ROMANIA

AGRICULTURAL POLLUTION CONTROL PROJECT

WORKING PAPER 14

PROJECT MONITORING AND EVALUATION SYSTEM

Project Preparation Unit
Calarasi

ROMANIA
AGRICULTURAL POLLUTION CONTROL PROJECT

Working Paper 14

Project Monitoring and Evaluation System

Table of Contents

A. MONITORING PHYSICAL EXECUTION OF PROJECT

Monitoring/Evaluation System

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, specifically the Technical Specialist to be appointed once the project becomes effective.

The M&E system proposed will use the following three approaches.

- **Regular Monitoring** through quarterly and annual progress reports of the physical implementation of project activities;
- **Concurrent Evaluation** of physical and financial impact of improved practices at the farm and village level;
- **Ex-post Evaluation** of the financial and economic impact of project activities

Project Performance Monitoring:

Monitoring of project performance will be based on the baseline survey undertaken during the preparation phase of the project. Extensive data by comunas and villages have been collected and the Public Health Directorate and the EPI-Calarasi have provided baseline data for soil and water quality levels. 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.

An internationally recruited expert would assist the PMU to design a simple Management Information System (MIS) for M&E, reporting formats for each component, including targeted annual performance objectives and monitoring indicators using the Project Design Summary, Annex 1, and the proposed indicators in Annex 2, as a basis.

Reporting Arrangements:

Quarterly reports will cover progress in physical implementation, the use of project funds and project impact. The Quarterly reports will be consolidated by the PMU into half-yearly progress reports to be submitted through MWEP to the Bank within two months of the end of each six-month reporting period. These half-yearly progress reports will also include an implementation plan and work program for the next six months following the reporting period. The format of reports will be agreed with the Government and the World Bank.

The PMU would submit the monitoring reports to the GEF/World Bank and Government.

Mid-term Review:

A mid-term review will be carried out to assess overall progress. Lessons learned, with recommendations for any improvements, would be used in restructuring the project, if necessary.

B. ENVIRONMENTAL MONITORING

Agricultural Practices to Reduce Environmental Pollution:

A comprehensive monitoring system will be put in place to monitor the environmental impact of project actions as described in Working Paper 12.

C. SOCIAL AND ECONOMIC ASSESSMENTS

Social Assessment:

The social assessment (SA) is a crucial mechanism for establishing how effectively the Project meets its goals. The farmers' attitude to environmental management will affect project results and potential replication elsewhere.

The baseline survey completed during project preparation has ascertained current attitudes to agriculture and environmental practices, potential farm demand for support such as that offered by the Project, access to information, and attitudes to institutions. The SA team will repeat the baseline survey at two-year intervals so as to track changes resulting from project activities.

The second instrument will be beneficiary surveys with a sample of participating households. Householders will be interviewed shortly after joining the Project, and one or two years after completing the investment. The interviews will focus on the level of interest and expectation, satisfaction or dissatisfaction, and on how benefits from the manure management system are perceived by the beneficiaries. The interviews should also focus on eligible households not in the Project to help managers understand the reasons why they did not participate or withdrew.

The social assessment process will evaluate Project impacts on the farmer and the household, the roles of various cooperating parties in supporting the beneficiaries, and the effects of public awareness and training programs from the perspective of both the beneficiaries and the broader community. It will continue throughout implementation, to provide feedback on Project design, management, and implementation. The procedures and practices in this Operational Manual) should be changed in response to the lessons learned from this social assessment. Project managers, consultants, contractors and stakeholder groups will all use this information.

The PMU will contract an independent organization to conduct the social assessment under terms of reference to be agreed with the Bank.

Economic Assessment:

If this Project is to be replicated nationally or internationally, it needs to evaluate the financial and economic impact of its activities as compared to the effectiveness of other intervention methods under similar programmes in Romania and in other countries. It should also study the impact of its interventions on farm profitability. The Economic Assessment will also ascertain farmers' willingness and ability to finance future interventions, and the economic justification of such interventions on a farm/regional/national level.

