

ROMANIA

MINISTRY OF ENVIRONMENT, WATERS and FORESTS

ENVIRONMENTAL MANAGEMENT PLAN
and
ENVIRONMENTAL GUIDELINES
for
Integrated Nutrient Pollution Control Project

November 2015

I. BACKGROUND

1.1. Project Scope

The overall development objective of the project is to continue to support the Government of Romania towards meeting the EU Nitrate Directive requirements at national scale. This will be achieved by (a) promoting investments in local communities for reducing nutrient discharges to water bodies, (b) strengthening institutional capacity and coordination within relevant national and local governments, institutions, agencies and stakeholders for regulating, implementing, monitoring and controlling the EU Nitrate Directive requirements and (c) promoting behavioral change and good agricultural practices at community level. Towards this, the project 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.

The project, to be implemented over 6 years, will support the following activities:

- *Component 1: Local Commune Investment Fund*
- *Component 2: Institutional Strengthening and Capacity Building*
- *Component 3: Public Awareness, Training and Technical Assistance*
- *Component 4: Project Management*

Component 1: Local Commune Investment Fund

This component will provide support for effective investments and management practices to reduce nutrient pollution from agricultural, livestock and human sources.

This component builds upon the experiences and lessons learnt from the on-going INPCP and includes support for a menu of investments focusing on manure collection and composting facilities, manure management biogas production from animal waste and adoption of code of good agricultural practices in about 100 communes highly exposed to nitrate pollution in all 11 river basins in Romania, covering all the 8 development regions.

The financial support provided within the Additional Financing will be demand-driven, supported on competitive grounds, based on the beneficiary communities' requests and eligibility. The communes 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. The selection and approval of sub-projects will be done on a competitive basis, for eligible activities and applicants. A detailed Applicants' Guidelines for the Competitive Investment Program will be also developed to provide guiding principles and rules for its implementation at the local, regional and national levels, describing in detail the eligibility criteria, selection and award procedure.

Under this component the Project will support investments and management practices to reduce nutrient pollution from agricultural, livestock and human sources, such as:

- 1.1 Building manure storage facilities;
- 1.2 Building composting/pelleting stations;
- 1.3 Providing necessary equipment for the manure storage/composting facilities;
- 1.4 Building small scale sewage networks and wastewater treatment plants for 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;

- 1.5 Buffer zones, pastures rehabilitation, tree planting and afforestation to improve the protection of water bodies.

A menu of customized eligible investments for nutrient pollution reduction will be available, including facilities for anaerobic digestion as co-generation installations/biogas stations using the animal waste as main source of energy.

Component 2: Institutional Strengthening and Capacity Building

The Project 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 the EU Nitrate Directive requirements.

The project will contribute to building capacity by providing equipment, other required facilities and specialized training for MEWF, 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 financial support will include:

- 2.1. Development of national knowledge and training hubs, as well as support for on-farmed demonstrations, to promote adoption of code of good agricultural practices to reduce on-farm nutrient pollution;
- 2.2. Equipment and related software for supporting the public institutions involved in implementing the Nitrate Directive for increasing the monitoring and reporting capacity under this Directive;
- 2.3. Strengthening the national monitoring network for water quality under ANAR;
- 2.4. Training courses for control/reporting under the Nitrate Directive
- 2.5. Training courses for strengthening the institutional capacity of the Romanian Government (Ministry of Environment, Waters and Forests, Ministry of Agriculture and Rural Development, Ministry of Health, public authorities) for monitoring compliance with the EU Nitrate Directive;

ANAR is the national institution designated for water quality monitoring and reporting, both for Nitrate Directive and Water Framework Directive. The project will support ANAR to increase the number of monitoring stations to meet the EU requirements to cover the entire national territory. There is an urgent need to support the construction of new piezometers and to increase water sampling facilities from surface waters located on public areas, based on hydrogeological studies, to monitor diffuse pollution stemming from agricultural activities and provision of permanent access to these facilities. Also, additional pumping and sampling equipment for piezometers is required.

The local (county) Environment Protection Agencies and Public Health Directorates will receive training and equipment for fast and affordable testing of the nutrients' concentration in public wells that are used as drinking water source. This will help inform the concerned communities regarding their water supply quality and enforce restriction measures in case of polluted waters.

The Agriculture Payments and Intervention Agencies and Environmental Guard need better procedures, regulating framework and training to report on the compliance by farmers of the Nitrate Directive requirements.

Support will be provided for the development of eight knowledge and training hubs (one in each development region) to promote adoption of good agricultural practices to reduce on farm nutrient pollution.

Component 3: Public Awareness, Training and Technical Assistance

The actual INPC project is considered a brand as a result of its Public Awareness Program, implemented during the last 3 years. The continuity of the awareness campaign and its replication in other areas of the country is necessary. None of the activities proposed are new or different in their nature from those currently being implemented under INPCP. The new public awareness program will include events organized at county and commune level and wide media and on-line campaigns; it will also use other tools, such as: an intranet platform on Nitrates Directive's implementation in Romania, a smart-phone map app with the areas where the pollution reaches high levels, etc.

In addition to information provision under the public awareness campaign, INPC 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 Additional Financing. 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.

One objective of this component will be to promote the financial instruments that will be available within the extended project 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 in order to be eligible. For the beneficiaries whose proposals were selected for financing, there will be specific workshops on procurement and technical issues organized, so as to facilitate a successful implementation. The promotion of the new financial instrument will be also undertaken through local media channels (radio and TV spots; press articles, etc.) and through on-line instruments. A special section dedicated to the financial program will be developed on the projects' existent website and will include periodical e-mail newsletters, containing relevant information for farmers' activities. Videos presenting farms that are already compliant with the Nitrate Directive and the provisions of the Code of the Good Agricultural Practices Code will be produced and disseminated through media and on-line channels.

The activities included in Component 3 would comprise:

- 3.1. Training and backstopping for potential Beneficiaries during the preparation and implementation phases; a help-desk to assist the potential Beneficiaries in identifying, preparing and implementing projects;

- 3.2. Local level public awareness campaigns (e.g. project opening conference, dissemination of project implementation benefits, dissemination of possible sources of funding, a system of permanent information for farmers, etc.);
- 3.3. Sharing experience on implementing the Nitrates Directive (national and EU level);
- 3.4. Technical assistance for revising the Code of Good Agricultural Practices; revising / drafting the compulsory action programs, if required;
- 3.5. Other technical assistance as required.

Component 4: Project Management

The Additional Financing Project will be implemented by the existing PMU located within the MEWF, enhanced with specialists in evaluation and selection of sub-projects proposals. While the beneficiaries will have a more active role in the sub-projects proposals and implementations, the PMU will have an extended role in providing information regarding the project and monitoring all project's 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, the beneficiaries and other institutions involved in the implementation of the Nitrates Directive.

The Applicant's Guidelines, as part of the Project Operational Manual, will detail the role and competencies of the PMU in the process of evaluation and selection of the sub-projects proposals under the first component. The PMU's role in the implementation of the other three components of the project will remain unchanged.

