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Report No: PAD1620

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT PAPER

ON A

PROPOSED ADDITIONAL LOAN

IN THE AMOUNT OF EUR 48 MILLION  
(US\$ 52.39 MILLION EQUIVALENT)

TO

ROMANIA

FOR AN

INTEGRATED NUTRIENT POLLUTION CONTROL PROJECT

March 4, 2016

Environment and Natural Resources Global Practice  
Europe and Central Asia Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective 31/01/2016)

Currency Unit = EUR  
0.916128 = US\$1

## FISCAL YEAR

January 1 - December 31

## ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
ANAR	National Administration for Romanian Waters
APIA	Agency for Payments and Intervention in Agriculture
APCP	Agricultural Pollution Control Project
ASAS	Academy of Agricultural Sciences
CPS	Country Partnership Strategy
DO	Development Objective
ECA	Europe and Central Asia
EMP	Environmental Management Plan
EU	European Union
FAO	Food and Agriculture Organization
FM	Financial Management
FY	Fiscal Year
GEF	Global Environment Facility
GHG	Greenhouse Gases
GOR	Government of Romania
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion and Results Report
ICT	Information and Communication Technologies
IP	Implementation Progress
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
INPCP	Integrated Nutrient Pollution Control Project
MARD	Ministry of Agriculture and Rural Development
MEWF	Ministry of Environment, Waters and Forests
MoPF	Ministry of Public Finance
MS	Moderately Satisfactory

ND	Nitrates Directive
NPV	Net Present Value
NVZ	Nitrate Vulnerable Zone
O&M	Operation and Maintenance
OP	Operational Policy
PDO	Project Development Objective
PMU	Project Management Unit
PNDR	National Rural Development Program
RF	Results Framework
RON	Romanian Leu
TA	Technical Assistance
TEEB	The Economics of Ecosystems and Biodiversity
WHO	World Health Organization

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Country Director:	Arup Banerji
Country Manager:	Elisabetta Capannelli
Senior Global Practice Director:	Paula Caballero
Practice Manager/Manager:	Kulsum Ahmed
Task Team Leader:	Gayane Minasyan/ Cesar Niculescu



**ROMANIA**  
**INTEGRATED NUTRIENT POLLUTION CONTROL PROJECT**

**CONTENTS**

Project Paper Data Sheet	<b>ii</b>
Project Paper	
I.    Introduction	<b>1</b>
II.   Background and Rationale for Additional Financing	<b>1</b>
III.  Proposed Changes	<b>6</b>
IV.  Appraisal Summary	<b>10</b>
V.   World Bank Grievance Redress	<b>18</b>
 Mandatory Annexes	
Annex 1: Revised Results Framework and Monitoring Indicators	
 Optional Annexes	
Annex 2: EU Nitrate Directive Requirements and Status of Romania Meeting Them	
Annex 3: Project Costs (Original IBRD Loan and Additional Financing Loan only)	
Annex 4: Economic and Financial Analysis	
Annex 5: Revised Implementation Arrangements and Support	

**ADDITIONAL FINANCING DATA SHEET**

*Romania*

*Integrated Nutrient Pollution Control Project - Additional Financing ( P155594 )*

*EUROPE AND CENTRAL ASIA*

*GEN03*

<b>Basic Information – Parent</b>									
Parent Project ID:	P093775				Original EA Category:	B - Partial Assessment			
Current Closing Date:	31-May-2017								
<b>Basic Information – Additional Financing (AF)</b>									
Project ID:	P155594				Additional Financing Type (from AUS):	Scale Up, Restructuring			
Regional Vice President:	Cyril E Muller				Proposed EA Category:				
Country Director:	Arup Banerji				Expected Effectiveness Date:	31-Oct-2016			
Senior Global Practice Director:	Paula Caballero				Expected Closing Date:	31-Mar-2022			
Practice Manager/Manager:	Kulsum Ahmed				Report No:	PAD1620			
Team Leader(s):	Gayane Minasyan, Cesar Niculescu								
<b>Borrower</b>									
Organization Name	Contact	Title	Telephone	Email					
Ministry of Public Finance	Anca Dana Dragu	Minister	0040213112376	cabinet@mfinante.ro					
<b>Project Financing Data - Parent ( Romania Integrated Nutrient Pollution Control Project-P093775 ) (in USD Million)</b>									
<b>Key Dates</b>									
Project	Ln/Cr/TF	Status	Approval Date	Signing Date	Effectiveness Date	Original Closing Date	Revised Closing Date		
P093775	IBRD-48730	Effective	30-Oct-2007	28-Dec-2007	08-Dec-2008	31-Dec-2013	31-May-2017		
<b>Disbursements</b>									
Project	Ln/Cr/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P093775	IBRD-48730	Effective	USD	68.10	68.10	0.00	48.88	13.43	71.78

<b>Project Financing Data - Additional Financing Integrated Nutrient Pollution Control Project - Additional Financing ( P155594 )(in USD Million)</b>					
<input checked="" type="checkbox"/>	Loan	<input type="checkbox"/>	Grant	<input type="checkbox"/>	IDA Grant
<input type="checkbox"/>	Credit	<input type="checkbox"/>	Guarantee	<input type="checkbox"/>	Other
Total Project Cost:		54.58		Total Bank Financing: 52.39	
Financing Gap:		0.00			
<b>Financing Source – Additional Financing (AF)</b>				<b>Amount</b>	
Borrower				2.18	
International Bank for Reconstruction and Development				52.39	
Total				54.58	
<b>Policy Waivers</b>					
Does the project depart from the CAS in content or in other significant respects?					No
Explanation					
Does the project require any policy waiver(s)?					No
Explanation					
<b>Team Composition</b>					
<b>Bank Staff</b>					
<b>Name</b>	<b>Role</b>	<b>Title</b>	<b>Specialization</b>	<b>Unit</b>	
Gayane Minasyan	Team Leader (ADM Responsible)	Senior Environmental Economist	Senior Environmental Economist	GEN03	
Cesar Niculescu	Team Leader	Senior Environmental Specialist	Senior Environmental Specialist	GEN03	
Valeria Nikolaeva	Procurement Specialist (ADM Responsible)	Procurement Specialist	Procurement	GGO03	
Anneliese Viorela Voinea	Financial Management Specialist	Financial Management Analyst	Finance	GGO21	
Alexandru Cosmin Buteica	Team Member	E T Consultant	ETC	GEN03	
Elena Strukova Golub	Team Member	Consultant	Consultant	GEN05	

Gabriela Grinsteins	Counsel	Counsel	Country Lawyer	LEGLE
Gillian Ann Cerbu	Team Member	Natural Resources Mgmt. Spec.		GEN03
Grace O. Aguilar	Team Member	Program Assistant	Program Assistant	GEN03
Jasna Mestnik	Team Member	Finance Officer	Finance Officer	WFALA
Jitendra P. Srivastava	Team Member	Consultant	Consultant	GEN03
Linh Van Nguyen	Team Member	Program Assistant	Program Assistant	GEN03
Rebecca Emilie Anne Lacroix	Safeguards Specialist	Social Development Specialist	Social Development Specialist	GSU03

### Extended Team

Name	Title	Location
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### Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Romania		Județul Vrancea			
Romania		Județul Vâlcea			
Romania		Județul Vaslui			
Romania		Județul Tulcea			
Romania		Județul Timiș			
Romania		Județul Teleorman			
Romania		Județul Suceava			
Romania		Județul Sibiu			
Romania		Județul Satu Mare			
Romania		Județul Sălaj			
Romania		Județul Prahova			
Romania		Județul Olt			
Romania		Județul Neamț			
Romania		Județul Mureș			
Romania		Județul Mehedinți			
Romania		Județul Maramureș			
Romania		Județul Iași			
Romania		Județul Ialomița			
Romania		Județul Hunedoara			
Romania		Județul Harghita			
Romania		Județul Gorj			



Romania		Județul Giurgiu			
Romania		Județul Galați			
Romania		Județul Dolj			
Romania		Județul Dâmbovița			
Romania		Județul Covasna			
Romania		Județul Constanța			
Romania		Județul Cluj			
Romania		Județul Caraș-Severin			
Romania		Județul Călărași			
Romania		Județul Buzău			
Romania		Județul București			
Romania		Județul Brașov			
Romania		Județul Brăila			
Romania		Județul Botoșani			
Romania		Județul Bistrița-Năsăud			
Romania		Județul Bihor			
Romania		Județul Bacău			
Romania		Județul Argeș			
Romania		Județul Alba			
Romania		Județul Ilfov			

**Institutional Data**

**Parent ( Romania Integrated Nutrient Pollution Control Project-P093775 )**

**Practice Area (Lead)**

Environment & Natural Resources

**Contributing Practice Areas**

**Cross Cutting Topics**

- [ ] Climate Change
- [ ] Fragile, Conflict & Violence
- [ ] Gender
- [X] Jobs
- [ ] Public Private Partnership

<b>Sectors / Climate Change</b>				
Sector (Maximum 5 and total % must equal 100)				
Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Water, sanitation and flood protection	Solid waste management	27		
Water, sanitation and flood protection	Wastewater Treatment and Disposal	22		
Public Administration, Law, and Justice	General public administration sector	20		
Agriculture, fishing, and forestry	General agriculture, fishing and forestry sector	18		
Water, sanitation and flood protection	Sanitation	13		
Total		100		
<b>Themes</b>				
Theme (Maximum 5 and total % must equal 100)				
Major theme	Theme	%		
Environment and natural resources management	Environmental policies and institutions	25		
Environment and natural resources management	Pollution management and environmental health	25		
Environment and natural resources management	Water resource management	24		
Environment and natural resources management	Land administration and management	13		
Rural development	Rural services and infrastructure	13		
Total		100		
<b>Additional Financing Integrated Nutrient Pollution Control Project - Additional Financing (P155594)</b>				
<b>Practice Area (Lead)</b>				
Environment & Natural Resources				
<b>Contributing Practice Areas</b>				
Agriculture				
<b>Cross Cutting Topics</b>				
[X] Climate Change				
[ ] Fragile, Conflict & Violence				
[X] Gender				

[ ] Jobs				
[ ] Public Private Partnership				
<b>Sectors / Climate Change</b>				
Sector (Maximum 5 and total % must equal 100)				
Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Water, sanitation and flood protection	Solid waste management	27		
Water, sanitation and flood protection	Wastewater Treatment and Disposal	22		
Public Administration, Law, and Justice	General public administration sector	20	100	
Agriculture, fishing, and forestry	General agriculture, fishing and forestry sector	18	100	
Water, sanitation and flood protection	Sanitation	13		
<b>Total</b>		100		
<input checked="" type="checkbox"/> I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.				
<b>Green House Gas Accounting</b>				
Not Applicable				
<b>Themes</b>				
Theme (Maximum 5 and total % must equal 100)				
Major theme	Theme	%		
Environment and natural resources management	Environmental policies and institutions	25		
Environment and natural resources management	Pollution management and environmental health	25		
Environment and natural resources management	Water resource management	24		
Environment and natural resources management	Land administration and management	13		
Rural development	Rural services and infrastructure	13		
<b>Total</b>		100		
<b>Consultants (Will be disclosed in the Monthly Operational Summary)</b>				
Consultants Required? Consultants will be required				



## **I. Introduction**

1. This Project Paper seeks the approval of the Executive Directors to provide an additional loan in the amount of EUR 48 million (US\$52.39 million equivalent) to Romania, as Additional Financing (AF) to the Integrated Nutrient Pollution Control Project (INPCP), P093775 IBRD Loan no.48730-RO.
2. The proposed AF will finance the costs associated with the scale-up of the current project nationwide and will be implemented over a six year period. The AF scale-up will broadly maintain the objective and structure of the INPCP with slight modifications, to reflect the realities of the current situation and lessons learned under INPCP and similar projects elsewhere. The AF will finance works, goods, services and operating costs and will comprise of four components, which are largely the same as in the INPCP, with slight modifications and with about 74 percent of total funding allocation to the first component: (i) Component 1: Investments in Local Communities to Reduce Nutrient Pollution; (ii) Component 2: Institutional Strengthening and Capacity Building; (iii) Component 3: Public Awareness and Information Support; and (iv) Component 4: Project Management.
3. The revised development objective of the project is to support the Government of Romania towards meeting the EU Nitrate Directive requirements at a national scale.
4. The AF includes modifications to the Results Framework (RF), including the PDO and a closing date extension.