The PMU will contract an economic assessment to address these issues with terms of reference to be agreed with the Bank.

Annex 1

ROMANIA: AGRICULTURAL POLLUTION CONTROL PROJECT

Project Design Summary

Hierarchy of Objectives	Key Performance Indicators	Monitoring & Evaluation	Critical Assumptions
Sector-related CAS Goal:	**Sector Indicators:**	**Sector/ country reports:**	**(from Goal to Bank Mission)**
Protection and sustainable management of natural resource and the environment	Gradual Improvements in soil and water quality	Agricultural statistics Periodic data collection on soil and water quality of major water bodies, by EPI	Improved agricultural practices contribute to national economy through an increase in average incomes, and environmental enhancement
Assist Romania in implementing the National Environment Action Plan (NEAP)	Capacity to address environmental degradation of the Black Sea.	National reports	EU membership is also likely to increase average incomes
Assist process of integration with the European Union	Progress towards meeting environmental compliance targets with EU legislation	Periodic EU assessments	Policy standards adopted meet EU requirements
	Strengthen the capacity of Environmental Protection Inspectorate (EPI) and Public Health Directorate (PHD) in Calarasi		
GEF Operational Program:			
The Project's objective of reducing nutrient discharge to Danube river and Black Sea is consistent with OP No. 8, Water body-based Operational Program which focuses mainly on threatened water bodies and the most important trans-boundary threats to their ecosystems. Project goals are also consistent with OP No. 9, Integrated Land and Water Multiple Focal Area	Increased awareness of threats to pollution of trans-boundary water bodies from nutrients from animal waste and agricultural chemicals	Agricultural Statistics Regional Surveys Periodic collection of data on water quality from major water bodies in the project area by EPI & PHD	Government's ability to mobilize resources to reduce threats to water bodies and build institutional capacity for future environmental challenges
		Regional Surveys	Sustained effort to raise the public awareness and demand for protection and improvement to environmental factors

Global Objective:	Outcome / Impact Indicators:	Project reports:	(from Objective to Goal)
To increase significantly the prevalence of environment-friendly agricultural practices among farmers' associations, family farms and other eligible farmers in target project areas. The ultimate goal is to reduce the discharge of nutrients and other agricultural pollutants to the Danube River and Black Sea through integrated land and water management.	Increased awareness of environmental issues in agriculture among farmers/households within and outside project area. Increased area of adoption of production and resource conservation technologies. High satisfaction rate among participating farmers.	Agricultural statistics Water quality data sets Social Assessment Economic and Financial Assessment Annual regional and national reports Interviews with farmer groups and local governments	Project-developed interventions are replicated on a wide scale. Adoption of improved environmental policies by government to address non-point agricultural pollution control.
	High percentage of participating farmers implementing environment-friendly agricultural practices at least two years after joining the project.		
Output from each Component:	**Output Indicators:**	**Project reports:**	**(from Outputs to Objective)**
1. Calarasi Judet			
ASSP, CGS, sub-projects with environment-friendly focus in the Judet.	Promotion of new environment-friendly agricultural prtactices	Quarterly reports from APCP and CGS (ASSP)	Technologies respond to farmers' needs.
Packages developed for manure management	High level of participation (all communas, all villages and 65% of individual farmers) in target areas that have built manure stores etc.	Quarterly reports	
A well documented pilot completed and evaluated for replication.	High level of participation (all comunas, all villages and 65 % of individual farmers) in target areas where nutrient management plans have been developed and other environment-friendly practices evaluated/demonstrated.	Quarterly reports	Markets and prices provide sufficient incentives to producers and processors.
Sustainable management adopted in Boianu-Sticleanu polder.	Use of environment-friendly agricultural practices. Area planted to agro-forestry. Management plan adopted for Iezer-Calarasi reserve. Improved water quality in drainage canals.	Quarterly reports EPI monitoring reports and periodic collection of water quality data.	Continued land use based on plans developed. Other government programs do not conflict with project goals.
Good monitoring system for water and soil quality.	Better soil and water quality monitoring.	Annual monitoring reports from EPI and Public Health Directorate, Calarasi	Continued adequate support from local and national government continues for carrying out the components