Actual situation in water and agriculture sectors

Rural water supplies and sanitation in Romania is low compared with other European countries. With about 10 million people living in rural areas, 33% are estimated to have access to a piped water system, with fewer presumed to benefit from such a service as many systems are not functioning correctly due to poor maintenance and/or lack funds. Approximately half the rural population is served by public or private wells and the remaining 17% are served by public standpipes with varying travel distances to obtain potable drinking water. The level of sanitation is even lower. At the end 2013, only 4.7% of rural population is served by a sewerage network (approximately 95% of the sewers in Romania are in urban areas). The remaining rural areas depend, at best, on septic tanks or dry latrines, usually poorly built and maintained. Rural households and public buildings (schools, community centers, and local public administration) commonly lack indoor toilets and running water for immediate hand washing. Practices for animal manure collection, handling, and storage vary depending on tradition; however the vast majority of households do not have controls to prevent direct seepage of liquids into soil. Many rural families house their animals in a barn/shelter attached to or near the main family house. In some regions, animal waste is disposed through open dumping onto fields, often along waterways with little consideration for the value as fertilizer or threats to human health and the environment. Solid waste in rural households typically lacks a formalized collection and disposal service and is often co-mingled with animal and other wastes.

Small farms and households typically do not take into account impacts to the environment, and awareness of alternatives to meet Nitrate Directive compliance is still low. Under-development of sanitation in rural areas combined with intensive agriculture and poor livestock management cumulatively result in significant nitrate and microbial contamination of shallow groundwater – the main source of potable water. The effects of this are observed in high groundwater levels of

nitrates and reported incidences of acute infantile methaemoglobinaemia (blue baby disease). Community well testing programs piloted in Romania indicate the problem is likely more widespread than official monitoring data shows. Pilot programs in Romania have shown that behavior can be modified through targeted programs to increase a public awareness linked with demonstrated investments, ultimately raising demand and willingness for increasing own resources for improvement.

1.2. Investment Component – Component 1 & 2

The main physical investment components of the proposed project are in Component 1 (Local Commune Investment Fund) and Component 2 (Institutional Strengthening and Capacity Building).

Type of works. Construction will involve a range of interventions, including the construction/rehabilitation of commune level manure storage facilities, building composting/biomass/pelleting stations, rehabilitation/expansion of the commune sewage system, low-cost sanitation/wastewater control, biogas digesters associated with commune level manure storage facilities, enhancement of the existing monitoring network of the ANAR with new piezometers. All these constructions will greatly contribute to a better control and monitoring of the nutrient pollution sources.

Planning and Design Standards. The INPC AF project will recommend use of the designs already used during the implementation of the INPC project as they have proven to be viable and have the principles of functional appropriateness. These designs will be made available to local authorities and design architects in order to be adapted to the local conditions. However, when competing for Project's financial support, the potential beneficiaries can come with their own solutions targeting the reduction of nutrients discharge to water bodies.

1.3 WB Safeguards Policies and Procedures

The major document regulating the WB environmental safeguard policy is OP 4.01 *Environmental Assessment*, which is one of ten safeguard policies that the projects submitted for the Bank financing are to comply with.

Ten safeguard policies and the +1 policy on *Access to Information* represent the framework of safeguard mechanisms applied by the WB for the sake of interests of beneficiaries, clients, stakeholders and that of the Bank. Applying these policies allows avoiding adverse impacts on the environment and people's lives, minimizing and mitigating potential unfavorable environmental and social project impacts.

1. Environmental Assessment (OP 4.01);
2. Natural Habitats (OP 4.04);
3. Pest management (OP 4.09);
4. Physical Cultural Resources (OP 4.11);
5. Forests (OP 4.36);
6. Safety of Dams (OP 4.37);
7. Involuntary Resettlement (OP 4.12);
8. Indigenous Peoples (OP 4.10);

9. Projects on International Waterways (OP 7.50);
10. Projects in Disputed Areas (OP 7.60);
- +1. Access to Information

The first six policies are environmental policies and they are taken as focus during preparation of the Environmental Assessment. The seventh and eighth are social and the ninth and tenth are legal.

The objectives of 10+1 safeguard policies are to:

- 1) Avoid negative impacts where possible; otherwise minimize, reduce, mitigate, compensate;
- 2) Match level of review, mitigation and oversight to level of risk and impacts;
- 3) Inform the public and enable people to participate in decisions which affect them;
- 4) Integrate environmental and social issues into project identification, design and implementation.

Principles of OP 10+ 1:

- In case of discrepancy between the requirements of OP 10+1 and those of the national legislation norms, the more stringent ones prevail;
- In case of conflict between the OP 10+1 and the national environmental requirements, the WB policies will prevail (even if some parts of the project are financed by the Government of Romania or third parties).

The legal basis for such approach is the Agreement ratified by the Romanian Parliament, which carries the force of an international treaty and prevails over the national legislative acts.

The major requirements of the environmental policies are stated in the Annex 4.

Environmental Safeguards

The project is classified Category B - partial assessment, and triggers two 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 well prescribed in the Environmental Management Plan (EMP), which was prepared for the original project. Since the Additional Financing for the project will support the same types of activities as under the original project, the existing EMP is updated (the actual version) and 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 AF will scale-up the original project nationwide, and would allow for six more years the financing of investments in local communes for reducing nutrient pollution, as well as support institutional strengthening and capacity building for compliance and improved agricultural practices.

The immediate impact of the proposed investment activities on the environment would be limited and can be divided into construction impacts and operational impacts. Potential adverse

environmental impacts from construction activities are summarized below and are restricted in scope and severity:

- Dust, noise, and soil erosion during construction activities;
- Inappropriate disposal of construction debris;
- Unsafe handling of hazardous building materials (e.g. asbestos), if any are encountered;
- Potential impacts on trees and vegetation
- Sediment loads in waterways in case of necessary stream crossing
- Unsafe practices during operation of the constructions;
- Possible negative impacts on buildings with cultural importance.

Potential impacts from operations of proposed investments have been identified as:

- Potential leakage of manure from commune level storage facilities or composting/pelleting stations if construction does not adhere to designs
- Inappropriate manure/leachate spreading on fields if code of good agricultural practices are not followed
- Odor/smell and noise from wastewater pumping stations or treatment facility if poorly maintained
- Potential impacts on receiving waters/ streams if quality of wastewater effluent is not ensured
- Illegal deposit of toxic or hazardous wastes at the commune waste platforms (materials which the platform was not designed for).

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.

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.

Since the whole territory of Romania drains into the Black Sea and Danube River Basins, and the project will cover all 11 river basins in Romania, the Bank policy OP 7.50 – Projects on International Waterways 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 riparian. Consequently, an exemption to the requirement to notify other riparian in line with paragraph 7(a) of OP 7.50 was granted by ECA Regional Vice President on November 17, 2015.