## **II. Background and Rationale for Additional Financing in the amount of EUR 48 million (about US\$52.39 million equivalent)**

5. **Original Project.** The INPCP was approved by the Executive Directors on October 30, 2007, and the Loan Agreement and Global Environment Facility (GEF) Grant Agreement became effective on December 8, 2008 for a total IBRD loan of US\$68.1 million and GEF Grant of US\$5.5 million, respectively. The PDO is “to support the Government of Romania to meet the European Union (EU) Nitrates Directive requirements by (a) reducing nutrient discharges to water bodies, (b) promoting behavioral change at the commune level, and (c) strengthening institutional and regulatory capacity.” The Global Environment Objective (GEO) is “to reduce over the long-term, the discharge of nutrients (nitrogen and phosphorus) into water bodies leading to the Danube River and Black Sea through integrated land and water management.” The Project has four components: (i) commune-based investments in Nitrate Vulnerable Zones (NVZ), (ii) support for institutional strengthening and capacity building, (iii) public awareness and replication strategy, and (iv) project management. The Project’s closing date is May 31, 2017.
6. On April 7, 2015, Romania requested additional support from the Bank to continue meeting the requirements of the EU Nitrates Directive, in light of the continued challenges Romania is facing with nutrient pollution countrywide, and successful experience gained by the Project. The proposed AF would allow financing of investments in local communities for reducing nutrient pollution, support institutional strengthening and capacity building for compliance and improved agricultural practices, particularly for farmers to avoid being penalized for non-compliance with eco-conditionality norms applied for getting the EU support for agriculture (direct payments).

7. ***The implementation of the original project is currently progressing well.*** The Project remains highly relevant in terms of Romania's obligations related to the implementation of the EU Nitrates Directive, and it continues to be the only project in Romania that finances direct investments in rural communities, bringing, at the same time, important environmental as well as social-economic benefits. Implementation Progress (IP) has been consistently rated Moderately Satisfactory (MS) for the last couple of years, derived as an average from satisfactory physical progress and low disbursements, due to institutional bottlenecks which were slowing down the process. Implementation slowed down during the first six months of 2015, but has improved since. Most of the agreed actions have been completed and implementation bottlenecks have been largely removed. Project disbursements currently stand at 77 percent (in EURO) and commitments under already signed contracts represent more than 83 percent of the loan. The remaining balance of the GEF grant is fully committed and expected to be disbursed by the end of June 2016. In September 2015, an 18 month extension of the closing date was granted for the Project, and the new closing date of May 31, 2017 was established. The project in the meantime has already met some of its key targets.

8. The original project was classified as an environmental category B – partial assessment. Two environmental safeguards policies were triggered: Environmental Assessment (OP4.01) and Projects on International Waterways (OP7.50, with an approved waiver on notification), and the Environmental Management Plan (EMP) was prepared, discussed and disclosed in country. No land acquisition has occurred under the project. There were no environmental or social safeguards issues registered with respect to INPCP implementation.

9. All key legal covenants are complied with, and financial management and procurement have been consistently rated satisfactory.

10. ***Rationale for Additional Financing.*** The team considered various options to respond to Romania's request for the additional support, including:

- (i) Preparation of a new project. The proposed additional activities are closely related to the ongoing activities; therefore, splitting those into two projects was not justifiable due to technical complexities and higher transaction costs involved.
- (ii) Reallocation of funds within the original Project. Almost all funds under the Project have been committed so reallocation was not possible.
- (iii) Financing from state budget or other IFIs. The National Rural Development Program (PNDR) and other Romanian funds are available to support some of the activities which would directly or indirectly contribute to the overall reduction of nitrates pollution. However, the established eligibility criteria under the 2014-2020 PNDR excludes to a large extent small-scale subsistence farmers, households and commune infrastructure addressing livestock waste management and the Code of Good Agricultural practices. Similarly, even though there is a large program for sewage and wastewater treatment investments, the needs of the country are far beyond what is possible to finance from combined EU and Romania funding sources.
- (iv) Proposed Additional Financing. The proposed AF supports scaling up of activities initiated under the original Project to help rural areas comply with the EU Nitrate

Directive requirements, through further investments as well as the strengthening of related policies, regulations, administrative structures, services and competencies at the national, regional and local levels in the country. The opportunity will also be used to introduce additional activities to reflect the evolving realities and changing needs in the country. This would also allow to move from a project based approach to a more programmatic engagement in the long term (see section III for details).

11. Considering the above options and constraints, the proposed AF would appear the most appropriate instrument. The AF will ensure smooth and efficient scale-up of the ongoing investments and provide comprehensive knowledge and Technical Assistance (TA) to farmers and relevant institutions.

12. ***Rationale for Project Restructuring.*** Project restructuring is required in order to revise the Results Framework, including the PDO, extend the project's closing date, and introduce changes in the project components. The extension of the closing date is necessary to complete all the additional scale-up activities. The proposed PDO revision aims to direct focus on the objective rather than the means of achieving it. The Results Framework is being revised to reflect the change of scale and the end target dates for some of the indicators, as well as rationalize the number of indicators, focusing on those of direct relevance to the PDO. Lastly, minor modifications are introduced to the titles of components and activities addressing evolving and newly emerging needs with regards to the Nitrates Directive.

13. ***Consistency with the Country Partnership Strategy and with institutional goals of reducing poverty and boosting shared prosperity.*** The objectives of the proposed AF are consistent with the World Bank Group's Country Partnership Strategy (CPS) for Romania, FY14-17. The CPS has a strategic pillar on Creating a 21st century government – which the Project addresses by strengthening institutional and regulatory capacity towards meeting the EU Water Framework Directive and in particular EU Nitrates Directive requirements. The AF also contributes to the CPS pillar on growth and jobs creation, through the construction and operational maintenance of platforms. Lastly, the AF helps improve the quality of drinking water in poor rural areas by reducing nutrient pollution in Romania's water bodies in the project area. Together with the promotion of behavioral change at the community level, this translates in better health endowments and practices for householders in poor rural areas – directly linking to the third pillar of the CPS, social inclusion.

14. In addition to the national goals articulated in the CPS, the proposed AF is also aligned with the World Bank Group's twin goals of ending extreme poverty and boosting shared prosperity. The AF helps with promoting environmentally-friendly, sustainable development of natural resources and agriculture in rural areas, and strengthening Romania's institutional and regulatory capacity for meeting EU requirements.

15. ***Sector Context.*** Romania covers an area of 238000 km<sup>2</sup>, of which 87 percent is rural. Nine million people (45 percent) out of the total Romanian population live in rural areas. Approximately one third of all farms in the EU are found in Romania, with around 3.63 million farm holdings. Currently, 92 percent of these farm holdings are less than 5 hectares and the majority are subsistence holdings. Out of the total number of farms, 68 percent are mixed farms with crops and livestock. However, Romania is gradually transitioning from small scale household farming towards medium and large operations. Despite the slow but constant increase in the number of

medium-sized farms, the large majority of farms keep a few animals (most common animals are cows, pigs, sheep, goats, chicken), sheltered in the immediate vicinity of family dwellings, without adequate storage facilities for animal waste collection. This type of inappropriate agricultural practice leads to pollution of ground water with nitrates and bacteria and the spreading of unpleasant odors and flies. The majority of the small farm holders are not conducting environmentally friendly agricultural practices and thus significantly contribute to non-point nutrient pollution. This leads to the pollution of the groundwater, posing threats to the health status of the householders that use it as drinking water.

16. Since almost the entire Romanian territory lies in the Danube River Basin, in 2013, at the recommendation of the European Commission, Romania accepted that the entire national territory comply with the provisions of the Action Program for the waters protection against the pollution with nitrates from agricultural sources. Under this new approach, the preparation and implementation by the local authorities of the “Local action plans for water protection against pollution caused by nitrates from agricultural sources” has become mandatory throughout the entire territory of Romania.

17. The current project (INPCP) covers 86 communes with direct investments only in the areas declared as nitrate vulnerable zones (NVZ) by the Government of Romania in 2008. However, the decision in 2013 to bring the entire territory of the country in compliance with the Water Framework Directive and Nitrate Directive poses challenges to the Ministry of Environment, Waters and Forests (MEWF) and Ministry of Agriculture and Rural Development (MARD). The Government of Romania (GOR) considers that the Bank’s continued assistance to build national level capacity to address these challenges is critical and will complement and facilitate the use of other resources. The National Rural Development Program (PNDR) and other Government funds are available to support some of the activities which would directly or indirectly contribute to the overall reduction of nitrates pollution. However, the established eligibility criteria under the 2014-2020 PNDR excludes to a certain extent small-scale subsistence farmers, households and commune infrastructure addressing livestock waste management and Code of Good Agricultural practices.

18. To help rural areas comply with the EU Nitrate Directive requirements, Romania needs further investments as well as the strengthening of related policies, regulations, administrative structures, services and competencies at the national, regional and local levels in the country. At the national level, a large number of farmers are penalized (in 2014 around 50 percent of the checked farmers have been penalized) for non-compliance with eco-conditionality norms applied for receiving EU support for agriculture (direct payments). Starting in 2015, the farmers applying for direct payments from European funds and from the national budget, as well as those seeking European funds through certain payment schemes from the 2014-2020 PNDR will have to comply with 20 norms related to cross-compliance (eco-conditionality), according to the Ministry of Agriculture requirements.<sup>1</sup> There is a critical need to provide farming communities with the necessary knowledge and tools to comply with the EU Water Framework and Nitrates Directives, and to improve Agency for Payment and Intervention in Agriculture (APIA) inspectors’ capacity for proper implementation. Similarly, even though there is a large program for sewage and

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<sup>1</sup> Order no. 352/636/54/2015 for the approval of cross compliance rules in the schemes and support measures for farmers in Romania.



wastewater treatment investments, the needs of the country are far beyond what is possible to finance from combined EU and GOR funding sources.

19. Consequently, the INPCP remains the main support vehicle for the implementation of the EU Nitrate Directive for small households and farms. GOR has therefore requested continued World Bank assistance in meeting this challenge through an Additional Financing to scale up the ongoing activities of INPCP (with some changes) covering all the agro-climatic regions in the country. Annex 2 provides further details on the requirements of the Nitrate Directive and Romania's progress towards meeting these requirements.

20. ***The Overall Risk Rating is Substantial.*** Key considerations underlying the risk rating include lengthy disbursement times due to a slow-down in procurement, possible fiscal constraints and at the national level, difficulty in ensuring inter-ministerial coordination of the Project activities.

21. Political and governance risk. There is a new Government in Romania, which resulted in changes in senior management. Experience has shown that leadership and staffing changes usually require some effort to re-build project ownership in the short run. At the same time, the proposed AF is grounded on the Government strategies on meeting the requirements of the EU Nitrate Directive and Water Directive in general. Additionally, the project relies on a competitive investment program, which promotes more accountability at the local level and strong community participation, so this dimension of the governance risk is considered to be low.

22. Fiduciary risk. World Bank-financed projects in Romania are usually pre-financed with State Budget funds, rather than loan advances. There is a substantial risk that fiduciary factors, specifically deficit targets set by the Ministry of Public Finance (MoPF), would limit or delay allocation of Government funds for pre-financing INPCP AF activities. As such, deficit targets could reduce the required allocation, negatively affecting project implementation. Although the allocation of Government funds has affected Bank-supported projects in Romania and is considered a substantial risk for the project, the MEWF would anticipate and attempt to mitigate this risk by preparing and discussing with the MoPF and the World Bank realistic annual and multi-annual project budgets with quarterly and monthly cash forecasts. Counterpart and beneficiary contributions have often overly complicated the movement of money, therefore the project design has been adjusted, with the beneficiary contribution coming in the form of feasibility studies which will be required to finance infrastructure investments in local communities.

