.21 m): Manure Management Practices (US$5.27 m). This sub-component will provide grants for the installation of improved manure storage facilities and equipment for manure collection and application in the seven comunas. Grants on a cost-sharing basis of about 70% of total costs would be provided for the construction of village-level solid waste manure facilities and small storage bunkers with effluent collection facilities at the household level, as well as supply of equipment for manure handling and spreading. Villages and households wishing to participate in the investment program would be selected against agreed criteria and cost-sharing arrangements. Promotion of Environment-friendly Agricultural Practices (US$2.48 m). This sub-component will promote the adoption of better agricultural practices that would improve agricultural production while reducing nutrient discharge pollution from agriculture. The proposed activities would include: (i) the promotion of environmentally-friendly agricultural practices; and (ii) demonstration program of integrated crop and nutrient management, including crop rotations and efficient application of organic and inorganic fertilizers based on soil tests using soil testing kits provided by the project. Activities within the entire Judet would be supported through the ASSP Competitive Grant Scheme with the APCP providing farmers groups, eligible institutions and NGOs with the beneficiary contribution required to access CGS funds. Integrated Management of Boianu-Sticleanu Polder (US$1.0 m) and Ecological Restoration of part of the Calarasi-Raul Polder: The project would develop and support a specific land use management plan for the Boianu-Sticleanu Polder. Thus the project would develop an action plan for a vulnerable area as requested under the EU Nitrate Directive. This component would include: (i) plantation of agro-forestry trees on the degraded lands adjacent to the Iezer Calarasi and buffer strips on unproductive riparian land; (ii) implementation of the code for good agricultural practices on the neighbouring arable land; and (iii) implementation of a conservation management plan for the proposed Iezer Calarasi nature reserve. The component will complement the restoration activities on the Bulgarian side (Oriahovo, Bulgarian Danube islands and the floodplain west of Belene and Tutracan). The project would also provide the costs of studies and ecological restoration of part (about 3000 hectares) of the Calarasi-Raul Polder (adjoining the Boianu-Sticleanu Polder to the east and comprising a major portion of abandoned rice fields) to wetlands. The project interventions in the two polders would be coordinated by the Danube Delta National Research Institute (DDNRI).Strengthening Capacity in Calarasi Judet (Environmental Protection Inspectorate (EPI) and Public Health Directorate) to Monitor Soil and Water Quality and Environmental Impacts (US$0.46 m). The project would strengthen the capacity of EPI and Public Health Directorate in Calarasi to carry out soil and water quality monitoring program to determine the impact of various project activities (in particular, manure and nutrient management and the application of Code of Good Agricultural Practices etc.), on soil and water quality. The project would support the incremental costs of: (a) selecting and maintaining a set of soil and water quality monitoring sites in the project area to develop baseline data for the current status of surface and groundwater quality; (b) determining the impact of improved manure storage systems and better agricultural practices on water quality; (c) strengthening institutional

and technical capacity of EPI and PHD by providing professional training to field and laboratory staff and upgrading laboratory equipment for analyzing water and soil samples for various water quality indicators; and (d) by providing incremental operating expenses for field monitoring activities. Component 2: Strengthening National Policy and Regulatory Capacity (US$0.27 m). This would include support to the Ministry of Water and Environmental Protection (MWEP) and Ministry of Agriculture, Food and Forests (MAFF) for: (i) work relating to the application of the Nitrates Directive and harmonization of legislation with the requirements of the European Union A new Governmental Decision (No. 964 and dated October 13, 2000) meets Government's obligations to introduce the provisions of the EU Nitrate Directive into Romanian legislation. The issue of this document is the first step in creating the legal framework for water and soil protection and would need to be followed by the preparation of the Code of Good Agricultural Practices.; (ii) developing a Code of Good Agricultural Practices; and (iii) strengthening the capacity of the National Authority for Ecological Agriculture in its efforts to promote scientific organic farming and land use management. Component 3: Public Awareness and Replication Strategy (US$0.45 m)The project will support public awareness efforts: (i) in Calarasi Judet, to familiarize the population and help induce the behavioral changes necessary to the success of the project in the seven selected comunas, and replication in the judet area; (ii) at national level, to disseminate the information concerning the benefits of the project activities and promote replication at national level; and (iii) at regional level, in the Black Sea Riparian countries to promote the pilot project as a possible model for replication.Component 4: Project Management Unit (US$0.87 m): The project would support a Project Management Unit (PMU) to be established in the DGAIA offices, Calarasi. The PMU would comprise Project Administrator, Agricultural Technical Specialist (who would also handle project monitoring/evaluation), Financial Management Specialist, Accountant, Secretary/ Translator and Driver. Procurement services would be provided to the PMU by the ASSP Project Management Unit located in the Ministry of Agriculture, Food and Forests. The costs of the Procurement and Financial Management Specialists would be shared, with the APCP supporting the costs of the Financial Specialist (who would be based in the ASSP, PMU, Bucharest), while the ASSP would support the costs of the Procurement Specialist.