1.4 On-going INPCP investment Program - Lessons Learned on Environmental Mitigation Aspects

Significant project implementation experience has been gained through implementation of the APCP (pilot in Calarasi County) and INPC Projects. Some of the key lessons from this include:

- Early and continuous involvement of local administrations and communities in project preparation and implementation is essential to ensure ownership and make the project successful.
- Mitigation measures to reduce nutrient discharge should yield tangible results for the key stakeholders, specifically local communities, to ensure adoption. For example, commune manure platforms would need to demonstrate their use to all residents for them to continue to want to sustain and operate this.
- Testing and demonstration activities are crucial in achieving the dissemination of the project results and the ensuring replicability of the project interventions.
- Dissemination of information through a wide public awareness campaign is critical to the widespread adoption of new technologies and practices. Furthermore, information is needed early in the project cycle to overcome the considerable lack of understanding of the health and environmental benefits from improved waste management, and achieve significant participation levels' in project activities.
- To achieve environmental, social and financial sustainability, project activities must be site-specific and address local issues and needs.
- Effective monitoring and evaluation mechanisms need to be developed and applied to measure project impact and feed lessons learned into project design.
- The nitrates problem cannot be addressed through agricultural measures alone. An integrated program to improve rural water and sanitation and solid waste management should be tackled.

A mid-term evaluation of environmental issues was conducted under the APCP and INPCP projects which concluded overall that environmental aspects has been well adhered to and that no adverse impacts were generated from construction of operations. Significant environmental benefits could be observed from many of the project interventions. The review noted an over-design of the groundwater monitoring systems around the manure platform (as recommended in the Platform Operations Manual) and recommended that only two groundwater observation wells (up and downstream) would suffice. The lack of full time security at the site was highlighted as a potential weak point which opened the site up to vandalism (some well tops were taken for metal value). Site operations and security coverage were combined as a result of this recommendation after the mid-term. The importance and linkages of manure waste separation and household waste was also highlighted. As a result, several communes formalize collection of both manure and household waste and established a fee collection system to sustain this service. A social survey has further underscored the importance of establishing a collection system for waste investments supported under the project.

1.5 Institutional and Implementation Arrangements

The project's investments will be managed by the INPC – PMU monitoring and evaluation specialists assisted by the technical support staff hired specially for this purpose in each Water Basin Administration (WBA). They will have mentioned in their TORs specific responsibilities related to management of investment components of the project.

In addition, at each construction site the beneficiary will provide on its own costs and in accordance with the prevailing laws, local personnel for daily supervision and monitoring of the construction

works. They will have also the attribute to make the contractors observe the environmental standards while performing their duties (See Annex III).

Plans for each construction will include measures to ensure that the environment is not negatively affected by the civil works to be supported by the project. The project beneficiaries (communities) will have the responsibility to prepare the necessary documentation by taking the following steps:

- clarify the legal status of land sites allocated to the future construction (all investments should verify commune ownership and ensure there are no encroachments on the property);
- prepare a technical documentation for the construction (this documentation should also contain description of the internal monitoring and supervision of works systems);
- request an Urbanism Certificate from the Local County;
- obtain all approvals including environment as specified within such Urban Certificate;
- obtain all operations permits including the environment permit;
- obtain explicit authorization for stream crossing or work in or near protected areas if necessary.

The proposed investments are not expected to trigger a need for a full EIA under Romanian law (EGO 195/2005).

INPC – PMU and its supporting technical staff at the WBA level will monitor environmental aspects of the approved projects during the whole project lifecycle. During the whole duration of the project implementation, the technical support staff in WBA will carry out periodic monitoring and evaluation of the environmental performance of the works, particularly prior to the disbursement of installment payments or when considering any extension of disbursement schedule is requested. This would allow the INPC - to observe potential controversial projects impact, to recommend remedial actions to be taken and to ensure that the Bank policies and the domestic legal requirements are met and local beneficiaries (Mayor, Commune Council, the community etc.), are enough aware that these concerns should be properly addressed.

For the purpose of the project implementation the Inter-ministerial Committee for the implementation of the Nitrates Directive in Romania will act as a Project Steering Committee. It will be responsible with the overall overseeing and coordination of the project activities, and it will consist of representatives of the MEWF, MARD, MOH, MRDPA supported by technical experts from the national institutes under the coordination of these ministries. The Project Steering Committee will provide the overall guidance on project implementation and it will ensure a coordinated approach at the Government level.

INPC - PMU will submit to the Steering Committee regular reports on the implementation of the project including among others the environmental performance of its interventions. The Environmental Supervision and Performance Report chapter shall include the following:

- the results of the field supervisors screening and review procedures;
- a description of any operations not currently in compliance with environmental requirements as per its corrective action measures and of the actions that have been taken or will be taken to correct the situation.

1.5. Current Environmental Regulatory Framework in Romania

This section briefly describes the main existing environmental regulations and standards relevant to the project and makes reference to institutions at the local and national levels responsible for issuing permits, licenses, and enforcing compliance of environmental standards. A more comprehensive list of the legal and institutional framework is provided in Annex I.

EGO 195/2005 approved by Law no.265/2006, other organic and major laws on various domains, International Conventions and treaties signed and ratified by Romania, different governmental decisions or ministerial orders, National Environmental Strategy and National Environmental Action Plan (NEAP) define the legal framework of environmental protection and related activities. EPL delegates most state authority to the central environmental protection authority that is the Minister for Environment, Waters and Forests (MEWF) and its territorial affiliates (NEPA, Local Environmental Protection Agency-LEPAs). EPL, which approaches the EU standards, sets forth general principles of environmental policy (polluter-pays, integrated monitoring, sustainable development, NGOs and public participation, international cooperation, rehabilitation of degraded areas) and adopts the general ways for the enforcement of these principles, such as: harmonization of environmental policies and development programs, correlation between special and environmental development, compulsory use of the environmental permitting procedure for certain economic and social activities with significant environmental impacts, use of economic incentives.

Agencies (entities) proposing new investment projects that are likely to have a significant environmental impact have to apply for environmental agreement. This might be awarded only after a serious environmental impact assessment accomplished by accredited experts and accompanied by a public debate. Potential impacts, mitigation measures and the necessary monitoring system should be outlined in this process. After project commissioning, an environmental authorization is also required. This might be issued after LEPA staff verified the compliance with environmental agreement provisions. Without these certificates, the proposed activity is not allowed to proceed. Awarding of environmental agreement is made simultaneously with other needed approvals, but the environmental authorization is preceded by obtaining of other approvals (for telecommunication utilities, for natural gas network, for electric power, from the Fire Commandment, etc.), the Water Permit being the most important one. The management agency of each activity is obliged to set up its own internal or self-monitoring system. Parameters to be monitored are established according to the provisions included within environmental agreement and environmental authorization. Data has to be registered and made available for LEPA staff. External Monitoring performed by LEPA is oriented mostly to the recognized important polluters, due to the serious scarcity of the necessary monitoring, analysis and information equipment.