23. Both MEWF and the Project Management Unit (PMU) by now have substantial experience in preparation and implementation of Bank-supported projects. The PMU will be adequately staffed to ensure careful project preparation and effective project implementation. The PMU has in place internal controls for project implementation including financial management, procurement and safeguards that are adequate and are well established. Local communities will be playing a much more prominent role in the AF, thus, major capacity building efforts and early "handholding" will be required in the beginning. Each Bank implementation support mission will include a safeguards specialist to ensure project compliance with Bank safeguards. The use of Bank procurement procedures is expected to minimize corruption. For each contract to be financed by the AF loan, the method, estimated cost, prior review requirements, in accordance with the Bank's established specific thresholds, and time frame will be agreed upon between the Borrower and the Bank and will be included in the Procurement Plan.

24. **Lessons Learned.** An Implementation Completion and Results Report (ICR) was prepared prior to the AF appraisal. The ICR included an analysis of lessons learned, which, to the extent possible, have been incorporated in the design of the AF. More specifically: (i) *longer term programmatic engagement is needed for sustained results*, and thus a programmatic approach is taken in this case, with a built-in longer implementation period; (ii) *maintaining flexibility in options for co-financing is important* to “cushion” the impact of events like the economic crisis of 2009. The AF attempts to simplify the co-financing arrangements, moving away from cash contribution; (iii) *ensuring that beneficiaries can sustain operating and maintenance costs of investments* is essential for sustainability of the outcomes - the AF thus relies more on a demand-driven approach where local communities would have to identify the activities that they would be willing to invest human resources and, in the longer-term, also operation and maintenance resources. In parallel, the AF would also supply equipment to help with packaging of the manure-based products, making them more “marketable”; (iv) *analysis of possibilities for marketing manure-based products needed to ensure sustainability of operations*, while not exactly part of the AF, as part of the preparation process a brief market analysis will be carried out before the AF becomes effective. In addition, the Bank team has been in contact with the International Finance Corporation to explore opportunities for private sector engagement in the further processing of manure products at a larger scale; and (v) *effective incorporation of incentives and support for beneficiaries and farmers to access EU funds, subsidies and other sources of finance*, training in the Code of Good Agricultural Practices and awareness raising on cross-compliance has been incorporated in the design of the AF to incentivize behavior change, etc.

### III. Proposed Changes

25. The proposed Additional Financing would finance the costs associated with the scale-up of the current project nationwide, with an indicative lending of EUR 48 million IBRD loan (about US\$52.39 million equivalent), and with an EUR 2 million (US\$2.18 million equivalent) beneficiary contribution. It will comprise of four components, which are largely the same as in the INPCP, with slight modifications, with about 74 percent of funding allocation to the first component:

26. **Changes to the Results Framework and Monitoring.** While the overall objective of the project remains the same, the language of the PDO is revised. The change in PDO pertains to the change of scale of the operation, indicating a scale-up to national level, supported by AF. The PDO is also shortened to make it more focused on the objective itself rather than the means for achieving it. The Results Framework and Monitoring Indicators (Annex 1) have been updated to reflect the increased scope of the project, target values and target dates have been aligned with the proposed new closing date. No new PDO level indicators are proposed. One original PDO level indicator, on land users adopting sustainable land management practices, has been moved to the intermediate level and will continue to be monitored at the intermediate level, to avoid partial double counting of farmers through the indicator which represents an index of various measures on rural waste management and good agricultural practices. Several new intermediate results indicators are suggested, three of them to monitor public participation, citizen engagement and grievance redress mechanisms. One additional indicator was introduced to measure the progress towards reaching the average density of groundwater quality monitoring stations for the Nitrate Directive of the EU-28 countries. The number of farmers (gender disaggregated) trained on the provisions of the Code

of Good Agricultural Practices will be monitored to track the progress towards delivery of the services by the knowledge hubs supported under the project. One new intermediate level indicator will specifically monitor the reduction of farmers penalized for non-compliance with the Nitrate Directive. Two indicators on relevant legislation update and adoption of monitoring guidelines and standards are being dropped, at the request of the client.

27. **Component 1: Investments in Local Communities to Reduce Nutrient Pollution (Total cost: US\$93.90 million, out of which AF loan of EUR 35 million/US\$38.20 million).** Component 1 is proposed to be renamed to reflect the shift in scope from NVZs to countrywide. This component will provide support for effective investments and management practices to reduce nutrient pollution from agricultural, livestock and human sources. It builds upon the experiences and lessons learnt from the on-going INPCP and includes support for a menu of investments which could include e.g. manure collection and composting facilities, manure management, biogas production from animal waste, and/or sewage and wastewater treatment in about 100 communes highly exposed to nitrate pollution in all eleven river basins in Romania.

28. The component will be slightly modified. The financial support provided within the AF will be demand-driven, supported on competitive grounds, based on the beneficiary communities' requests and eligibility. The beneficiaries will propose sub-projects, selected from a menu of investments based on agreed eligibility criteria and having the main objective to reduce water pollution with nutrients. Detailed Applicants' Guidelines for the Competitive Investment Program will be developed to provide guiding principles and rules for implementation at the local, regional and national levels, describing in detail the eligibility criteria, selection and award procedure. The selection will be done in two stages. In the first stage, the applicants will submit a Concept Note that will be evaluated based on specified evaluation criteria and will be given a score. Only the applicants receiving a score over a defined threshold will be invited to prepare and submit a full proposal that will be evaluated in a second stage. TA and training on development of proposals will be provided to applicants preparing full proposals. The full proposals, grouped by type of investments, will be reviewed by technical evaluators. Proposals with a score over a defined threshold will be ranked by type of investments and will be recommended by the PMU for consideration and approval by the Technical and Economic Committee of the MEWF.

29. The activity "Promotion of Code of Good Agricultural Practices" which is currently under Component 1 will continue under Component 2, to leave the focus in this component on commune level investments.

30. **Component 2. Institutional Strengthening and Capacity Building (Total cost: US\$14.00 million, out of which AF loan of EUR5.5 million/US\$6.00 million).** This component will support activities that aim to strengthen institutional capacity and coordination within relevant national and local governments, institutions, agencies and stakeholders for regulating, implementing, monitoring and reporting on the EU Nitrate Directive and Water Framework Directive requirements. The project will contribute to building capacity by providing equipment, software and other required facilities and specialized training for MEWF, National Administration for Romanian Waters (ANAR), MARD, Agriculture Payments and Intervention Agencies, National Environment Protection Agencies, Environmental Guard and Public Health Directorates, and selected Research Stations and County Offices for Soils and Agro-Chemistry. The activities will also include support to ANAR to monitor and report to the MEWF and EU on the quality of surface water and groundwater under the EU Nitrates Directive and the EU Water Framework Directive, through the acquisition of equipment for groundwater wells; the construction of

groundwater wells; the acquisition of laboratory equipment and related software; and the provision of TA for, inter alia, the carrying out of studies and the development of software.

31. The project will support a comprehensive training program for the staff of the relevant national, regional and county level agencies on monitoring and reporting under the EU Nitrates Directive and EU Water Framework Directive, as well as improving the capacity building system to support the scaling up at the national level.

32. TA will be provided to: (i) update the Code of Good Agricultural Practices and revise action programs; and (ii) carry out activities to promote the adoption by the farmers of the improved nutrient management practices set forth in the Code of Good Agricultural Practices.

33. **Introduction of sub-component/activity 2.1. Development of national knowledge and training activities (through providers), as well as support for on-farm demonstrations, to improve compliance, adoption and monitoring of the Code of Good Agricultural Practices to reduce nutrient pollution.** The INPCP has supported Romania in developing and approving a “Code of Good Agricultural Practices for Water Protection against Pollution with Nitrates from Agricultural Sources”. However, both farmers and APIA inspectors need knowledge, training and demonstrations to adopt, comply with and properly manage implementation. There is a need to develop at least one permanent facility in each of the development regions where farmers, trainers, APIA inspectors and local and regional authorities can go to see, learn and discuss practical demonstrations of its applicability; where information is requested, training and necessary backstopping is provided, including capacity to conduct on-farm demonstrations of good agricultural practices on specific locations. Support will be provided for the development of eight knowledge and training providers (one in each development region) to promote adoption of good agricultural practices to reduce on farm nutrient pollution. These knowledge and training providers will be developed on the basis of already existing research units under Academy of Agricultural Sciences (ASAS) and / or agricultural universities or other relevant institutions, based on their capacity and relevance and long term commitment to promote sustainable and environmentally-friendly agriculture specific to the farming systems and needs of their region.

34. **Component 3: Public Awareness and Information Support (Total cost: US\$7.52 million, out of which AF loan of EUR3.5 million/US\$3.82 million).** This component was renamed to better reflect the actual substance of the activities. None of the activities proposed are new or different in their nature from those currently being implemented under INPCP. In addition to information provision under the public awareness campaign, the AF will provide some channels for direct citizen engagement (e.g., PMU contact information, Facebook, Twitter). The opportunities for providing feedback, the analysis of such feedback and the report back to communities on its results will be strengthened under the AF. The public awareness campaign and associated activities will reflect the needs and interests of different groups, such as Roma communities and gender groups. The surveys on knowledge, attitudes and behavior will be expanded to allow for qualitative data collection and the consolidated results of the surveys will be shared with participating communities in a user friendly format. Participating municipalities will be requested to provide summaries of public consultation, including the feedback received and the responses provided.

35. One objective of this component will be to promote the financial instruments that will be available within the AF to potential beneficiaries. This objective will be reached through face-to-

face meetings, where the beneficiaries will find out about the Calls for Proposals sessions and will be taught how to prepare their proposals.

36. **Component 4: Project Management (Total cost: US\$10.57 million, out of which AF loan of EUR4 million/US\$4.37 million).** The AF will be implemented by the existing PMU located within the MEWF, enhanced with specialized consultants. While the beneficiaries will have a more active role in the sub-projects proposals and implementation, the PMU will have an extended role in providing information regarding the project and monitoring all project activities, as well as ensuring the coordination of all interventions aimed at implementing the Nitrates Directive. This will involve a revision of the PMU procedures for clarifying the coordination mechanism between PMU, beneficiaries and other institutions involved in the implementation of the Nitrates Directive. A more detailed description of the PMU's roles and responsibilities is included in Annex 5.

37. The original IBRD loan and Additional Financing loan cost by components is presented in Annex 3.

38. **Reporting.** It is proposed that Project Reports specified in the INPCP Loan Agreement and the proposed INPCP AF cover implementation progress of both Loans. These reports are expected to monitor and document progress over one calendar semester (January 1 to June 30, and July 1 to December 31).

39. **Anti-corruption guidelines.** The Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 (Anti-Corruption Guidelines) will apply to the additional financing and the original loan and GEF grant. The following guidelines will be applicable for procurement commencing after AF effectiveness: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA credits & Grants and Guidelines: Selection and Employment of Consultants under IBRD Loans & IDA Credits & Grants by World Bank Borrowers, published in January 2011, revised July 2014".

40. **Closing Date.** The closing date of the project is proposed to be extended by four years and ten months, from May 31, 2017 to March 31, 2022.