2. National Policy and Regulatory Capacity Improved policy framework applied for non-source pollution control.	Policy framework adopted for non-source pollution meets EU criteria.	Government legislation	Continued support and enforcement of policy
Code of Good Agricultural Practices adopted	Adoption of code monitored by EPI	Quarterly reports	Provide resources to monitor and regulate standards.
Strengthening of institution for Organic farming.	Information system and legislation ion place.	Agricultural statistics	
3. Public Awareness & Replication: Increased knowledge & awareness of ways to reduce nutrient pollution of water bodies in Calarasi Judet.	Public awareness Adoption of environment-friendly agricultural practices	Social assessment sample surveys Quarterly reports	
Increased awareness of ways to reduce nutrient discharge from agriculture in other Judets.	Public and farmers aware of the potential to improve income while protecting the environment. Demands from other local governments for replication of project investments.	Social assessment sample surveys Quarterly reports	Allocation of resources
Increased Awareness and demand for replication in the region.	Visits and awareness of farmers, NGOs, and officials of other countries of the project in the Calarasi Judet	Quarterly reports	Farmers and leaders in other countries become interested in reducing non-point source pollution from agriculture and allocate resources to replicate project activities.
4. Project Management Well-managed project.	Continued support from the Project Steering Committee and Project Co-ordination Committee.	Supervision Reports	Adequate availability of necessary institutional support by government agencies.

Project Components / Sub-components:	Inputs: (budget for each component)	Project reports:	(from Components to Outputs)
1. Calarasi Judet US$ 9.22 million			
Matching grant for manure management practices	US$ 5.20 million	Progress Reports (quarterly)	Local government support the pilot initiative by contributing resources.
Testing and demonstrating environment-friendly agricultural Practices	US$2.47 million	Progress Reports (quarterly)	Project incentives are sufficient to motivate farmers to participate in the project
Integrated management of Boianu-Sticleanu Polder and ecological restoration of the Calarasi-Raul Polder.	US$1.09 million	Progress Reports (quarterly)	Enforcement of land-use plan
Monitor Soil and Water Quality and Environmental Requirements.	US$0.46 million	EPI and PHD annual reports of soil and water quality. Sample survey	Implementing agencies able to attract and retain qualified staff.
2. National Level US$ 0.27 million			
Develop policy framework for non-point source pollution.	US$0.09 million	Draft of appropriate policies	Continued support and will for enforcing policies
Develop Code of Good Agricultural Practices.	US$0.12 million	Draft of Code	
Promotion of organic farming.	US$0.06 million	Status Institutional frame-work	
3. Public Awareness & Replication Strategy(US$ 0.45 million)			
Public awareness in Calarsi Judet	US$0.21 million	Annual social assessment sample survey	Timely availability of counterpart funds
Public awareness, and replication national level	US$ 0.17 million	Sample Survey	Continued support for implementing agency
Regional cooperation for replication	US$0.07 million	Progress Reports (quarterly)	Ability to interact with each other for mutual benefit.
4.Project Management Unit US$0.86 million			
Project Administration	US$0.65 million	Progress Reports (quarterly)	Ability to maintain staff, offices and support from local government and communities
Project Monitoring/Evaluation	US$0.21 million	Progress Reports (quarterly)	

Annex 2

Table 18: Baseline and Targets for Key Performance Indicators*

(Figures for indicators marked with * are cumulative)