Environmental Impact Assessment (EIA). The accomplishment of full EIA on which basis the environmental agreement would be issued, is mandatory for all activities listed in Appendix I of the GD no.445/2009 on the framework procedure for environmental impact assessment for certain public and private projects, as well as all projects proposed for the costal zone and those proposed in protected hydro-geological areas. Projects listed in Appendix II of the same normative act, projects proposed within a natural protected area and those designated for the management of the natural protected areas are subject to the screening procedure. The result of the screening procedure is a decision based on which the project is further subject to the EIA or not. The current regulations require that the information provided by the developer of the EIA process shall include the

measures envisaged in order to avoid, reduce and where possible, offset the significant adverse effects.

The EIA procedure comprises a mandatory involvement of the public and the public authorities with environmental protection responsibilities. The public comments are taken into account in the EIA procedure. The public authorities with environmental protection responsibilities are always involved in the Technical Review Committee-which is mandatory required by the national EIA procedure.

The national EIA procedure is detailed within MO 135/2010. The national EIA procedure is applied also using the guidance of the MO 863/2002. (Screening, Scoping and Review Guidance) and, as appropriate, on the requirements of the MO 864/2002 on the transboundary EIA procedure.

II. ENVIRONMENTAL MANAGEMENT PLAN

2.1 Introduction

The Environmental Management Plan (EMP) has been prepared to integrate environmental concerns into the design and implementation of the proposed project. The EMP would support:

- (a) inclusion of EMP follow-up procedures in the operational processes of **INPC-PMU** and its support staff at Water Basin Administration level;
- (b) highlighting the EMP follow-up responsibility in the TORs of the **INPC-PMU** and its support staff at Water Basin Administration level;
- (c) training of designated staff from **INPC-PMU** and its support staff at Water Basin Directorate level in project implementation, supervision and monitoring and evaluation;
- (d) site-specific environmental screening concerning all project supported constructions;
- (e) monitoring and evaluation of mitigation measures identified in the site-specific reviews;
- (f) inclusion of Environmental Guidelines in the design of all works to be performed under the INPC Project.

2.2. Establishment of Environmental Expertise within the Project Implementation Structure

The Monitoring & Evaluation Specialists assisted by the technical support staff in the WBA and would be responsible for coordination and supervision of the environmental plans and risk mitigation measures undertaken in the project. They will work in close cooperation with Local Environment Protection Agencies and they will ensure: a) coordinate environmental training for staff, designers and local contractors; b) disseminate existing environmental management guidelines and develop guidelines in relation to issues not covered by the existing regulations, in line with EU standards for implementation, monitoring and evaluation of mitigation measures; c) ensure contracting for construction and supply of equipment includes reference to appropriate guidelines and standards; and d) conduct periodic site visits to inspect and approve plans and monitor compliance.

2.3. Site Specific Environmental Screening and Review

As a part of the EMP, all project supported activities related to works would be subject to a site-specific environmental screening and review process, according to the requirements of the Environmental Protection Law. The Local authorities are obliged according to the law to submit

an Environmental Approval for the civil works. This process requires mitigation of site-specific environmental impacts and would use a standardized appraisal format that includes, but is not limited to, review of:

- a) current environmental problems at the sites (soil erosion, water contamination, etc.);
- b) potential environmental impacts, if any, due to the project disposal waste from construction, waste handling and disposal, construction noise and dust, etc);
- c) any cultural assets that might be found in the place of construction, and
- d) associated public safety and operational risks.

2.4 Supervision

The environmental issues including mitigation measures would be supervised periodically by the PMU M&E Staff supported by the 2 technical support staff located in the Water Basin Administration. No unusual environmental impacts related to construction activities are anticipated under the proposed program given the relatively small size of the investments and their location outside the main commune inhabited areas. These investments are expected to be environmentally beneficial since they will be following the improved planning and design standards established and tested during the implementation of the APCP and INPC project; none of the units to be financed is expected to have any large scale, significant and/or irreversible impacts.

The potential negative environmental impacts are expected to be localized or able to be mitigated during the implementation stage. In addition, there are environmental regulations in force in Romania, which make control and supervision of construction works mandatory (Romanian Licensing and Permitting Procedures are presented in Annex II). Contracts and bill of quantities will include clauses for appropriate disposal of construction debris, including hazardous materials that may be encountered. Existing regulations require, and procurement documents will specify, that no environmentally unacceptable materials can be used.

The EMP presented below identifies the environmental impacts and proposed mitigation measures for most of the activities under the Components 1 &2:

DURING THE CONSTRUCTION PHASE

The construction phase is limited in time. The average construction time for one commune level platform or for one composting/ pelleting station is 4 months with the lower limit being 3 months and maximum time 5 months (influenced by the weather conditions. Building wastewater infrastructure may last between 6-18 months (influenced by the length and complexity: only sewage system or together with the wastewater treatment plant).

Environmental Component	Impacts	Mitigation Measures	Institutional Responsibility
Physical Environment			
Soils	Contamination from waste materials	Protection of soil surfaces during construction; control and daily cleaning of construction sites; provision of adequate waste disposal services.	Contractors
Water	Clogging of drainage works Introduction of hazardous wastes	Special attention to drainage, proper disposal of oil and other hazardous materials; Rehabilitation of adequate sanitary facilities, including appropriate disposal of wastewater and sewerage	Contractors
Air Quality	Dust during construction	Dust control by water or other means to keep dust down if problem is evident	Contractors
Noise	Noise disturbance during construction or operation	Restrict construction to certain hours; Generators and air compressors will be located as far as possible from residential homes and stopped their operation during work breaks or when it is not need	Contractors
Social Environment	Ensure appropriate setbacks from residential areas	Construction equipment staging should not restrict access and daily life of commune residents; will be installed culverts crossing over ditches to allow easy access for residents	Contractors

Environmental Component	Impacts	Mitigation Measures	Institutional Responsibility
Aesthetic and Landscape	Risk of construction debris dumped into nearby water bodies; Disposal of construction waste: except for wood paints, all other building materials are non-hazards (lime, cement and sand plaster, concrete, glass, ceramics-electrical and sanitary, fabric insulated copper wiring, cast iron sanitary pipes, galvanized water pipes, etc)	The building site will be cleaned and all debris and waste materials will be disposed of in accordance with clauses specified in the bills of quantities. The sites for disposal of construction waste will be government- approved sites	Contractors
Human Health	Construction Accidents, Handling of asbestos material	Specially designed systems for handling/disposal of hazardous wastes; fencing the site to prevent unauthorized access; the site will be marked and signaled with visible signs warning residents of all potential hazards.	Contractors

Supervision to be done by INPC – PMU and its technical support staff in WBA assisted by inspectors in LEPA and in the Local Inspectorate for Quality in Constructions.

Issues Related to New Construction

Project site selection will ensure that sites for new construction are located outside the inhabited areas, are public domain, commune-owned, and new land is not to be acquired from private owners. No resettlement envisaged in order to have access to the land for construction. All land will be confirmed to be un-encroached through site inspection and social survey. The commune will be required to document legal title to all the sites allocated for new construction. Any site with illegal occupants will be omitted from consideration for future sites.