#### IV. Appraisal Summary

<b>Summary of Proposed Changes</b>	
<p>The proposed changes include: (i) revision of the PDO to improve the language of the original version and sharpen the focus, and to better reflect the scale of the activities supported by the AF; and (ii) The Results Framework has been revised to: 1) reflect the increased scope of the project; 2) align some of the target values and dates with the proposed new closing date; 3) introduce additional indicators to reflect the supplementary activities proposed under the AF; 4) rationalize the number of indicators, focusing on those of direct relevance to the PDO. There are no changes to the implementation arrangements, i.e. same implementing agency; institutional arrangements and financial management. The closing date is proposed to be extended from May 31, 2017 to March 31, 2022, to allow for all activities to be completed.</p>	
Change in Implementing Agency	Yes [ ] No [ X ]
Change in Project's Development Objectives	Yes [ X ] No [ ]
Change in Results Framework	Yes [ X ] No [ ]
Change in Safeguard Policies Triggered	Yes [ ] No [ X ]
Change of EA category	Yes [ ] No [ X ]
Other Changes to Safeguards	Yes [ ] No [ X ]
Change in Legal Covenants	Yes [ ] No [ X ]
Change in Loan Closing Date(s)	Yes [ ] No [ X ]
Cancellations Proposed	Yes [ ] No [ X ]
Change in Disbursement Arrangements	Yes [ ] No [ X ]
Reallocation between Disbursement Categories	Yes [ ] No [ X ]
Change in Disbursement Estimates	Yes [ X ] No [ ]
Change to Components and Cost	Yes [ X ] No [ ]
Change in Institutional Arrangements	Yes [ ] No [ X ]
Change in Financial Management	Yes [ ] No [ X ]
Change in Procurement	Yes [ X ] No [ ]
Change in Implementation Schedule	Yes [ X ] No [ ]
Other Change(s)	Yes [ ] No [ X ]
<b>Development Objective/Results</b>	
<b>Project's Development Objectives</b>	
<p>Original PDO</p> <p>To support the Government of Romania to meet the EU Nitrates Directive requirements by (a) reducing nutrient discharges to water bodies, (b) promoting behavioral change at the commune level, and (c) strengthening institutional and regulatory capacity.</p>	

<b>Change in Project's Development Objectives</b>						
Explanation: While the overall objective of the project remains the same, the language of the PDO is revised. The change in PDO pertains to the change of scale of the operation, indicating a scale-up to national level, supported by AF. The PDO is also shortened to make it more focused on the objective itself rather than means for achieving it.						
Proposed New PDO - Additional Financing (AF)						
The development objective of the project is to support the Government of Romania towards meeting EU Nitrate Directive requirements at a national scale.						
<b>Change in Results Framework</b>						
Explanation: Targets for most of the indicators have been revised taking into account the scale up of activities. No new PDO level indicators are proposed. One original PDO level indicator, on land users adopting sustainable land management practices, has been moved to the intermediate level and will continue to be monitored at the intermediate level, to avoid partial double counting of farmers through the index indicator on various measures for rural waste management and good agricultural practices. Several new intermediate results indicators are suggested, three of them to monitor public participation, citizen engagement and grievance redress mechanisms. One additional indicator was introduced to measure the progress towards reaching the average density of groundwater quality monitoring stations for the Nitrate Directive of the EU-28 countries. Number of farmers (gender disaggregated) trained on provisions of the Code of Good Agricultural Practices will be monitored to track the progress towards delivery of the services by the knowledge hubs supported under the project. One new intermediate level indicator will specifically monitor the reduction of farmers penalized for non-compliance with the Nitrate Directive. Two indicators on relevant legislation update and adoption of monitoring guidelines and standards are being dropped, at the request of the client.						
<b>Compliance</b>						
<b>Covenants - Additional Financing ( Integrated Nutrient Pollution Control Project - Additional Financing - P155594 )</b>						
Source of Funds	Finance Agreement Reference	Description of Covenants	Date Due	Recurrent	Frequency	Action
				<input type="checkbox"/>		
<b>Conditions</b>						
Source Of Fund	Name		Type			
IBRD	Update the Project Operational Manual		Effectiveness			
<b>Description of Condition</b>						
Condition of Effectiveness consists of the following: namely that the Borrower, through MEWF has updated and adopted the Operational Manual with contents and in a manner acceptable to the Borrower and to the Bank						

<b>Risk</b>									
<b>Risk Category</b>						<b>Rating (H, S, M, L)</b>			
1. Political and Governance						Substantial			
2. Macroeconomic						Moderate			
3. Sector Strategies and Policies						Moderate			
4. Technical Design of Project or Program						Moderate			
5. Institutional Capacity for Implementation and Sustainability						Moderate			
6. Fiduciary						Substantial			
7. Environment and Social						Low			
8. Stakeholders						Substantial			
9. Other									
<b>OVERALL</b>						<b>Substantial</b>			
<b>Finance</b>									
<b>Loan Closing Date - Additional Financing ( Integrated Nutrient Pollution Control Project - Additional Financing - P155594 )</b>									
<b>Source of Funds</b>					<b>Proposed Additional Financing Loan Closing Date</b>				
International Bank for Reconstruction and Development					31-Mar-2022				
<b>Change in Disbursement Estimates (including all sources of Financing)</b>									
Explanation:									
Change in disbursements due to additional Euro 48 million equivalent IBRD loan and proposed new closing date for the project, March 31, 2022. The original loan closing date will not be extended.									
<b>Expected Disbursements (in USD Million)(including all Sources of Financing)</b>									
Fiscal Year	2017	2018	2019	2020	2021	2022			
Annual	11.10	7.00	8.70	10.00	12.00	11.00			
Cumulative	11.10	18.10	26.80	36.80	48.80	59.80			
<b>Allocations - Additional Financing ( Integrated Nutrient Pollution Control Project - Additional Financing - P155594 )</b>									
Source of Fund	Currency	Category of Expenditure	Allocation			Disbursement %(Type Total)			
			Proposed			Proposed			
IBRD	USD	Goods, works, non-consulting services, consultants' services, and Operating Costs under the Project	52,394,400.00			100.00			



		<b>Total:</b>	52,394,400.00	

**Components**

**Change to Components and Cost**

Explanation:

The proposed Additional Financing would finance the costs associated with the scale-up of the current project nationwide. It will provide both technical assistance, public awareness, training and specific investments to increase the use of environmentally friendly agricultural practices, management of animal and human wastes to reduce nutrient loads to surface and ground waters in Romania as well as for improved regulatory and monitoring activities for water quality.

None of the current activities are proposed to be dropped. Component 1 is proposed to be renamed to reflect the shift from NVZs to the countrywide scope. Activity "Promotion of Code of Good Agricultural Practices" which is currently under Component 1 will continue under Component 2 and will be implemented under "Developing knowledge and training activities (through providers), as well as support for on-farm demonstrations, to improve adoption and compliance by farmers with the Code of Good Agricultural Practices" activity. This shift is to consolidate capacity building activities under Component 2 and focus Component 1 on community level physical investments.

Table below presents project costs per components (all financing sources included).

<b>Current Component Name</b>	<b>Proposed Component Name</b>	<b>Current Cost (US\$M)</b>	<b>Proposed Cost (US\$M)</b>	<b>Action</b>
Commune Based Investments in Nitrate Vulnerable Zones	Investments in Local Communities for Reducing Nutrient Pollution	55.70	93.90	Revised
Institutional Strengthening and Capacity Building	Institutional Strengthening and Capacity Building	8.00	14.00	Revised
Public Awareness and Replication	Public Awareness and Information Support	3.70	7.52	Revised
Project management	Project management	6.20	10.57	Revised
	<b>Total:</b>	73.60	125.99	

**Other Change(s)**

**Change in Procurement**

Explanation:

The applicable procurement guidelines for procurement commencing after effectiveness of the AF shall be: Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA

credits & Grants and Guidelines: Selection and Employment of Consultants under IBRD Loans & IDA Credits & Grants by World Bank Borrowers, published in January 2011, revised July 2014”.

### **Change in Implementation Schedule**

Explanation:

The closing date is proposed to be extended by four years and ten months, from May 31, 2017 to March 31, 2022 to allow for all activities envisaged under AF to be completed. The original loan closing date remains intact.

## **Appraisal Summary**

### **Economic and Financial Analysis**

Explanation:

The economic analysis uses a benefit cost approach, health, ecosystem services supported by the AF, global services, yield increase and property value benefits are estimated, as well as direct project benefits in terms of nutrient pollution reduction and savings on fertilizers. The financial analysis focuses on operation and maintenance costs, their funding and affordability.

The project will have clear benefits in addressing key elements in nutrient pollution of the Black Sea from poor agricultural practices in the Romanian catchments that drain into the Danube River. Besides improvements in the quality of ground and surface waters, project benefits also include: (i) progress towards compliance with the EU Nitrates Directive and increased absorption capacity of future EU funds for water and sanitation; (ii) sequestering carbon in the grasslands, croplands and forests; (iii) improvements in health as there will be an improvement in the drinking water, sanitation and general hygiene of the population; (iv) additional farm income from effective use of organic waste, crop rotations, organic products and improved livestock grazing practices and improved agricultural productivity through better agricultural practices, low input use and better farm management; (v) additional farm income from fertilization with pellets; and (vi) increased capacity building of local institutions.

The analysis focused on determining reductions of nutrients (N, P and K) leakage into the environment that were achieved as a result of improved manure management and other agricultural practices, including compost/pellet stations, sewage plants and afforestation. Net Present Value (NPV) for each type of project and corresponding Internal Rate of Return (IRR) were then calculated, as total monetary value of direct and indirect benefits, minus the total project cost. The costs taken into account included capital investment costs, maintenance and operation costs, and project management costs. Only market prices were considered and no adjustments were made, because due to insignificant market distortions, market prices were considered similar to economic prices. Details of the analysis are provided in the Annex. NPV (5 percent discount rate) and IRR for the project portfolio including 80 manure management platforms and 20 compost stations, 23 sets of animal waste collection equipment and 4 sewage networks and waste water treatment plants, was estimated, when direct and indirect economic benefits are included. High IRR for animal wastes collection equipment are justified on the assumption that the corresponding platform cost are covered outside of the project. High IRR of the sewage plant is explained by the expected increase of real estate value if a dwelling is connected to a public sewage. NPV of the project’s economic benefits is estimated at US\$72 million and IRR is estimated at 22 percent.

In the financial analysis of the similar project portfolio net cash flow is calculated. Only direct benefits are included along with the animal waste collection fee (60 percent adoption rate) in the high case, animal wastes collection fees are not included in the low case. Then NPV of the project portfolio varies from - US\$14.6 million to US\$12.7 million and the IRR is in the range from 0 to 9.1 percent. Financial sustainability of the project eventually depends on the behavioral changes in rural population of Romania

in the long term. In the short term, financial support of the project investments portfolio at the local and national level in Romania, as well as by the EU institutions, is justified by substantial economic benefits of nutrient pollution reduction in Romania. It should be noted that in the financial analysis, a conservative approach has been adopted, assuming that capital investment is provided as a loan with a subsidized interest rate equal to the discount rate. If all capital investment is provided to recipients as a grant and they bear only operational costs, then the IRR is significantly higher.

### **Technical Analysis**

#### Explanation:

Component 1. Financial support provided within the AF will follow a competitive investment provision in communities. It will be demand driven based on communities requests and meeting a well-defined eligibility criteria. The beneficiaries will propose sub-projects from a predefined approved menu using procedures described in the Applicants' Guidelines for the project. The selection and approval of sub-projects are also detailed in the Guidelines. This will improve interest, commitment and greater involvement of the beneficiaries in the implementation of the sub-projects and will allow the PMU to provide the necessary support and oversight at the national level. One difference would be that beneficiaries will not be required to co-finance in cash as this requirement had posed implementation difficulties and delays in the on-going project.

Component 2, Institutional Strengthening and Capacity building will continue to support capacity of MEWF and ANAR. However, the AF will work more closely and support Agriculture Payments and Intervention Agencies, National Environment Protection Agencies, Environmental Guards and Public Health Directorates to improve their capacities to support the overall objectives of the project. Although Romania has a revised “Code of Agricultural Practices”, farmers as well as involved implementing agencies need updated information, training and on-farm demonstrations of these practices to adopt, comply with them and conduct proper monitoring. To meet this urgent need the AF will provide for the development of one knowledge and training provider in each of the eight major agro-ecoregions of Romania based on the competition between e.g. already existing research and training stations under the Romanian Academy of Agricultural Sciences (ASAS), agricultural universities and/or other existing relevant institutions in the regions.

