

**ENVIRONMENTAL MANAGEMENT PLAN
AND
ENVIRONMENTAL GUIDELINES
FOR**

Integrated Nutrient Control Project

I. BACKGROUND

1.1. Project scope

The overall development objective of the project is to reduce nutrient discharges to water bodies and promote behavior change through strengthened institutional capacity and demonstrated communa-based actions. The local environment objective is to reduce over the long-term the discharge of nutrients into water bodies leading to the Danube River and Black Sea through integrated land and water management. Towards this, the project will provide technical assistance and specific investments to reduce nutrient discharge from rural area sources to surface and ground waters in Romania. Project activities will thus help Romania to comply with selected measures under the EU environmental acquis, prepare and implement environmental *acquis* administrative measures, build capacity for absorbing EU funds upon accession, and promote related compliance and enforcement by the private sector and industry.

The project, to be implemented over 5 years, will support the following activities:

(1) Integrated investments in Eleven Training and Demonstration Sites in high priority Nitrate Vulnerable Zones. Eleven pilot training and demonstration (T&D) sites for the benefit of the farmers, cattle and poultry enterprises and the agro-industry, in each of the ten river basins that have NVZs comunas, would be financed by the project taking an integrated approach for nutrient management.

Investments for T&D sites will be tailored to each site based on the following envisaged investments:

- Commune manure management platform/ waste collection sites
- Implementation of the Code of Good Agricultural Practices such as tree planting as protection buffers, riparian buffers, erosion control, grazing management and nutrient management plans
- Low cost options for rural sanitation/wastewater control
- Community biogas linked with the manure platform operations to demonstrate cogeneration with compost (only if the feasibility studies show economic viability)
- Expansion of groundwater monitoring wells

(2) Manure management in NVZ comunas. Based on the list of NVZs and prioritization agreed upon under the Dutch grant financed preparatory work, the project would support commune manure management activities in all NVZs. This component will provide grants for the installation of new or improved manure storage facilities at the village/communa level and equipment for manure collection and application. The amount of the grant would be based on the volume of manure generated and existing capacity within the communa to make the necessary investments to protect the groundwater from nutrient discharge pollution.

(3) Support for strengthening the policy and regulatory framework under the Nitrates Directive. This component would support the Ministry of Environment and Water Management (MEWM) in its efforts to harmonize national legislation with the requirements of the EU Nitrates and select measures under the Water Framework Directives. It would also help to build the regulatory and enforcement capacity for the implementation of the Code of Good Agricultural Practices, organic farming, etc.

(4) Support for Institution Strengthening and Capacity Building. This component will focus on human resource development to build capacity of key beneficiaries as well as staff at local, regional and central levels (such as inspectors, monitors, etc.) for effective implementation of the proposed project activities and the requirements of the EU Nitrates Directive. Training and equipment will be provided for improving and strengthening awareness, knowledge and skills related to nutrient reduction measures, EU principles on project financing, measures to obtain funding support from non-Bank sources, etc. Equipment and training will also be provided for soil and water quality monitoring at the local, judet and river basin levels. The project will also finance a data reporting system in accordance with EU requirements.

T&D sites will be mainly used for general training under the Nitrates Directive and specific training on soil quality protection. A national training center will be supported for use mainly by the existing/newly recruited staff of the Romanian Waters Authority. Preliminary discussions have identified a site with an existing facility to be expanded for this Training and Information Facility on Water Quality:

(5) Public awareness and Dissemination. A broad public information campaign of the project's activities and benefits will be undertaken at the local, national and regional levels to achieve replication of project interventions in other similar areas within Romania as well as other Black Sea riparian countries and EU candidate countries. The project will provide for the organization of national and regional workshops, field trips, and study tours where knowledge and skills on effective low-cost environmentally friendly technologies will be shared. The project will also use the media (TV, radio, agricultural and environmental journals) as a vehicle for disseminating the benefits of proposed activities.

(6) Project Management. A Project Management Unit (PMU) of the APCP re-designed to suit the national coverage and enhanced as needed will serve as the PMU of the proposed project. Other agencies that may be needed to implement component activities will be hired on a contractual basis as needed. Regional EPAs and Local EPAs within proximity of the selected pilot demonstration sites will help the PMU in the implementation of selected project measures, such as monitoring, training, expert advice, etc. Ministry of Environment and Water Management (MEWM) will be the line ministry responsible for the overall implementation of the project. The current Inter-Ministerial Committee for Nitrates, chaired by the Ministry of Environment and Waters will provide guidance and oversight for project activities. This component would also provide funding for specific monitoring and evaluation tools of project results, including public surveys, beneficiary surveys, etc.