Cultural Assets

No cultural or historical assets are anticipated to be negatively affected by the new construction. Romania has a well-developed cultural heritage protection system with responsibility for monitoring and enforcement conducted by the Ministry of Culture (MC). Legal framework for cultural preservation is outlined in the Law for Preservation of Historical Heritage No. 422/2001. subsequently amended.

During technical design and obtaining environment permit, it will be reviewed if any of the proposed locations can certify as historical heritage. If any cultural assets are found during construction (excavation) works (“chance finds”), the measures outlined in the Law 422/2001 will be undertaken, including instituting a protection zone in compliance with the Law 422/2001, reporting to the local offices of Ministry of Culture and obtaining a special permit for the execution of works in connection with the found cultural assets.

DURING THE OPERATIONS PHASE

The commune level manure management platform is expected to be operational for a period of 20 years.

Environmental Component	Impacts	Mitigation Measures	Institutional Responsibility
Water/Soil	<p>Over accumulation of the liquid fraction in the collection basin due to heavy rains</p> <p>Potential impacts on receiving waters/ streams if quality of wastewater effluent is not ensured</p> <p>Leaking of septic tanks or toilet facilities if not properly maintained</p> <p>Water quality degradation in</p>	<p>Use of the provided pumps to spread periodically the liquid fraction on the nearby fields</p> <p>Adherence to operations and maintenance plan with routine water quality testing as defined in operating license</p> <p>Agreed Maintenance plan with financing source. Public awareness activities to involve commune residents interested in</p> <p>Using appropriate technology for</p>	<p>Daily: The platform Operator – in accordance with the Platform Operation manual</p> <p>Periodic: EPA and Water Basin Administration Inspectors</p> <p>Daily: Treatment plant operator</p> <p>Periodic: EPA and Water Basin Administration Inspectors</p> <p>Owner of the public building (typically the commune/mayor’s office)</p>

Environmental Component	Impacts	Mitigation Measures	Institutional Responsibility
	receiving surface waters	wastewater treatment; Training for operating process	Daily: Treatment plant operator
Soils	Over accumulation of the composed manure due to the lack of sufficient manure spreading equipment Over-accumulation of the household waste on the platform	A periodic evaluation of the quantities stored onto the platform and disposal of the excess as per the provisions of the Code of Good Agricultural Practices Application of the Platform Operation Manual	Daily: Commune/Platform Operator Periodic: EPA Inspectors Daily: Commune/Platform Operator Periodic: EPA Inspectors
Noise and Odor	Odor/smell from wastewater pumps or treatment facility if poorly maintained.	Using a maintenance plan for the facilities	Periodic: Treatment plant operator

III. ENVIRONMENTAL GUIDELINES

3.1 Introduction

The Environmental Guidelines section details the specifics to be addressed during construction works. The Environmental Guidelines for Civil Work Contracts – Annex III – will be incorporated in the RFPs when selecting the construction firms for project interventions. A clause to address the potential for “chance” finds will be required in all construction sub-contracts with financing under the loan/grant. The guidelines cover the handling of construction debris generated, selection of construction materials and construction methods with limited impact on the environment and energy saving methods.

3.2 The Site

The site specific screening and review should carefully assess the following issues:

- Dust and noise due to the demolition and construction;
- Dumping of construction wastes accidental spillage of machine oil, lubricants, etc;
- Inadequate handling of hazardous materials such as asbestos and paint from transportation and handling of construction works will be minimized.
- To reduce noise, construction will be restricted during certain hours. All debris, construction and wood waste will be stored within the work site.
- Wood waste will be stored separately and arranged to be recycled instead of disposing it.
- Open burning and illegal dumping will not be permitted. Proper sites for earth/clay and sand disposal will be determined and prior approval from relevant authority for disposal will be obtained.
- Stock piling of construction debris on site will be avoided and waste will be disposed of on a regular basis at the authorized government dumping ground. Debris chutes will be provided to transfer debris from higher floors to the ground.
- Construction in and around waterways should be avoided when possible. A special permit would be required in the case of river bed crossing.

3.3 Selection of Construction Materials and Construction Methods

Environmentally sound goods and services should be selected. Priority should be given to products meeting standards for recognized international or national symbols. Traditionally well-trying materials and methods should be chosen before new and unknown techniques. Construction sites should be fenced off in order to prevent entry of public, and general safety measures would be imposed. Temporary inconveniences due to construction works should be minimized through planning and coordination with contractors, neighbors and authorities. In densely populated areas, noisy or vibration generating activities should be strictly confined to the daytime.

3.4 Handling of Waste

The handling of construction debris will be according to local and national regulations, and as specified in the EMP, and described above under site considerations. These regulations are developed and enforceable in Romania. Monitoring will be the responsibility of site supervisors hired and working for the Communes.

Legal and Institutional Framework on EIA *¹

International Laws

1. Article 11(2) of Romania's Constitution (as revised by Law No. 429/2003) provides that treaties ratified by Parliament according to the law are part of national law.
2. The following treaties to which Romania is party relate to the protection of natural habitats:
 - Ramsar Convention on Wetlands (Ramsar, 1971), ratified by Romania on 21/9/91.
 - The Danube Delta and Small Island of Braila have been designated as Ramsar Sites.
 - Convention on the Conservation of Migratory Species (Bonn, 1979), ratified by Romania on 1/7/98.
 - Convention on Biological Diversity (Rio de Janeiro, 1992), ratified by Romania on 17/8/94.
 - Convention on the Conservation of European Wildlife and Natural Habitats (Berne, 1979). Accession by Romania on 18/5/93.
 - Convention concerning the protection of the World Cultural and Natural Heritage (Paris, 1972). Accession by Romania on 16/5/90. Several areas, including the Danube Delta are designated as UNESCO World Heritage Site.
 - Danube River Protection Convention signed in 1994.
3. On environmental assessment, relevant treaties ratified by Romania include:
 - UN/ECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus, 1998), ratified by Romania by Law no.86/2000.
 - Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991), ratified by Romania by Law no.22/2001.
4. The following treaties ratified by Romania relate to cultural property:
 - European Convention on the Protection of the Archaeological Heritage (revised) (Valetta, 1992), ratified by Romania 20/11/97.
 - Convention concerning the protection of the World Cultural and Natural Heritage (Paris, 1972). Accession by Romania on 16/5/90. Several areas, including the Danube Delta are designated as UNESCO World Heritage Site.

European Union's "*acquis communautaire*"

5. Relevant legal texts include:

¹ The list presented here is comprehensive – not all the included legislation is relevant to the project interventions

- Treaty concerning the Accession of the Republic of Bulgaria and Romania to the European Union, signed by the EU Member States and Bulgaria and Romania in Luxembourg on 25 April 2005.
- Protocol concerning the conditions and arrangements for admission of the Republic of Bulgaria and Romania to the European Union (Annex VII; list referred to in Article 20 of the protocol; transitional measures, Romania; Section 9 on environment).

Environmental Assessment

- Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment.
- Directive 2001/42/EC on Strategic Environmental Assessment.