Component 3 will continue to follow an already very successful model with national level coverage. The AF will be implemented by the existing PMU with additional staff to handle the Competitive Investment procedures and national coverage, enhanced with specialized consultants.

### **Social Analysis**

#### Explanation:

Social Safeguards: Similar to the current project, OP 4.12 on Involuntary Resettlement is not triggered under the AF. The proposed investments will require an area of 2500-3000 sq.m. for the manure storage and management platforms (the main expected investments), 1000-1500 sq.m. for wastewater treatment plants. The proposed investments will continue to take place exclusively on municipally owned land. Sound criteria are in place with regards to selection of possible sites: the proposed sites must be on municipal land, be at least 500 meters from the closest inhabited structure (regardless of legal status or temporary/permanent occupation of the structure) and the type of land must be used for agriculture. Such land is typically either not used or available for grazing. For the latter case, Romania has relevant legislation in place to ensure that alternative grazing area (of comparable size and quality) are offered to communities prior to any construction starting on the selected plots.

**Citizen Engagement and Public Awareness:** The current project has implemented a comprehensive range of public awareness and sensitization activities that will be continued under AF. Though farmers and schoolchildren are already specific target groups, it was agreed that a more nuanced stakeholder analysis and tailoring of messages to different population groups, particularly as they relate to gender and national minorities, will further increase the reach and impact of the communications activities.

The majority of the communication and public awareness activities relate to information provision. However, the project also includes a range of mechanisms that enable people to voice questions, comments or concerns about the project. In addition to face-to-face opportunities through public awareness, farmer and Trainer-of-Trainer sessions, the project is using Information and Communication Technologies (ICT) and social media to disseminate information (TV, radio, newspaper, website, blog, pinterest), while questions or comments can be submitted via Facebook or Twitter. PMU/Ministry contact information is included in all the communications materials.

**Social inclusion:** Analysis of baseline and mid-term evaluation data indicate that specifically vulnerable groups in the project areas are women, people over 60 years old and people with below average income. Many people are vulnerable given a combination of these factors. While knowledge, attitudes and practice are relatively homogenous between these groups and the general population, some trends nevertheless emerge. For example, though an equal number of women and men participate in the Trainer-of-Trainer sessions, less women have participated in the public awareness sessions (31 percent female participation in 2013), while they are slightly more likely to have received information via television or radio than the general population. People over 60 are less likely to think that manure or agricultural practices have any impacts on the Danube or Black Sea. As a result of these findings, the communications campaign will be adapted for different target groups under AF, while survey reports will systematically analyze results by gender, age and income status for increased effectiveness of project activities. The presence of the platforms could also offer a source of income and avenues for including elderly and low income women and such avenues will be explored in the participating municipalities. Furthermore, AF places renewed emphasis on training female farmers on the Code of Agricultural Practices, and this is monitored as part of the results framework.

The project has applied the Roma Sensitivity Enhancer and has carried out specific consultations with Roma communities. Four of these were in localities included in the current project (Albestii de Arges, Balta Alba, Gratia, Peciu Nou) and two were in potential beneficiary localities (Puiesti and Buzescu) under the AF project. The overall message from communities in project areas is further interest in having additional localities part of the AF project, since they have received excellent feedback from those who have benefited from the project so far. The meetings also confirmed the relevance of information campaigns and stakeholders' engagement - contributing not only to raising awareness about the project but educating the population on the nitrates' level, pollution, waste, etc. Roma communities also raised the issue of inclusion in sewerage services and employment opportunities. While the latter is beyond the scope of the project, the participating municipalities are encouraged to carry out consultations with the Roma living in the proposed investment area so that their interests are reflected in the proposals. Furthermore, the Trainers of Trainers sessions will aim to include 1 or 2 Roma representatives, where relevant, to ensure they benefit from the knowledge exchange events. There is a significant difference in the level of understanding between those who benefited from information campaigns and those who have not. Jobs and labor market - particularly among vulnerable groups the project also provides opportunities for temporary job provision, mostly on construction of platforms and other infrastructure investments.

## **Environmental Analysis**

Explanation:

Environmental Safeguards: Even though the scale of the project will change, the nature of the activities remains the same and no changes to the project safeguards category are expected, and no additional safeguard policies are triggered. The project remains Category B - partial assessment, and triggers the same safeguards: OP 4.01 (Environmental assessment), and OP 7.50 (Projects on International Waterways). The required mitigation measures for the project activities are standard and widely used in construction practices. They are already well prescribed in the Environmental Management Plan (EMP), which was prepared for the original project. Since the new project will support the same types of activities as under the original project the existing EMP has been updated and will be applied also for the AF. The EMP stipulates that all contracts for construction works include requirements for implementation of the specific measures as per EMP provisions and good construction practices. In addition to the overall project EMP which identifies the range of issues expected, all sub-investments will require an environmental approval from the local (county) environmental protection agency.

The proposed AF will scale-up the original project nationwide, and would allow for six more years the financing of investments in local communities for reducing nutrient pollution, as well as support institutional strengthening and capacity building for compliance and improved agricultural practices. A menu of investments focusing on communal storage and handling systems to promote better management of livestock and household waste, composting and packing/pelleting facilities, buffer strips, pastures rehabilitation and afforestation to improve the protection of water bodies and adoption of code of good agricultural practices in additional 100 communes highly vulnerable to nitrate pollution in all eleven river basins in Romania. In addition, the Project will continue to demonstrate the impact of small-scale sanitation facilities on nutrient load reductions by supporting the construction of small sewage networks and compact wastewater treatment plants for about three-four communities that already implemented measures to mitigate the pollution with nutrients originating from agriculture, but where this is still imminent due to the households having non-septic tanks from which effluent leaks directly into the groundwater.

The immediate impact of the proposed investment activities on the environment would be limited and can be divided into construction impacts and operational impacts. These risks are anticipated in advance of project implementation and addressed by local regulations and direct mitigation activities in the design, planning and construction supervision process as well as during the operation of the facilities. The long-term environmental impacts anticipated are positive and linked to the overall project's global environment objective to reduce nutrients in surface and ground water bodies.

Since the whole territory of Romania drains into the Black Sea and Danube River Basins, and the project will cover all eleven river basins in Romania, the Bank policy OP 7.50 is triggered. However, as in the parent project, the AF consists only of upgrading/extension of small-scale sanitation facilities in about three-four rural areas (communes), and meets the criteria for an exception to the notification requirements under paragraph 7(a). The limited wastewater collection and treatment investments meet exception 7(a) because they are small-scale rural investments dealing with rehabilitation/extension of existing schemes which would not have any adverse change to the water quality or quantity to other riparians. Consequently, an exemption to the requirement to notify other riparians was sought in line with paragraph 7(a) of OP 7.50 and was provided by the ECA Regional Vice President on November 17, 2015.

The AF will capitalize on the already existing capacity within the PMU which is well staffed and experienced. Environmental issues including mitigation measures would be supervised periodically by the PMU M&E Staff supported by the technical support staff located in each of the Water Basin Directorates, and by specialized consultants. The local (county) environmental protection agency and water inspectorate would also be involved in supervision of construction work and operations. The project will rely on the

Romanian laws (fully aligned with the EU environmental acquis) governing the process for environmental permitting and review.

ISDS was disclosed on December 6, 2015, and the updated EMP was disclosed on November 1, 2015.

### **Risk**

Explanation:

The aggregate project risk rating derived from the SORT is substantial. This adjustment was made giving consideration to the lengthy disbursement times due to a slow-down in procurement at the national level, difficulty in ensuring inter-ministerial coordination and the fact that the new programming cycle is approaching.

In terms of mitigation measures, the project is building on the experience of on-going and earlier projects. More specifically, the following measures are expected to mitigate or minimize the recognized risks:

- (i) Keeping the PMU in place and providing them with extra funding to increase the staffing and training in improving tracking and preventing bottlenecks;
- (ii) changes in the design aiming to secure greater commitment and involvement of beneficiaries; and
- (iii) realistically understanding that this kind of projects require a longer implementation period, and thus building-in longer duration upfront.

## **V. World Bank Grievance Redress**

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

## Annex 1: Results Framework

### ROMANIA: Integrated Nutrient Pollution Control Project - Additional Financing

Project Name:	Integrated Nutrient Pollution Control Project - Additional Financing (P155594)			Project Stage:	Additional Financing	Status:	DRAFT
Team Leader(s):	Gayane Minasyan	Requesting Unit:	ECCU5	Created by:	Gayane Minasyan on 11-Sep-2015		
Product Line:	IBRD/IDA	Responsible Unit:	GEN03	Modified by:	Gayane Minasyan on 03-Feb-2016		
Country:	Romania	Approval FY:	2016				
Region:	EUROPE AND CENTRAL ASIA	Lending Instrument:	Investment Project Financing				
Parent Project ID:	P093775	Parent Project Name:	Romania Integrated Nutrient Pollution Control Project (P093775)				
<b>Project Development Objectives</b>							
Original Project Development Objective - Parent:							
To support the Government of Romania to meet the EU Nitrates Directive requirements by (a) reducing nutrient discharges to water bodies, (b) promoting behavioral change at the commune level, and (c) strengthening institutional and regulatory capacity.							
Proposed Project Development Objective - Additional Financing (AF):							
The overall development objective of the project is to support the Government of Romania towards meeting EU Nitrate Directive requirements at national scale.							
<b>Results</b>							
Core sector indicators are considered: Yes				Results reporting level: Project Level			
<b>Project Development Objective Indicators</b>							
Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target

Revised	Downward trend of nitrates concentration in waters: at least 70% of targeted project areas show 10% reduction in nitrates discharge to water bodies	<input type="checkbox"/>	Text	Value	0	61.5%	70%
				Date	16-Feb-2007	04-Nov-2015	31-Mar-2022
				Comment			
Revised	Percentage of population in the project area adopting preventative and remedial measures to reduce nutrient discharges (index measures various rural waste management and good agricultural practices)	<input type="checkbox"/>	Text	Value	3%	52.6%	75%
				Date	26-Feb-2009	04-Nov-2015	31-Mar-2022
				Comment			
Revised	Improved inter-governmental coordination and capacity to assess, monitor and report on progress with implementation of the EU Nitrates Directive	<input type="checkbox"/>	Text	Value	TBD from gap analysis report	Improvements acknowledged - Good capacity of the governmental institutions in the assessment, monitoring and reporting regarding the implementation of the EU Nitrates Directive	Improvements acknowledged
				Date	01-Feb-2008	04-Nov-2015	31-Mar-2022
				Comment			
Revised	Favorable EU assessment of Romania's progress towards meeting EU Nitrates Directive	<input type="checkbox"/>	Text	Value	n.a.	Progress acknowledged	Progress acknowledged through EU comments on reports.
				Date	01-Feb-2008	04-Nov-2015	31-Mar-2022



				Comment			
Revised	Nutrient load reduction (Nitrogen(N)) achieved under the project	<input checked="" type="checkbox"/>	Tones/year	Value	0.00	255.50	600.00
				Date	01-Feb-2008	04-Nov-2015	31-Mar-2022
				Comment			
Marked for Deletion	Land users adopting sustainable land mgt. practices as a result of the project	<input checked="" type="checkbox"/>	Number	Value	0.00	17400.00	21000.00
				Date	01-Feb-2008	30-Sep-2015	31-May-2017
				Comment			
<b>Intermediate Results Indicators</b>							
Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
Revised	Percentage of cropped area in the project communes under relevant nutrient reduction measures.	<input type="checkbox"/>	Text	Value	9% (updated from baseline survey)	38%	60%
				Date	26-Feb-2009	04-Nov-2015	31-May-2022
				Comment			
New	Reduction in number of farmers penalized by APIA for non-compliance with Nitrate Directive	<input type="checkbox"/>	Percentage	Value	50.00	50.00	30.00
				Date	30-Sep-2015	02-Dec-2015	31-Mar-2022
				Comment			
New	Number of surveys conducted that collect feedback and report back the results to the communities	<input type="checkbox"/>	Number	Value	0.00	0.00	3.00
				Date	04-Nov-2015	04-Nov-2015	31-Mar-2022
				Comment			
New	Percentage of questions, comments or complaints relevant to the project that are received and addressed within indicated 30 days	<input type="checkbox"/>	Percentage	Value	0.00	0.00	100.00
				Date	04-Nov-2015	04-Nov-2015	31-Mar-2022
				Comment			
New			Number	Value	0.00	0.00	100.00