Rural water supplies and sanitation in Romania is low compared with other European countries. With 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 with 12.9% of rural houses served by a sewerage network with wastewater from only 10% treated (approximately 94% of the sewers in Romania are in urban areas). The remaining rural areas depend, at best, on septic tanks or cess pits, usually poorly built and maintained. Rural households and public buildings (schools, community centers, 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 and medium sized farms 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 behaviour 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 Component 1 (Integrated investments in Eleven Training and Demonstration Sites in high priority Nitrate Vulnerable Zones) and Component 2 (Manure management in NVZ comunas)

Type of works. Construction will involve a range of interventions, including the construction/rehabilitation of communa level manure storage facilities, installation of household level manure storage platforms, rehabilitation/expansion of the communa sewage system, low-cost sanitation/waste water control, biogas digesters associated with communa 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.

Selection of the Training and Demonstration Sites (T&D). A set of criteria for site selection has been developed and agreed upon by all parties. In order to be selected as a T&D a site should respect the following minimum criteria:

- Located in one county situated in a Water Basin (only one site per Water Basin will be selected)
- Has a good and representative mixture of small, medium and large farms.
- Has degraded communal land suitable for the application of the agro-forestry or afforestation techniques.
- Has animal husbandry as an important component of the household activities.
- Is included on the approved list of Vulnerable Zones.
- Has not benefited from other similar types of intervention.
- Demonstrates a high degree of commitment - measurable by the level of the local contribution both financial (estimated at 10% of the total value of the construction works) - and in-kind.
- Its geographical position offers good premises for dissemination and replicability of the lessons learned in the neighboring counties.

The following additional criteria were considered as an advantage in the prioritization and selection of sites, although were not considered as mandatory.

- Has one slaughter house compliant with the EU requirements (optional) whose sludge could be used as fertilizer on agricultural land.
- Is situated in the vicinity of a large urban area which has a waste water treatment plant whose sludge is approved for use as a fertilizer on agricultural land.

In addition preference will be given to those that have or will have ready the detailed designs of the construction works envisaged for their communa.

The targeted T&D communes have been identified in 11 counties as the focus of project appraisal.

Ongoing Government investment programs. The Government of Romania is nearing completion of the GEF funded “Agricultural Pollution Control Project” as a pilot project in 7 communes in the Calarasi Judet. This is the only financial intervention that addresses the problem of ground and surface water with nitrates as per the provisions of the EU Nitrate Directive 676/91. Moreover, for the implementation of this Directive Romania has not requested a transition period and there are no current EU funds specially targeting this problem. However, for the broader aspect of the contamination of ground and surface water there are some connected governmental projects related to water supply and sewage systems in the rural area that once implemented will have a significant impact in reducing

the nitrate content in the ground water by diminishing the input from social sources. Nonetheless, the problem of contamination of ground and surface water from the improper handling of the manure at household/communa level, combined with the little knowledge on the modern best agricultural practices continue to pose a threat on the water resources and are not addressed so far by any governmental program. Once approved, the INPC project will tremendously help in addressing these problems.

Planning and Design standards. The INPC project will use the designs used during the implementation of the APCP 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.

1.3 Environmental Category

The project is classified under the Environmental Category B in accordance with World Bank operational policies and requires the preparation of an Environmental Management Plan (EMP). 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) environment protection agency.

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 communa level storage facilities if construction does not adhere to designs
- Inappropriate manure spreading on fields if code of good agricultural practices are not followed
- Improper cleaning and management of individual and manure management platforms
- Odor/smell and noise from wastewater pumps or treatment facility if poorly maintained
- Potential impacts on receiving waters/ streams if quality of wastewater effluent is not ensured
- Leaking of septic tanks or toilet facilities if not properly maintained
- Illegal deposit of toxic or hazardous wastes at the commune waste platforms (materials which the platform was not designed for).

- Over-accumulation of plastic, glass, and other recyclable waste materials at the commune platform due to a collection system failure

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.