Pollution Prevention and Control; Integrated Permitting

- Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control).

Waste Management

- Council Directive 1999/31/EC of 26 April 1999, on the landfill of waste.
- Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste.
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste.
- Council Directive 86/278/EEC of 12 June 1986, on the protection of the environment, and in particular the soil, when sewage sludge is used in agriculture (as amended by Directive 91/692/EEC, EC No. 807/2003 of 14 April 2003, EC No. 219/2009).
- Council Directive 94/62/EC of 20N December 1994 on packaging and packaging of waste (as implemented by Commission Decisions 97/129/EC and 97/138/EC and amended by Directive 2004/12, Directive 2005/20, Regulation 219/2009, Directive 2/2013, Directive 720/2015).

Water and Waste Water

- Council Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment, as amended by Commission Directive 98/15/EC, Regulation 1882/2003, Regulation 1137/2008, Directive 2013/64/EU.
- Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption as amended by Regulation 1882/2003, Regulation 596/2009.
- Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.
- Directive 2006/11/EC of the European Parliament and of the Council of 15 February 2006 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.

Nature Protection

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna.

Air Quality

- Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe.

Romanian Law

- Relevant Romanian law includes the following:

Environmental Assessment

- EGO 195/2005 on environmental protection, approved by Law no.265/2006. Framework Law on Protection of the Environment.
- GD 445/2009 (published in M.Of. no. 481 of 13/07/2009). Framework procedure for environmental impact assessment, and approval of list of public and private projects subject to this procedure.
- MO 135/2010 (published in M.Of. no. 274 of 04/27/2010). for approval of the EIA application methodology.
- MO 863/2002 (published in M.Of. no. 52 of 01/30/2003). Guidelines on EIA methodology (screening, scoping, and review of study).
- MO 864/2002 (published in M.Of. no. 397 of 06/09/2003) on procedures and public consultation in case of transboundary impacts.
- MO 1026/2009 (published in M.Of. 562 on 08/12/2009) approval of the conditions for the development of the environmental report, EIA and other environmental documentations,.
- MO 1798/2007 (published in M.Of. 808 on 11/27/2007) Methodology for the environmental permit issuance.

Strategic Environmental Assessment

- GD 1076/2004 (published in M. Of nr. 707 of 05.08.2004) on procedures for environmental assessment of plans and programs.
- MO 995/2006 on the list of plans and programs subject to the environmental assessment procedure.

Nature Protection

- EO 57/2007 regarding the protected natural areas and the conservation of natural habitats, wild flora and fauna.
- GD 230/2003.
- MO 552/2003.
- MO 1052/2014.

Waste, Waste Water, Air and Noise Pollution

- MO 662/2006 for the approval of the procedure and competencies for issuing water management permits and authorizations
- Water Law 107/1996 with subsequent modifications
- MO no. 1012/ 2005 for the approval of the procedure for public information access related to the water management field
- MO no. 1182/2005 MoEWM and 1270 /2005 MoAFRD for the approval of the Code of the agricultural good practices for the protection of the waters against pollution with nitrates from agricultural sources, as it was amended by MO 990/2015.
- MO no. 296/216/2005 regarding the framework Program of actions for the elaboration of the action programs in vulnerable zones at the pollution with nitrates from agricultural sources
- MO no. 242/197/2005 regarding the monitoring system of the sole from the vulnerable and potential vulnerable zones
- Law 458/2002 regarding drinking water quality, republished
- GD 974/2004 on inspection and monitoring of drinking water
- GD 349/2005 regarding management of solid waste
- GD 188/2002 for the approval of certain norms concerning the conditions of discharging waste water into the aquatic environment
- GD 235/2007 regarding management of oil waste
- Law 249/2015 regarding management of packaging and packaging of waste
- GD 856/2002 regarding records of disposal and collection of solid waste and approval of list including hazardous waste
- Law 211/2011 regarding solid waste
- Law 104/2011 regarding ambient air quality.
- GD 1470/2004 regarding approval of National strategy for solid waste management and National Plan for solid waste management.

Cultural Property

- Law 422/2001 on protection of historic monuments, republished
- GO 43/2000 on protection of the archaeological heritage, republished
- Law 150/1997 ratification of the European Convention on the Protection of Archeological Heritage (Valetta, 1996).

Romanian Licensing and Permitting Procedures²

Introduction

In conformity with Emergency Ordinance for Environmental Protection No.195/2005 including the respective updates - the Governmental Decision No. 445/2009, and the MO No. 863/2002 and 135/2010, the decision making process of the EIA regarding the issuance of the Environmental License to construct and the Environmental Permit to operate is well developed. The Environmental Protection regulation sets out the EIA requirements and principles; the GD 445/2009 sets out the procedures, while the OM 863/2002 and 135/2010 present in detail the procedures for EIA and for issuing the environmental license.

Based on the Romanian law, any development of a new facility or modification of an existing one requires the approval of an EIA before the environmental license (environmental agreement) and permit to operate (environmental authorization) is approved by LEPAs. For any activities not covered in the list of mandatory EIA (Annexes I and II of the GD no. 445/2009), the LEPAs use selection criteria to determine whether such activities could have a significant environmental impact. Existing facilities require an environmental permit from the LEPAs, which includes assessment of compliance with the environmental standards (e.g., conditions related to air, water, and soil reflecting existing standards).

The GD 445/2009 presents the steps of the procedure, the requirements that the physical or legal certified persons to prepare the impact studies, and the list of activities which are subject to the EIA procedure. Overall, the EIA procedure includes a screening stage, a scoping stage, and a validation stage.

Procedures for Receiving an Environmental License to Construct (or the Environmental Agreement)

The procedure for issuing the environmental license to construct is described in detail in the following steps and briefly presented in the flow chart.

Step 1. The initial screening of the new project/investment

This is determined by the local EPA responsible for the location (commune, city) where the investment will develop. When requesting the Environmental License to Construct, *the Beneficiary is responsible to present to the local EPA or MEWF a Technical File* including the following documentation:

- Request Form of the EA in conformity with the MO No. 135/2010; this request is attention to the local EPA or to the MEWF depending on the geographical location of the project;
- Urban Planning Certificate and the corresponding licenses and permits (obtained at the level of Feasibility Study) based on the corresponding law;

² The annex is provided for information purposes only its provisions do not apply in full to the project proposed interventions

- Contracts with the local solid waste company for collection of the solid wastes and with “*Apele Romane*” for water supply and sewage discharges (other authorizations from local utilities may be required based on necessity);
- Technical Memorandum (standard form) in conformity with Annex .2 of the MO No. 1798/2007 (prepared by the Consultant/Firm that developed the Feasibility Study);
- Technical Note (standard technical form) in conformity with the OM No. 839/2009 (prepared by the Consultant/Firm that developed the Feasibility Study);
- Fee (differs depending on the stage of the EA process);
- Public announcement/debate regarding the request to obtain the Environmental Permit in conformity with Annex 3 of the MO No. 1798/2007.