	Number of meetings/public consultations/workshops organized towards meeting project objectives	<input type="checkbox"/>		Date	04-Nov-2015	04-Nov-2015	31-Mar-2022
				Comment			
New	Increased number of groundwater quality monitoring sites and sample analysis for the Nitrate Directive	<input type="checkbox"/>	Number	Value	7.50	7.50	8.00
				Date	04-Nov-2015	04-Nov-2015	31-Mar-2022
				Comment	density per 1000 km2		
New	Number of farmers trained by knowledge and training providers on Code of Good Agricultural Practices (male/female disaggregated)	<input type="checkbox"/>	Number	Value	0.00	0.00	6000.00
				Date	04-Nov-2015	04-Nov-2015	31-Mar-2022
				Comment			
New	Number of female farmers trained by knowledge and training providers on Code of Good Agricultural Practices	<input type="checkbox"/>	Number	Value	0.00	0.00	3000.00
			Sub Type	Date	04-Nov-2015	04-Nov-2015	31-Mar-2022
			Breakdown	Comment			
Revised	Percentage of households with access and connection to sewage system (in targeted villages receiving sewage investments)	<input type="checkbox"/>	Text	Value	0	27%	60%
				Date	16-Feb-2007	04-Nov-2015	31-Mar-2022
				Comment			
New	Land users adopting sustainable land mgt. practices as a result of the project	<input checked="" type="checkbox"/>	Number	Value	0.00	17400.00	30000.00
				Date	01-Feb-2008	04-Nov-2015	31-Mar-2022
				Comment	In reality this is not a new indicator. This used to be the PDO level indicator and monitored since the		

					beginning of the project. It was just moved to the list of intermediate results indicators		
Marked for Deletion	Relevant legislation updated and Ministerial Orders issued clearly defining responsibilities. EU reporting process tested and using inputs of multiple institutions.	<input type="checkbox"/>	Text	Value	Legislative and reporting framework un-tested	Completed	EU acceptance of Romania report.
				Date	16-Feb-2007	04-Nov-2015	31-May-2017
				Comment			
Marked for Deletion	Unified set of monitoring guidelines and standards for soil and water adopted, and monitoring program implemented.	<input type="checkbox"/>	Text	Value	Separated monitoring frameworks for water and soil	Completed	Satisfactory Implementation to meet government and EU requirements
				Date	16-Feb-2007	04-Nov-2015	31-May-2017
				Comment			
Revised	Working groups at Water Basin and County levels functioning effectively and all staff working on the Nitrates Directive fully operational.	<input type="checkbox"/>	Text	Value	Ad-hoc implementation of working groups	WGs are functioning effectively	WGs effective to support EU reporting and to coordinate actions of other agencies
				Date	16-Feb-2007	04-Nov-2015	31-Mar-2022
				Comment			
Revised			Text	Value	0	302	700

	Number of technical staff (ANAR, EPA, Health Directorates) trained (cumulative)	<input type="checkbox"/>		Date	26-Feb-2009	04-Nov-2015	31-Mar-2022
				Comment			
Revised	Number of communal platforms completed (cumulative)	<input type="checkbox"/>	Text	Value	0	63	150
				Date	26-Feb-2009	04-Nov-2015	31-Mar-2022
				Comment			
Revised	Number of project communes implementing at least one of the following nutrient reduction measures: communal platforms, pasture rehabilitation, tree planting (cumulative)	<input type="checkbox"/>	Text	Value	0	92	200
				Date	26-Feb-2009	04-Nov-2015	31-May-2022
				Comment			
Revised	Land area where sustainable land mgt. practices were adopted as a result of proj	<input checked="" type="checkbox"/>	Hectare(Ha)	Value		15262.00	38000.00
				Date	01-Feb-2008	04-Nov-2015	31-Mar-2022
				Comment			

## **Annex 2.EU Nitrate Directive Requirements and Status of Romania Meeting Them ROMANIA: Integrated Nutrient Pollution Control Project - Additional Financing**

- I. Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources
  1. Council Directive 91/676/EEC (the Nitrates Directive) aims to reduce water pollution caused by nitrates from agricultural sources and to prevent such pollution through a number of steps to be fulfilled by Member States:
    - a. water monitoring of all water body types (with regard to nitrate concentration and trophic status);
    - b. identification of waters that are polluted or at risk of pollution, on the basis of criteria defined in Annex I to the Directive;
    - c. designation of nitrate vulnerable zones, which are areas that drain into identified waters and contribute to pollution;
    - d. the establishment of codes of good agricultural practices, implemented on a voluntary basis throughout the Member State territory;
    - e. the establishment of action programs, which include a set of measures to prevent and reduce water pollution by nitrates and are implemented on an obligatory basis within designated nitrates vulnerable zones or throughout the entire territory;
    - f. the review and possible revision at least every 4 years of the designation of nitrate vulnerable zones and of action programs; and
    - g. the submission to the Commission every four years of a progress report on the implementation of the Directive.
- II. Status of meeting Nitrate Directive's Requirements in Romania
  2. The EU Council Directive 91/676/CEE (Nitrate Directive) concerning the protection of waters against pollution caused by nitrates from agricultural sources was transposed into Romanian legislation through the Government Decision no. 964/2000. In accordance with the provisions of the Nitrate Directive, Romania has designated 255 administrative areas as Nitrate Vulnerable Zones (NVZs) where the preparation and implementation by local public administration authorities of Action Programs for protection of waters against nitrate pollution were compulsory.
  3. The localities included in the INPC project were selected among these 255 NVZs. The INPC project contributed to the implementation of the Nitrate Directive and elaboration of the Action Programs by: (i) preparation and distribution to farmers and local authorities of the Code of Good Agricultural Practices for Water Protection against Water Pollution with Nitrates from Agriculture, (ii) providing training and demonstrations for farmers on good, environment-friendly, agricultural practices, (iii) providing investments in livestock manure storage and management facilities, both for individuals and at community level, (iv) strengthening ANAR's capacity for water quality monitoring and reporting by providing training, software, computers, field and laboratory equipment. Although Action Programs were prepared for all 255 NVZs, only the 86 communes included in the INPC project have the

required manure storage capacities that cover the prohibition period for manure spreading on agricultural fields.

4. Romania's report on Nitrate Directive implementation for the period 2008-2011 was accepted by the EU Commission and there is no infringement case opened against Romania on this matter. The Commission report mentions the improvement of the water quality monitoring with improved selection of monitoring sites. Also, the general quality of the Action Programs has improved, with tightened measures, improved fertilization methodologies and enhanced enforceability. Awareness of the Directive's obligation is also improving.

5. In 2013, at the recommendation of the European Commission, Romania agreed that the entire national territory must comply with the provisions of the Action Program for waters protection against pollution with nitrates from agricultural sources. Under this new approach, the preparation and implementation by the local authorities of the "Action programs for water protection against pollution caused by nitrates from agricultural sources" has become mandatory throughout the entire territory of Romania. According to an Analyses Report carried on within the INPC Project, the implementation of the Nitrates Directive in Romania, for the period 2016-2021, requires urgent investments targeting reduction of nitrates pollution in about 950 localities. Although EU and Governmental funds will be available for large and medium size farms to support measures that contribute to nutrient reduction, INPC-AF remains the main support for local communities, small farmers and households.

**Annex 3: Project Costs (Original IBRD Loan and Additional Financing Loan only)  
ROMANIA: Integrated Nutrient Pollution Control Project - Additional Financing**

	INPCP		INPCP-AF		Cumulative	
	EURO	US\$	EURO	US\$	EURO	US\$
Component 1	40,509.03	55,173.30	35,000.00	38,204.25	75,509.03	93,377.55
Component 2	3,814.20	5,194.94	5,500.00	6,003.53	9,314.20	11,198.47
Component 3	2,280.65	3,106.25	3,500.00	3,820.43	5,780.65	6,926.68
Component 4	3,396.11	4,625.50	4,000.00	4,366.20	7,396.11	8,991.7
<b>Total</b>	<b>50,000.00</b>	<b>68,100.00</b>	<b>48,000.00</b>	<b>52,394.40</b>	<b>98,000.00</b>	<b>120,494.40</b>

**Annex 4: Economic and Financial Analysis**  
**ROMANIA: Integrated Nutrient Pollution Control Project - Additional Financing**

1. The economic analysis uses a benefit cost approach, health, ecosystem services supported by the project, global services, yield increase and property value benefits are estimated, as well as direct project benefits in terms of nutrient pollution reduction and savings on fertilizers. The financial analysis focuses on operation and maintenance costs, their funding and affordability.
2. The project will have clear benefits in addressing key elements in nutrient pollution of the Black Sea from poor agricultural practices in the Romanian catchments that drain into the Danube River.
3. Besides improvements in the quality of ground and surface waters, project benefits also include: (i) progress towards compliance with the EU Nitrates Directive and increased absorption capacity of future EU funds for water and sanitation; (ii) sequestering carbon in the grasslands, croplands and forests; (iii) improvements in health as there will be an improvement in the drinking water, sanitation and general hygiene of the population; (iv) additional farm income from effective use of organic waste, crop rotations, organic products and improved livestock grazing practices and improved agricultural productivity through better agricultural practices, low input use and better farm management; (v) additional farm income from fertilization with pellets; (vi) increased capacity building of local institutions.
4. It is often difficult to categorize the benefits of different agricultural nutrient removal interventions, because this is often a function of local conditions: topography, climate, cropping systems, maintenance, site selection and installation; in addition, most interventions are not used alone, but in combination with one or more types of interventions. However, some approximations could be made using recent meta analysis of water supply, sanitation and hygiene projects by WHO, global greenhouse inventory methodology prepared by the IPCC and ecosystem valuation methodology developed by the TEEB.
5. This analysis compiles data and information from the technical literature related to the economic impacts of nutrient pollution (i.e., the external costs associated with not taking or delaying action to reduce nutrients in receiving waters, resulting in negative impacts such as economic losses and increased costs). Reduction of the nutrient pollution results in corresponding benefits that are quantified in this analysis.
6. A benefit cost analysis of nutrient reduction interventions was carried out under the ongoing Integrated Nutrient Pollution Control Project (INPCP), and the mid-term results can be used to assess the effectiveness of the AF as well. The analysis was based on actual data generated during the INPCP project period, and not just estimates made before the project. For manure management, the analysis went through the following steps. The quantity of manure produced and available for storage on platforms was estimated, based on the period the livestock was kept inside the households and the quantity of bedding materials used. Then, based on the use of manure before the Project (percentage dumped onto the soil or in unauthorized places and percentage applied as fertilizer in the backyard) and after the Project (percentage composted and spread as



fertilizer, percentage applied as fertilizer in the backyard), the quantity of nutrients leaching into ground and surface waters before and after the Project was determined, and the reduction of nutrient discharge was calculated.

7. Direct project benefits include substitution of compost produced at the platforms and pellets for chemical fertilizers. Indirect project benefits include reduction of diarrheal illness in children under 5 years of age in the project area estimated from the WHO meta-analysis about diarrheal illness associated with inadequate water supply and sanitation; averted reduction of the EU credit is estimated by the nutrients load averted by proper disposing of manure from livestock; reduction of volatilizing N<sub>2</sub>O emissions is estimated using 2006 IPCC Guidelines for National GHG Inventories (IPCC, 2006). Compost/packing/pelleting stations benefits are estimated using market price per bag of pellet; and agricultural yield increase associated with a constant feed flow based on 'slow release' of nutrients, resulting in a long-term effect and high level of effectiveness of pellets use. Benefits of sewage plants include corresponding reduction of diarrheal illness and value increase in property connected to public sewage. Forest buffer value is estimated based on the value of ecosystem services in temperate forests estimated by the TEEB.