KEY PERFORMANCE INDICATORS	Baseline 2001	2002	2003	2004	2005	2006	2010
PROJECT IMPACT INDICATORS:							
a) Percentage of households with livestock in project area using village manure storage, household bunkers and segregating waste materials.*	-	5%	15%	25%	35%	45%	65%
b) Percentage of area under nutrient management systems including crop rotation, crop nutrient management with soil testing, and use of organic manures.*	-	<1%	2%	10%	20%	30%	65%
c) Percentage of area under environment-friendly agricultural practices.*		<1%	2%	10%	20%	30%	65%
d) Trend in water quality indicators for designated sites.		TBD	TBD	TBD	TBD	TBD	TBD
PROJECT OUTPUT INDICATORS:							
1.1 Calarasi Judet							
1.1.1 Number of environment-friendly practices promoted using CGS.*			2	5	7	10	
1.2 Project Area of Seven Comunas							
1.2.1 Percentage participation by households in areas that have built village-level manure stores and associated household bunkers.*	-	5%	15%	25%	40%	65%	
1.2.2 Percentage of farmers participation in areas where nutrient management plans have been introduced.*	-	<1%	10%	20%	40%	65%	
1.2.3 Percentage of farmers adopting one or more environment-friendly practices in areas where demonstrated.*	-	<1%	10%	20%	40%	65%	
1.2.4 Percentage of vulnerable terrace areas planted to trees.		10%	26%	45%	65%	100%	
1.3.1 Conservation management plan operating in the Iezer-Calarasi Nature Reserve.			X	X	X	X	X
1.3.2 Percentage of vulnerable areas in Boianu-Sticleanu polder planted to trees.*	-	2%	10%	30%	60%	100%	100%
1.3.3 Percentage of arable area in Boianu-Sticleanu polder where principles of Code of Good Agricultural Practices adopted.*	-	<1%	10%	25%	55%	80%	100%
1.3.4 Percentage of Calarasi-Raul Polder restored to wetland.*	-	-	-	5%	20%	20%	

KEY PERFORMANCE INDICATORS	Baseline 2001	2002	2003	2004	2005	2006	2010
1.4.1 Water quality indicators for terrace area.		TBD	TBD	TBD	TBD	TBD	
1.4.2 Water quality indicators for drinking wells..		TBD	TBD	TBD	TBD	TBD	
1.4.3 Water quality indicators for drainage/irrigation canals in the B-S Polder.		TBD	TBD	TBD	TBD	TBD	
2. Strengthening National Policy & Regulatory Capacity							
2.1 Policy framework for non-point source pollution meets EU criteria.			X				
2.2 Code of Good Agricultural Practices adopted			X				
2.3 Institutional framework to promote Organic Farming strengthened.			X				
3. Public Awareness & Replication							
3.1 Increased knowledge & awareness of ways to reduce nutrient pollution of water bodies in Calarasi Judet.				X			
3.2 Increased awareness of ways to reduce nutrient discharge from agriculture in other Judets.					X		
3.3 Increased Awareness and demand for replication in the region.					X		
4. Project Management Unit							
4.1 PMU established and dealing Effectively with all project matters.		X	X	X	X	X	
4.2 Monitoring and Evaluation system in place and reporting.		X	X	X	X	X	
PROJECT COMPONENT INPUT INDICATORS:							
1.1 Calarasi Judet							
1.1.1 Number CGS sub-projects for environment-friendly practices awarded in the Calarasi Judet.	-	3	4	4	4	4	
1.2 Project Area of Seven Comunas							
1.2.1 Number of village-level manure storage facilities constructed.*		2	6	10	14	14	
1.2.2 Number of household bunkers constructed.*		500	1500	2750	4000	4000	
1.2.2 Number of villages with manure collection, handling and spreading systems.*		2	6	10	14	14	
1.2.3 Number of demonstration sites for environment-friendly practices established.*		5	10	15	25	30	
1.2.4 Area of trees planted in vulnerable terrace areas.*		45	113	196	297	432	
1.2.5 Number of training workshops held.		3	3	5	4	2	
1.2.6 Number DGAIA/OJCA staff trained.*		5	10	20	25	25	