Within the EPA, a Technical Review Committee (TRC) is formed, which includes members of the local EPA, the National Environmental Guard (NAG), the National Water Administration “*Apele Romane*”, Sanitary and Urban Institutes and those authorities responsible for environmental permits authorizations. The TRC members analyze the documentation presented within the Technical File and issue one of the following three classifications of the project investments: (i) activities are of insignificant environmental impact and therefore the project is NOT subject to environmental procedure; (ii) activities are of low environmental impact and the simplified licensing procedure will apply; and (iii) activities are of significant environmental impact and the full environmental permitting procedure will apply. Furthermore, (for cases (ii) and (iii)) the EPA authorities together with the members of TRC and the Beneficiary are visiting the site of the future investment to: (i) verify its location as presented in the Technical File; and (ii) complete the List of Control developed according to the OM No. 863/2002.

Step 2. EIA Report Preparation

The EPA reviews and approves the List of Control which includes the conclusion presented by the TRC, based on which documents it announces the Beneficiary of his obligation to develop the EIA study (the impact study).

The Beneficiary is obliged to:

- Prepare the EIA report in conformity with the OM No. 863/2002. The EIA report should be developed only by physical persons or consulting firms independent of the Beneficiary and the person who developed the Feasibility Study, that are accredited for developing such technical studies for Infrastructure Projects/Investments including the legal conditions stipulated in the OM No. 1026/2009;
- Hire based on contract and competition through expression of interest/invitation to submit proposals process the firm/physical person who will develop the EA report;
- Prepare and sponsor the public announcement of the definition of the project (this is the 2nd public information in the EIA process approval);

Step 3. The Review of the EIA Report

At this stage, the EPA is in charge with the following steps: (i) completes the List of Control for the EIA Report analysis process; (ii) prepares the Public Consultation; and (iii) communicates the results to the Beneficiary.

The Beneficiary is obliged to:

- Present to the local EPA the EIA report, with the help of the consulting firm that developed the EIA;
- Prepare and launch the public consultation in the presence of those affected, NGOs, or interested persons including presentation of the project and the EIA Report during of a public debate;
- Evaluate the discussions and conclusions received during the public consultation;
- Reply to the public comments and requests with a valid technical solution.

Step 4. Decision and Approval of the Environmental License to construct

The EPA issues the Environmental License to start construction of the investment within 30 days after the final decision.

The Beneficiary is obliged to:

- Announce the public about the approval of the Environmental License;
- Request of Environmental Permit to Operate

Additional points:

- The EIA report is prepared at the level of the project's Feasibility Study, in conformity with GD No. 445/2009;
- The minimum information presented by the Beneficiary during the request to obtain the Environmental License should be also completed based on conditions recommended by the foreign donors (EBRD, WB, EIB) and/or as required by the EU legislation and the Romanian legislation in force;
- For those investments obtained through ISPA or SAPARD funds, the conditions during the project operation established through the Environmental Permit will take in consideration the limits of the pollutants' discharges required by the EU and Romanian legislation. However, the national limits will prevail if they are more restrictive than those imposed by the EU legislation.
- The Environmental License is valid during the entire period of the project construction, but will expire if the investment works will not start in maximum 2 years from its approval. During the period of investment constructions, the local environmental protection authorities will monitor those conditions imposed by the Environmental License (please note detailed information on the monitoring process in the next section);
- The Beneficiary is obliged by law to inform the environmental protection authorities in writing any time when there is a significant modification of the initial conditions of the project based on which the current Environmental License was issued.

3. Procedures for Obtaining an Environmental Permit to Operate

The Environmental Permit to Operate investments with significant impact on the environment is issued by the EPA in conformity with OM No. 1798/2007. The local EPA together with the local National Environmental Guard as well as representatives of National Agency "Apele Romane" is

inspecting the site after construction and issue a technical note with observations at the site (e.g., Environmental Audit).

The Environmental Audit of existing facilities is carried out only by certified persons paid by the Investor and includes: (i) a checklist including characteristic elements of the investment; (ii) an environmental study including data collection and technical review of all environmental aspects, before taking a decision on the scale of potential or existing environmental impacts from the site; and (iii) site investigations to quantify the potential scale of contamination of the site. Compliance programs are usually required based on the result of the environmental audit.

The Beneficiary is in charge with:

- Request the Environmental Permit to the local EPA;
- Prepare a *Technical File* as in the previous case;
- Announce the public about the request to start operations;
- Annual renewal of the permit once it is issued (it is valid for 5 years).

Standards (ambient and emission limits) are usually followed to comply with the environmental protection as requested by EU. Currently there are ambient standards for air, noise, waste and discharges of certain substances in the water.

Monitoring capacity during the Construction Period and After the Issuance of the Environmental Permit to Operate

During constructions, LEPAs together with the NGA and “Apele Romane” are in charge with visiting the site of the project and inspecting the environmental compliances stipulated in the Environmental License and Environmental Permit.

The NGA inspectors may accompany the LEPAs’ inspectors for site visits according to an inspection program. Following the site visit and checking the compliance, the inspectors prepare a report based on which they may advise the operators on how to meet standards and permit conditions. If a facility/project does not comply with relevant standards, it will first receive a warning from the inspector followed by a certain amount of time necessary to take care of the steps that comply with the permit. If these steps are not performed, an administrative fine will be imposed (the size of the fine varies as presented in the legislation). Finally, non-compliance will result in court action.