8. For the other environment friendly agricultural practices implemented, the reduction of nutrient discharge was calculated based on collected data regarding application of factory made fertilizers in Romania from FAO STAT, the amount leaching, and a theoretical percentage reduction of leaching conventionally accepted in the nutrients literature as a proxy for a particular practice.

9. The analysis focused on determining reductions of nutrients (N, P and K) leakage into the environment that were achieved as a result of improved manure management and other agricultural practices, including compost/packing/pelleting stations, sewage plants and afforestation. NPV for each type of project and corresponding IRR were then calculated, as total monetary value of direct and indirect benefits, minus the total project cost. The costs taken into account included capital investment costs, maintenance and operation costs, and project management costs. Only market prices were considered and no adjustments were made, because due to insignificant market distortions, market prices were considered similar to economic prices.

10. Table 1 presents estimated NPV (5% discount rate) and IRR for the project portfolio including 80 manure management platforms and 20 composting, packing/ pellets stations, 20 sets of animal waste collection equipment and 4 sewage plants, when direct and indirect economic benefits are included. High IRR for animal wastes collection equipment are justified on the assumption that the corresponding platform cost are covered outside of the project. High IRR of the sewage plant is explained by the expected increase of real estate value if a dwelling is connected to a public sewage. NPV of the project's economic benefits is estimated at US\$72 Mn. and IRR is estimated at 22%.

**Table 1. Estimated NPV and IRR for the project investment components, economic benefits included**

	Manure platforms and compost stations, thousand US\$	Animal waste collection equipment, thousand US\$	Sewage plant, thousand US\$	Total, thousand US\$
Number of units	80 platforms; 20 compost stations	20 sets of equipment	4 sewage plants	
0	-24,730	-2,674	-1,290	-28,693
1	4,093	828	1,277	6,198
2	4,758	1,078	360	6,196
3	5,010	1,172	360	6,543
4	5,267	1,268	360	6,896
5	5,528	1,366	360	7,255
6	5,596	1,392	360	7,348
7	5,664	1,417	360	7,442
8	5,732	1,443	360	7,535
9	5,800	1,468	360	7,629
10	-5,712	-2,136	360	-7,488
11	5,936	1,519	360	7,816
12	6,004	1,545	360	7,910
13	6,072	1,571	360	8,003
14	6,140	1,596	360	8,097
15	6,208	1,622	360	8,190
16	6,277	1,647	360	8,284
17	6,345	1,673	360	8,377
18	6,413	1,698	360	8,471
19	6,481	1,724	360	8,564
20	-5,031	-1,881	360	-6,552
21	6,617	1,775	360	8,752
22	6,685	1,800	360	8,845
23	6,753	1,826	360	8,939
24	6,821	1,851	360	9,032
25	6,889	1,877	360	9,126
26	6,980	1,911	360	9,251
27	7,070	1,945	360	9,375
28	7,161	1,979	360	9,500
29	7,252	2,013	360	9,625
30	7,343	2,047	360	9,750
NPV	\$51,468	\$15,913	\$4,876.28	\$72,258
IRR	19.4%	40.4%	52%	22%

11. The estimated IRR of tree buffers investments varies from 5% to 12 %. Economic value of ecosystem services provided by temperate forest, as estimated by the TEEB project, and a conservative scenario for forest growth explains a lower IRR value for the tree buffer investment.

12. Financial analysis of agricultural nutrient removal interventions focuses on operation and maintenance costs and their funding. As it is reported by mid-term survey for the INPCP, mean willingness to pay for animal waste collection is at about 12 RON. However, only 6% of respondents replied to the animal waste collection fee question, which confirms negative attitude towards this payment among farmers. It is explained by several factors, among which the age structure (average age of respondents is 50-60 years old), education level (most of respondents do not have high school diploma) and poverty rates.

13. The age structure is a relevant factor because the elderly have fewer resources compared to other age groups, and age influences the voluntary participation that take place when the proposed services are implemented. The social survey undertaken for the participating communes shows that average household income in the selected communes is about 15% lower than in average farmer's income in Romania. Also, farmers in Romania among other population groups use the lowest share of their income on taxes, dues and fees. Thus the capacity and willingness to pay for animal wastes disposal is estimated as low based on the mid term INPCP survey. However, commune members willingly bring manure to platforms and will be assisted with compost application instead of chemical fertilizers. Then direct benefits from savings on fertilizers cost or direct sales of compost or pellets by communes will contribute to the O&M costs, including transportation, salaries, handling and spreading, vehicles maintenance, energy costs, etc. As the experience of the INPCP shows, these costs can be supported through the regular local budgets and/or from compost sales revenues, and by the animal waste collection fee in the long run.

14. With regard to the AF Water and Sanitation interventions, the benefit cost analysis takes into consideration the investment costs per capita. As such, it is expected that communes with at least 2500 people are likely to qualify, as long as in kind contributions of communes into these projects would be substantial and the project will provide additional resources to cover only part of the total investment cost. Based on average consumption and the combined water and wastewater tariff of 3 RON per cubic meter, it was estimated that the monthly tariff for an average household would be 33 RON. These costs are comparable with similar per capita costs achieved in wastewater schemes throughout Romania and neighboring countries. However, current willingness to pay for water sewage services is at 16 RON for an average household as reported by the INPCP mid-term survey.

15. Table 2 presents financial analysis of the similar project portfolio, including estimation of its NPV (5% discount rate) and IRR. In this analysis, net cash flow of this project portfolio is calculated. Only direct benefits are included along with the animal waste collection fee (60% adoption rate) in the high case, animal wastes collection fees are not included in the low case. Then NPV of the project portfolio varies from -US\$14.6 Mln. to US\$12.7 Mln. and IRR is in the range from 0 to 9.1%.

**Table 2. Estimated NPV and IRR for the project investment components, only direct benefits and service fees included**

	Manure management platforms and compost stations, with animal waste collection fee, thousand US\$	Manure management platforms and compost stations, no animal waste collection fee, thousand US\$	Animal waste collection equipment, thousand US\$	Sewage plant, thousand US\$	Total, thousand US\$	Total, thousand US\$
	80 platforms; 20 compost stations	80 platforms; 20 compost stations	20 sets of equipment	4 sewage plants	Low case	High case
0	-25,894	-23,277	-3,110	-1,537	-30,541	-27,924
1	569	2,790	278	113	960	3,181
2	985	2,909	434	113	1,531	3,456
3	1,123	2,949	486	113	1,722	3,547
4	1,262	2,988	538	113	1,913	3,639
5	1,401	3,028	590	113	2,103	3,730
6	1,401	3,028	590	113	2,103	3,730
7	1,401	3,028	590	113	2,103	3,730
8	1,401	3,028	590	113	2,103	3,730
9	1,401	3,028	590	113	2,103	3,730
10	-10,180	-8,552	-3,041	113	-13,107	-11,480
11	1,401	3,028	590	113	2,103	3,730
12	1,401	3,028	590	113	2,103	3,730
13	1,401	3,028	590	113	2,103	3,730
14	1,401	3,028	590	113	2,103	3,730
15	1,401	3,028	590	113	2,103	3,730
16	1,401	3,028	590	113	2,103	3,730
17	1,401	3,028	590	113	2,103	3,730
18	1,401	3,028	590	113	2,103	3,730
19	1,401	3,028	590	113	2,103	3,730
20	-10,180	-8,552	-3,041	113	-13,107	-11,480
21	1,401	3,028	590	113	2,103	3,730
22	1,401	3,028	590	113	2,103	3,730
23	1,401	3,028	590	113	2,103	3,730
24	1,401	3,028	590	113	2,103	3,730
25	1,401	3,028	590	113	2,103	3,730
26	1,401	3,028	590	113	2,103	3,730
27	1,401	3,028	590	113	2,103	3,730
28	1,401	3,028	590	113	2,103	3,730
29	1,401	3,028	590	113	2,103	3,730
30	1,401	3,028	590	113	2,103	3,730
NP	-\$16,534	\$10,818	\$1,699	\$194	-\$14,641	\$12,711

V						
IRR	-2.2%	9.2%	9.9%	6.1%	0.0%	9.1%

16. Financial sustainability of the project depends on the behavioral changes in rural population of Romania in the long term. In the short term, financial support of the project investments portfolio on the local and national level in Romania, as well as by the EU institutions, is justified by substantial economic benefits of nutrient pollution reduction in Romania.

## **Annex 5: Revised Implementation Arrangements and Support ROMANIA: Integrated Nutrient Pollution Control Project - Additional Financing**

### **I. Financial management (FM) arrangements.**

1. The additional financing will follow the same FM arrangements as the ongoing IBRD Loan in terms of budgeting, flow of funds, accounting and reporting, internal controls, and external audit, as detailed below. The FM performance of the existing project is satisfactory and there are no overdue or unsatisfactory interim financial reports or audited project financial statements. The main FM risks pertaining to the additional financing relate to (i) insufficient allocations secured in the State Budget to pre-finance project eligible expenditures, (ii) insufficient PMU FM capacity to plan and monitor activities on component 1, (iii) insufficient beneficiary capacity to properly oversee the activities on the ground, and (iv) possibility to double-finance or to pay from a different source than intended project expenditures. Given that the PMU has already instituted proper FM arrangements for INPCP to prevent the above-mentioned risks and that these will be further consolidated, the FM residual risk is assessed as moderate.

2. **Staffing.** The PMU is well-familiarized with the procedures applicable to World Bank-financed projects, including fiduciary requirements and the national public debt and financial management regulations. The PMU has currently two economists in charge of the financial, accounting and disbursement activities under the project. Given the increased workload expected on component 1 and the temporary peak going in parallel with three sources of financing during 2017, the PMU will be strengthened with a Financial Manager (existing position but vacant) to be recruited by effectiveness. The FM capacity will continue to be regularly reviewed and it may be further supplemented during the project implementation in case the volume of activities will require it.

3. **Budgeting.** The PMU has proper capacity to prepare realistic comprehensive forecasts for all project components, including sub-projects under component 1, in line with the Procurement Plan and Project Implementation Plan. The project budget will be included as a separate line in the Ministry's budget. Close monitoring of project actual status and planned activities is important for mitigating the risk of insufficient annual and in-year budgetary allocations and any shortages should be duly signaled to relevant stakeholders. Procurement will be centralized at the PMU level for the more complex and the largest component of the project that refers to geographically-dispersed local community investments. Project-supported beneficiaries will ensure preparation of the feasibility studies and technical design for investments envisaged under component 1.

4. **Flow of funds and disbursement.** The disbursement method will be reimbursement, as the default mechanism for the IBRD-financed projects in Romania is to fully pre-finance eligible expenditures from the State Budget. There will be no Designated Account and the project proceeds will be channeled through the existing Treasury system and classifications. The Treasury will make monthly budgetary openings as requested, and the project would receive its allocations in title 65. Each month, MEWF will report to MoPF in Euro and RON on eligible expenditures incurred, and periodically will provide MoPF summary sheets, statements of expenditures, contracts, invoices, and any other relevant documents, to report on the amounts already spent for the purposes of the project. Based on the documents received, MoPF will request

periodic reimbursements from the IBRD Loan, sending to the Bank applications for withdrawals. Disbursed funds would flow to the MoPF's Euro account opened with the National Bank of Romania (NBR), as reimbursement for the pre-financing used on the project eligible expenditures. These funds will be used for the purposes specified in Romanian legislation on public debt.

5. **Accounting.** The PMU uses a reliable accounting software for the project which complies with the national accounting and reporting regulations and which provides input for the preparation of the semi-annual interim reports. Project records are kept in the system on accrual basis using the existing chart of accounts. The system will be updated as to accommodate the records of the new source of financing to the same level of details as for the ongoing project.