5. Financing

	Total (US$m)
Total Project Cost	11.77

6. Implementation

Project Oversight Committee: A Project Steering Committee (PSC) will be responsible for providing project oversight advice and assistance in resolving issues associated with project implementation, and ensure commitment of the concerned Ministries. Co-ordination at the Judet-level of Calarasi would assured by a Project Co-ordination Committee chaired by the President of the County Council, with the Prefect as vice-chair. MWEP would establish a Project Management Unit (PMU), located at DGA-Calarasi to handle procurement; all financial matters relating to disbursements, maintenance of project accounts and financial monitoring; monitoring as well as evaluation of all project activities. The PMU would comprise Project Administrator, Agricultural Technical Specialist (who would also handle project monitoring/evaluation), Financial Management Specialist,

Accountant, Secretary/Translator and Driver. Project Monitoring and Evaluation: A well-designed monitoring and evaluation system will be critical for ensuring the project's timely and successful implementation, and enhancing its impact by a systematic analysis of lessons learned and their effective dissemination. Project monitoring and evaluation would be the responsibility of the PMU. Monitoring will be based on the baseline survey undertaken during preparation phase of the project. The PMU would annually monitor and evaluate project performance through conducting beneficiary surveys. The results of M&E activities will be fed back into the implementation process as improved practices.

7. Sustainability

Institutional sustainabilityThe local government agencies and the communa councils led by elected Mayors, are in full support of the project. The project preparation team will work closely with the extension service (ANCA), which has only been recently established and supported through the World Bank Agricultural Support Services Project (ASSP). The project seeks to strengthen the policy and regulatory framework and build capacity of national and local institutions, including the Ministry of Waters, Forests and Environmental Protection and the Ministry of Agriculture, Food and Forests towards project preparation and implementation. Also, the PMU will be located in the Calarasi branch of the General Directorate for Agriculture (DGAIA) bringing project management to the local level. Both the DGAIA and the Environmental Protection Inspectorate, which have strong institutional capacity and a proven track record at the county level, will have lead responsibility for project implementation at the field level and will thus ensure sustainability of the project.Social sustainabilityEarly involvement of key stakeholders in project preparation and implementation, including policy makers, local public officials and community leaders, farmers, their associations, NGOs, will ensure social sustainability of the project. The technology provided will be responsive to the needs of the farmers and end-users. They will help in identifying issues and possible measures to address them. Farmers will participate in installing on-farm field trials and community waste containment structures. This will give the farmers and beneficiaries a sense of ownership and contribute to social sustainability. The Farmer's associations and individual farmers have pledged their support and are looking forward to working with the project staff.Financial SustainabilityThe main focus of activities at the village and individual farm level is the introduction of environment-friendly agricultural practices that maintain or increase farm profitability and household revenues. Farmers will be contributing towards the installation and operating expenses of the demonstrations and be involved in the planning and execution from the start. During project preparation, data on the comuna's budget was collected and measured to see whether the comunas would be able to support the manure storage platforms' O&M costs and revenues after the five years of project implementation. It was concluded that the comunas could indeed support the maintenance of platforms, paying a charge for manure collection of about US$3/year/household which is affordable for an average household in the Calarasi Judet. A sense of ownership with cost sharing plus attention to positive impact on profitability will ensure that farmer adoption of these practices will become self-sustaining. The project would also benefit the farmers by promoting cost-saving yield-enhancing agricultural practices. In addition, the promotion of organic farming has the potential to open new markets for the local farmers.The Government has demonstrated

consistent financial commitment to implementing the recently completed GEF Danube Delta Biodiversity Project and the ongoing Biodiversity Conservation Management Project. This project is a logical extension of these initiatives.