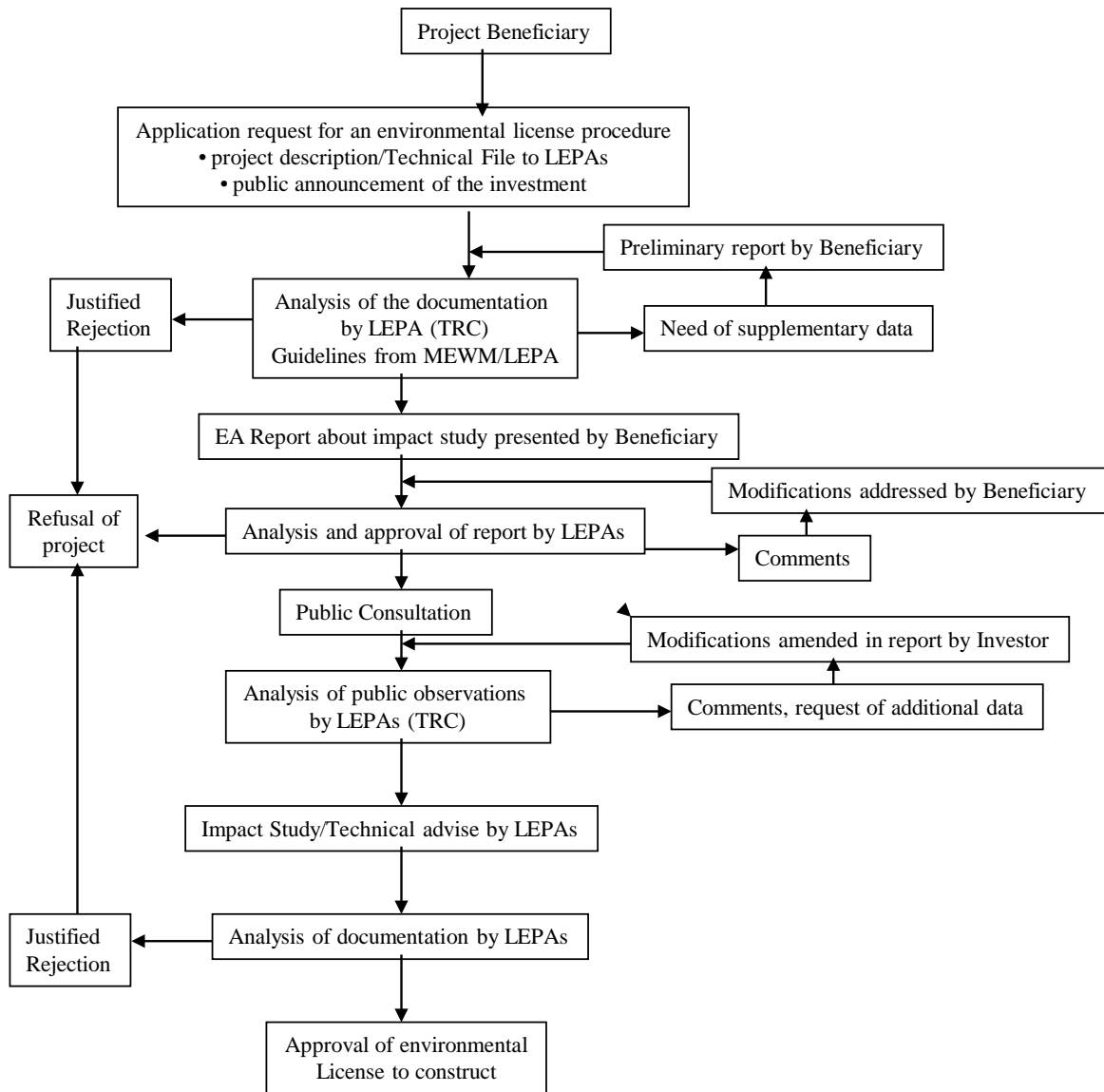


Figure. Procedures for issuing the environmental license to start-up investments of a new facility

Environmental Guidelines for Civil Work Contracts

Contractors will be obliged to apply environmentally sound construction standards and procedures. All civil works contracts will have the following environment-protecting provisions:

- 1 Take measures and precautions to avoid adverse environmental impacts, nuisance or disturbances arising from the execution of the works. This shall be done by avoidance or suppression whenever possible rather than abatement or mitigation of the impact once generated.
- 2 Comply with all national and local environmental laws and regulation. Nominate staff to be responsible for implementation of environmental actions and to receive guidance and instructions from the engineer or environmental authorities.
- 3 Minimize dust emissions to avoid or minimize adverse impacts on air quality.
- 4 Prevent or minimize vibration and noise from vehicles and equipment.
- 5 Minimize disturbance to and restore vegetation where it is disturbed as a consequence of the works.
- 6 Protect surface and groundwater and soil quality from pollution. Appropriately collect and dispose of constructions debris.

SAFEGUARDS POLICY OF THE WORLD BANK

Below are the key extracts from OP that give the idea of preventive mechanisms of the World Bank and help to understand and analyze information on environmental, social and legal policies.

OP 4.01 Environmental Assessment

EA is a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project. EA evaluates a project's potential environmental risks and impacts in its area of influence; examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation.

EA takes into account the natural environment (air, water, and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and physical cultural resources); and trans boundary and global environmental aspects.

EA considers natural and social aspects in an integrated way. EA is initiated as early as possible in project processing and is integrated closely with the economic, financial, institutional, social, and technical analyses of a proposed project

OP 4.04 Natural habitats

The Bank promotes and supports natural habitat conservation and improved land use by financing projects designed for environmental conservation. The Bank promotes the rehabilitation of degraded natural habitats and does not support projects that involve the significant conversion or degradation of critical natural habitats.

OP 4.09 Pest Management

In assisting borrowers to manage pests that affect either agriculture or public health, the Bank supports a strategy that promotes the use of biological or environmental control methods and reduces reliance on synthetic chemical pesticides.

The Bank requires that any pesticides it finances be manufactured, packaged, labeled, handled, stored, disposed of, and applied according to standards acceptable to the Bank. The FAO's Guidelines for Packaging and Storage of Pesticides (Rome, 1985), Guidelines on Good Labeling Practice for Pesticides (Rome, 1985), and Guidelines for the Disposal of Waste Pesticide and Pesticide Containers on the Farm (Rome, 1985) are used as minimum standards.

OP 4.11 Physical Cultural Resources

This policy addresses physical cultural resources, which are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources include everything that remained after ancient inhabitants (holy places and battlefields) and also unique natural sites such as waterfalls and canyons. The Bank does not support projects threatening cultural resources that are property of population. The

Bank supports only those projects that are located or designed in such a way as to prevent damage to the environment.

OP 4.36 Forests

Management, protection and sustainable development of forest ecosystem and its resources are necessary for reducing poverty and sustainable development.

The Bank does not finance plantations that involve any conversion or degradation of critical natural habitats due to potential risk to biodiversity.

The Bank may finance harvesting operations conducted by small-scale landholders, by local communities under community forest management, or by such entities under joint forest management arrangements, if these operations:

- (a) have achieved a standard of forest management developed with the meaningful participation of locally affected communities, consistent with the principles and criteria of responsible forest management; or
- (b) adhere to a time-bound phased action plan¹⁴ to achieve such a standard. The action plan must be developed with the meaningful participation of locally-affected communities and be acceptable to the Bank.

OP 4.37 Safety of dams

The Bank distinguishes between small and large dams. Small dams are normally less than 15 meters in height. This category includes, for example, farm ponds, local silt retention dams, and low embankment tanks. For small dams, generic dam safety measures designed by qualified engineers are usually adequate.

OP 7.50 Projects on international waterways

This policy applies to the following types of international waterways: (a) any river, canal, lake, or similar body of water that forms a boundary between, or any river or body of surface water that flows through, two or more states; (b) any tributary or other body of surface water that is a component of any waterway described in (a) above.

This policy applies to the following types of projects: hydroelectric, irrigation, flood control, navigation, drainage, water and sewerage, industrial, and similar projects that involve the use or potential pollution of international waterways as described above.

If ARIS implements any project that relates to this category, it should familiarize itself with OP 7.50 and strictly adhere to the procedures therein.

OP 7.60 Projects in disputed areas

Projects in disputed areas may raise a number of delicate problems affecting relations not only between the Bank and its member countries, but also between the country in which the project is carried out and one or more neighboring countries. In order not to prejudice the position of either the Bank or the countries concerned, any dispute over an area in which a proposed project is located is dealt with at the earliest possible stage.