6. **Internal controls.** The ongoing project has instituted a reliable internal control framework which will continue to be applicable to the new source of financing. Particular emphasis will continue to be placed on the higher risk component 1 and such controls will be properly described in the updated POM. The updated POM would detail key aspects such as (i) the criteria for eligibility of beneficiaries and sub-projects; (ii) evaluation and selection procedures; (iii) planning and procurement process; (iv) flow of funds; (v) monitoring of activities and expenditures at the level of each beneficiary and (vi) reporting mechanism.

7. **Interim financial reporting.** The PMU will continue to prepare semi-annual cash-based financial reports, in local currency, in a similar format that was confirmed during negotiations. Separate sets of interim reports will be prepared for each source of financing under INPCP.

8. **External audit.** Separate annual project financial statements will be prepared for each source of financing under the project and will be audited by private auditors acceptable to the Bank, in accordance with terms of reference agreed with the Bank. The terms of reference have been discussed and confirmed at negotiations.

9. It is envisaged that the following effectiveness condition and respective action will be implemented by the PMU to consolidate the existing FM framework:

- (i) The existing INPCP POM and stand-alone FM manual will be updated in a manner satisfactory to the Bank with the financial and disbursement arrangements applicable to the additional financing;
- (ii) The financial function of the PMU will be supplemented with a full-time Financial Manager.

## II. Procurement

10. Public procurement environment in Romania. Public procurement was identified as across-cutting issue in the sector functional reviews conducted by the Bank and among the main factors accounting for the country's low rates of EU funds absorption. In order to address the current system bottlenecks and draw a roadmap for the future, the Government of Romania developed a national strategy for public procurement and is in the process of drafting new legislation to transpose the new EU public procurement directives. The package of four laws are to be adopted by April, 2016 the latest. The national strategy on public procurement envisages measures aimed

to improve the quality of the legislative framework, to ensure overall coherence and efficiency of the institutional system, to enhance the regularity and quality of the public procurement process and at the same time to raise capacity of the contracting authorities, with emphasis on professionalization and integrity issues. While the envisaged changes in the public procurement area are expected to show real improvement in the way the system functions in the mid-term, due to the current system’s deficiencies the procurement environment in Romania remains substantial risk.

11. Procurement implementation arrangements and procurement capacity and risk assessment. The Procurement Capacity Assessment of the existing Project Management Unit within MEWF has been updated, based on the Borrower’s preferred choice of procurement arrangements especially with regard to component 1 of the project. Currently the PMU is staffed with three procurement officers. The PMU has sufficient experience and has shown satisfactory performance in conducting procurement procedures following the World Bank Guidelines. Yet, for a better coordination of the procurement activities, the actual Senior Procurement Specialist position will take over the procurement managing responsibilities, as a Procurement Manager. As per the envisaged project implementation plan the PMU’s procurement capacity is sufficient for the implementation of the activities under the additional financing. Furthermore taking into account the fact that this is an additional financing and the major procurements, due to their nature, will be more efficiently conducted if aggregated at central level, it was agreed that the procurement function will be designed in a similar fashion with the current project – i.e. to be implemented at the level of the PMU using a centralized approach (including with regard to component 1).

12. The key issues and risks concerning procurement for implementation of the project have been identified and include: (i) capacity of potential beneficiaries under Component 1 in planning and managing projects; (ii) numerous beneficiaries which will pose coordination and monitoring challenges; (iii) potential risks of delays in project implementation due to the demand driven approach under Component 1 and possible delays in preparation of feasibility studies/ technical specifications under the sub-project scheme which could further pose a challenge in aggregating the procurement packages; (iv) too lengthy internal clearance procedures; (v) lack of adequate number of technical experts to be designated for evaluation committee members (vi) potential need for enhancing the PMU procurement capacity to reflect the higher demand under Component 1 and (vii) lack of adequate funds from the State Budget for pre-financing project’s activities.

13. Risk mitigating measures. To mitigate the identified procurement-related risks, the following mitigation actions should be considered.

<b>Actions</b>		<b>Deadline/Status</b>
1	Prepare a detailed procurement plan for the first 18 months of the implementation of the project	Negotiations/Done
2	Prepare and adopt a Project Operational Manual including a detailed chapter on procurement	By project effectiveness
3	Ensure the smooth transition between the ongoing project and the additional financing by well-designed procurement strategy	Negotiations/In-progress



<b>Actions</b>		<b>Deadline/Status</b>
	(especially for the public awareness campaigns focused on sub-projects beneficiaries)	
4	Develop sample technical specifications for the menu of demand-driven investments to be financed under the project	Early stage of implementation
5	Ensure extensive PMU capacity building focused on management of demand driven sub projects schemes.	Ongoing, with a focus on the first and second year of project implementation
6	Establish effective monitoring mechanism covering the central and county levels by setting up a management information system	Early stage of implementation
7.	Ensure a pool of adequate number of technical experts who could be designated for evaluation committee members.	Early stage of implementation
8	Ensure adequate funds from the State Budget for pre-financing project activities	Ongoing
9	Regular procurement support and monitoring, including training, during project implementation	Ongoing

14. Applicable procurement procedures. Procurement for the proposed additional financing would be carried out in accordance with the World Bank's: "Guidelines for Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits and Grants" dated January 2011, revised July 2014; and "Guidelines for Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" dated January 2011, revised July 2014, as per provisions stipulated in the Legal Agreement. The different procurement or consultant selection methods, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank project team in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect actual project implementation needs and improvements in institutional capacity. The Bank Standard bidding documents will be used, as well as the Bank's standard request for proposals for selection of consultants, including the standard evaluation reports. A Project Operational Manual will be developed/updated by effectiveness, with a detailed chapter on procurement reflecting the project's specifics, including a clear division of responsibilities among procurement officers and technical and monitoring specialists, the internal clearance procedures and the coordination mechanism with project beneficiaries.

15. The demand driven sub-project scheme under the Component 1 would be ruled by agreed procedures reflected in the Project Operations Manual. The beneficiaries will undertake planning and be involved in the implementation of their sub projects. Technical assistance for project preparation and for project implementation will be provided under the project. A menu of demand driven investments and sample technical specifications and guidance will be developed so that to ensure a comprehensive approach and to facilitate the project implementation. Due to their nature and complexity (similar equipment, standard platforms and biogas facilities) it is envisaged that the procurement under the sub projects will be aggregated at the PMU level so that economies of scale are achieved. Eligible activities under the sub-projects will include, but would not be limited to, building appropriate manure storage facilities, building composting/packing/pelleting stations;

building biogas stations; acquiring equipment for manure storage, handling, composting, packing/pelleting facilities; building sewage network and wastewater treatment plants for communities that already implemented complete measures to mitigate the pollution with nutrients originating from agriculture; investments targeting the improvement of the protection of the water bodies through creating buffer zones and promotion of good agricultural practices to reduce nutrient load in surface and ground water.

16. Under Component 2 of the project is envisaged procurement of equipment for supporting the work of public institutions to increase the monitoring and reporting capacity under the Nitrate Directive, equipment for monitoring the quality of soil and water (nitrate/eutrophication monitoring), capacity building measures for strengthening the national network for water quality monitoring and training activities.

17. Component 3 envisages mainly consultancy services for public awareness, and information support through training and technical assistance.

18. Training. The procurement of training, seminars and similar activities will be carried out on the basis of the analysis of the most suitable program for training offered by organizations, availability of services, period of training, and reasonableness of cost. Training will be financed according to a program acceptable to the Bank.

19. Procurement Plan. The draft Procurement Plan for the first 18 months of implementation, available as a separate project document, was prepared by the implementing agency before negotiations. The Procurement Plan will be updated annually or as needed by the PMU to: (i) reflect project implementation; (ii) accommodate changes that should be made; and (iii) add new packages necessary for the Project. Each update will be subject to Bank prior review. The Procurement Plan will be published on the World Bank website. Procurement under the Project will be carried out in accordance with the agreed Procurement Plan as updated and will include the following categories: consulting services, goods, non-consulting services and civil works. The thresholds for procurement methods and Bank prior review applied for procurement will be reflected in the Procurement Plan and in the POM. The procurement thresholds may be adjusted during the project implementation to reflect the increased capacity of the implementing agency.

20. The procurement planning under the sub-projects will be governed by the provisions of the Project Operations Manual.

21. Post-review. Contracts not subject to prior review will be subject to post-review as per procedures set forth in Paragraph 5 of Appendix 1 of the Procurement Guidelines and Consultant Guidelines. The Bank will carry out procurement post-review on an annual basis with a sampling rate of initially 10 percent. This rate will be adjusted periodically during project implementation based on the performance of the project implementing agency.

### **III. Project Management**

22. The existing PMU structure will be revised in order to increase the coordination capacity and ensure an efficient and operational personnel structure, adapted to the changes in approach

of AF implementation versus original project implementation arrangements. This necessity resulted from the extended role of the PMU in evaluating and selecting sub-projects proposals, the more active role of the beneficiaries in the sub-projects proposals and implementation, and consequently the increase coordination role of the PMU, the need to monitor all project activities, as well as ensuring the broad coordination of all interventions on a new scale-up operation in the field of EU Nitrates Directive.

23. The net PMU staff will increase by one. Some changes in the structure, competencies and responsibilities will be introduced. The PMU's current staffing will be reduced with one of the three drivers' positions, but two technical coordinators will be added for improved technical management and coordination of the components.

24. The increase of the PMU technical capacity for monitoring, evaluation and selection also implies some improvement measures for the project management, in order to ensure effective coordination of all technical activities. Also, the technical department together with WBA (water basin administration) designated specialists will monitor environmental aspects of approved projects during the whole project lifecycle in accordance with the approved EMP. This demand for harmonization and coordination of efforts between activities, people and involved organizational structures is supported by the large number and diversity of occupational areas of the technical specialists who are directly or indirectly contributing to project implementation – technical specialists of PMU, technical departments of MEWF, consultants, contractors for construction works and technical equipment, technical staff of ANAR, representatives of beneficiary communes, staff of public authorities involved in permits issuing or inspection activities. These modifications will result in the following:

- a. The procurement capacity will be maintained, but the Senior Procurement Specialist will be in charge with coordinating all the procurement activities within the PMU, as a Procurement Manager.
- b. The project monitoring and evaluation will be carried out by a dedicated Senior Monitoring and Evaluation Specialist in charge with monitoring implementation, impact evaluation, integrated reporting and safeguards implementation for the project inputs, outputs and outcomes.
- c. Increasing the technical capacity of the PMU by creating a Technical Department and one new Technical Specialist position . The Technical Department will consist of one managing/coordinating position and 5 specialist as follows:
  - i. one Technical Coordinator/Manager of the Technical Department of the Project, including technical competencies for supervising the implementation of all the investments included in Part 1 and 2 of the project;
  - ii. one Training and Communication Specialist, with competencies related to the institutional strengthening and collaboration within the second Project Component and public relations, awareness and information within the Project's third component.

- iii. four Technical Specialists, out of which at least 2 civil works engineers.
- d. Strengthening the PMU's financial management by employing staff for the current vacant position of Financial Manager. The Financial Manager will also have the role of Financial Internal controller and will supervise all financial, budgetary, book-keeping and reporting activities within the Project.
- e. The Translator position will be transformed to a Project Assistant position, in order to assure new competencies and responsibilities for this position.

25. For all the above mentioned positions, customized and comprehensive terms of reference will be developed. Also a revision of the PMU procedures, structure, roles and responsibilities of departments will be initiated so as to clarify and ensure the coordination mechanism between PMU, beneficiaries and other institutions involved in the implementation of the Nitrates Directive. In the course of project implementation specific efforts will be made to maintain the PMU staffing with properly qualified, trained and motivated staff. This will be ensured through a continued performance evaluation and adequate remuneration.

26. The proposed organization chart of the PMU is presented below.