8. Lessons learned from past operations in the country/sector
Key lessons learned from rural environmental and agricultural operations in the regions and reflected in the Proposed Project include: the early involvement of key stakeholders in project preparation, specifically including local communities and influential decision makers, is essential in order to ensure ownership and successful project implementation; working directly with the beneficiaries is essential for developing ownership, which is a precondition for the sustainability of an operation;environment-friendly agricultural activities should establish a link between the objectives of environmental protection and tangible benefits for key stakeholders, specifically including local communities;the benefits and objectives of the project should be made known to key stakeholders, if not through active participation, then through effective public awareness and outreach programs; where consumptive use of natural resources is an issue, (e.g., grazing, hunting, fishing, and use of agricultural land), resource users must be substantively involved in the design of sustainable resource management systems, and effective monitoring and control mechanisms need to be developed and applied; decentralized responsibility for financial and project management (e.g., as in the Romania Danube Delta Biodiversity Project) builds local ownership and sustainability of project activities; applied research and monitoring programs should be site-specific and targeted to provide direct support for effective conservation management;substantial capacity exists at the local and national levels, but counterpart training and specialized support for project related activities such as procurement, disbursement, supervision, financial management, etc., is a must; anddissemination of information about the benefits of improved environmental management is critical to the widespread adoption of new technologies and practices.The project will incorporate these experiences and build on them specifically by: (i) addressing the links between socio-economic issues and environment-friendly agricultural practices, (ii) building both the local and national capacity for reduction of nutrient loads into the groundwater and surface water including the Black Sea; and (iii) ensuring a participatory and transparent approach to project preparation and implementation.

9. Program of Targeted Intervention (PTI) N

10. Environment Aspects (including any public consultation)
Issues : The major environmental issue is reducing the amount of nutrients leaching into the groundwater or flowing directly into the river systems and then into the Black Sea. The thrust of this project is to decrease this flow through land use management in the polder and partial restoration, appropriate manure and solid waste management and improved agricultural practices. The project cannot be successful without the full co-operation of the farmers. Therefore, it has been designed and will be implemented in a participatory manner so as to have the maximum environmental (and financial) impact on the area. Hence, no major adverse environmental impacts are envisaged.As part of component 1, the project

will provide for 6,750 manure storage bunkers at individual farmer's homesteads to store manure from their domestic animals and 14 village-level manure storage facilities. The environmental concerns under this component may include leakage of the manure from the village-level storage facilities (if construction is not made according to specifications), inappropriate manure spreading in the fields and improper cleaning of the individual manure storage tanks and large manure platforms. An environmental assessment has been made and mitigating measures proposed to address these environmental issues are given in Annex 11. Also, an environmental management plan has been developed to ensure that activities undertaken under this component will be closely monitored with regular inspections by the local environmental agency(ies). Farmers will be advised on measures to address any adverse environmental impacts arising out of inappropriate manure management. All civil works that the project will support will be subject to review and approval by the local environmental authorities. In order to encourage the widespread adoption of environment-friendly practices, grants for investment in manure storage and handling systems would be part of a package of environment-orientated measures to be promoted at the comuna/village level. A contract would be drawn up between the PMU and the comuna/village council covering the assistance for manure systems, introduction of agro-forestry on comuna land and better management practices for communal grazing lands. Also, the comuna/village council would commit to working with farmer and family associations on the adoption of environment-friendly agricultural practices on privately owned land.

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Note: This is information on an evolving project. Certain components may not be necessarily included in the final project.