KEY PERFORMANCE INDICATORS	Baseline 2001	2002	2003	2004	2005	2006	2010
1.3.1 Conservation management plan for the Iezer-Calarasi Nature Reserve prepared.		X					
1.3.2 Conservation management plan for the Iezer-Calarasi Nature Reserve implemented.			X	30%	60%	80%	100%
1.3.3 Area trees planted in vulnerable areas of Boianu-Sticleanu polder.*		30	110	320	635	1090	
1.3.4 Plan for ecological restoration of Calarasi-Raul polder prepared.		X					
1.4.1 Ecological restoration of Calarasi-Raul polder implemented.			X	X	X		
1.4.2 Number of piezometers established.*		28	44	60	76	76	
1.4.3 Number of piezometers established for monitoring manure stores.*		4	8	24	40	56	
1.4.4 Number of drinking wells monitored.		62	62	62	62	62	
1.4.5 Number of irrigation/drainage canals monitored.		3	3	3	3	3	
2. Strengthening National Policy & Regulatory Capacity							
2.1 MWEP unit equipped		X					
2.1 MAFF/MWEP group established to work on Code of Good Agricultural Practices.		X					
2.2 MAFF Organic Farming Unit using TA		X	X				
3. Public Awareness & Replication							
3.1 Multi-media program developed for Calarasi Judet.			X				
3.2 Nationwide public information Program developed.				X			
3.3 Regional workshop program and Exchange of views at regional Level.		-	-	1	1	1	
4. Project Management Unit							
4.1 Manager and staff of PMU Appointed.		X					
4.2 Staff trained in administrative, financial management and M/E procedures, and systems established.		X					

WP 14
Annex 3

Romania
AGRICULTURAL POLLUTION CONTROL PROJECT

TERMS OF REFERENCE
Beneficiary (Household) Survey

OBJECTIVE:

The general objective of the assignment is to repeat the baseline household survey at regular intervals to determine the impact of the project. The data obtained will be centralized an analyzed according with the WB Social Assessment Unit, the conclusions representing an important input in the monitoring of the project components.

TASKS:

The principal tasks will be as follows:

(i) Update the questionnaire to be distributed in the area with the purpose to reflect the current situation from farmers perspective. The data collected will represent part the baseline data for the preparation of the project.
(ii) Translate the final version of the questionnaire in Romanian and prepare the sampling method.
(iii) Train people from Calarasi (OJCA, DGAIA, EPA) in how to interview the farmers and how to fill in the questionnaire. The consultant will also go at the beginning in the field with each one the trainees in order to supervise their activity.
(iv) The consultant will collect the questionnaires and screen them (taking out the ones which are not relevant).
(v) Data analysis and interpretation will be done with the support of
(vi) The conclusions of the survey will be communicated to all the other bodies and local administration representatives (DGAIA, EPA, OJCA, Public Health Department, County Council, Prefecture)

OUTPUTS (DELIVERABLES):

(i) Updated Questionnaire and sampling method
(ii) Trained staff in interviewing farmers (applying the questionnaire)
(iii) Indicators of social impact t against baseline
(iv) Final report (data analysis and conclusions)

REPORTING AND TIMING:

The consultant will report to the Administrator, PMU, who will agree the work plan with the consultant at the start of the assignment, as well as the timing for, and contents of the draft report. The Draft Report will be reviewed by the Administrator and Technical Specialist , PMU, and their comments will be incorporated in the Final Report

The following documents will be submitted to the PMU:

- The original set of questionnaires filled in during the survey
- The results of the first screening of the questionnaires
- The final report, which will include the data analysis and the conclusions reached and the indicators measuring the social impact of the project.

The report should be presented in English and Romanian and should be submitted in two copies to the PMU.