1.4 On-going APCP investment Program - Lessons Learned on Env. Mitigation Aspects

Significant project implementation experience has been gained through implementation of the Agriculture Pollution Control Project in Calarasi County. 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 project 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 Directorate. 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 (communas) will have the responsibility to prepare the necessary documentation by taking the following steps:

- ③ clarify the legal status of land sites allocated to the future construction (all investments should verify communa ownership and ensure there are no encroachments on the property);
- ③ prepare a technical documentation for the construction (this documentation should also contain description of the internal monitoring and supervision of works systems);
- ③ request an Urbanism Certificate from the Local County;
- ③ and obtain all approvals including environment as specified within such Urban Certificate.

- ③ All operations permits including the environment permit

- ③ 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 WBD 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 WBD 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, Communa 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 MWEF, MAFRD, MoH, MAI 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:

- ③ the results of the field supervisors screening and review procedures;
- ③ 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 Ministry of Environment and Water Management (MEWM) and its territorial affiliates (NEPA, REPAs 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 polices 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 REPA/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 their 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 REPA/LEPA staff. External Monitoring performed by REPA/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.1213/2006 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 hydrogeological 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 involment 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 a MO which is presently under elaboration.

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 864/2003 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 Directorate level;

- (b) highlighting the EMP follow-up responsibility in the ToRs of the **INPC-PMU** and its support staff at Water Basin Directorate 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;
- and
- (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 WBD 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 Regional and 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 Directorates. 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 communa 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 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 communa level platform is 3 months with the lower limit being 2 months and maximum time 4 months (influenced by the weather conditions. Rehabilitation of wastewater infrastructure may last between 6-12 months.

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	Contractors
Social Environment	Ensure appropriate setbacks from residential areas	Construction equipment staging should not restrict access and daily life of commune residents	Contractors
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	Contractors

Supervision to be done by INPC – PMU and its technical support staff in WBD assisted by inspectors in REPAs/LEPAs 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, communa-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. There are no illegal occupants on the initial eleven sites, and 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 and Religious Affairs (MCRA). Legal framework for cultural preservation is outlined in the Law for Preservation of Historical Heritage No. 422/2001, as amended by Law 468/2003.

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 MCRA 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	Over accumulation of the liquid fraction in the collection basin due to heavy rains	Use of the provided pumps to spread periodically the liquid fraction on the nearby fields	Daily: The platform Operator – in accordance with the Platform Operation manual Periodic: EPA and Water Directorate Inspectors
	Potential impacts on receiving waters/ streams if quality of wastewater effluent is not ensured	Adherence to operations and maintenance plan with routine water quality testing as defined in operating license	Daily: Treatment plant operator Periodic: EPA and Water Directorate Inspectors
	Leaking of septic tanks or toilet facilities if not properly maintained	Agreed Maintenance plan with financing source. Public awareness activities to involve commune residents interested in	Owner of the public building (typically the commune/mayor’s office)
Soils	Over accumulation of the composed manure due to the lack of sufficient manure	A periodic evaluation of the quantities stored on the platform and disposal	Daily: Communa/Platform Operator

	spreading equipment	of the excess as per the provisions of the Code of Good Agricultural Practices	Periodic: EPA Inspectors
	Overaccumulation of the household waste on the platform	Application of the Platform Operation Manual	Daily: Communa/Platform Operator Periodic: EPA Inspectors
Noise and Odor	Odor/smell from wastewater pumps or treatment facility if poorly maintained.		

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-tried 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

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.

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.

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.

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"

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

- Council Directive 85/337/EEC of 27 June 1985 (as amended by Directives 97/11/EC and 2003/35/EC), 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

- Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control (as amended by Directive 2003/35/EC of 26 May 2003).

Waste Management

- Council Directive 1999/31/EC of 26 April 1999, on the landfill of waste.
- Council Regulation EEC/259/93 of 1 February 1993, on the supervision and control of shipments of waste within, into and out of the European Community.
- Council Directive 75/442/EEC of 15 July 1975, on waste (as amended by Council Directive 91/156/EEC, Commission Decision 94/3/EC, Commission Decision 96/350/EC and Commission Decision 2000/532/EC).
- 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).
- Council Directive 91/689/EEC of 12 December 1991, on hazardous waste (as amended by Council Directive 94/31/EC, Council Decision 94/904/EC and Commission Decision 2000/532/EC and implemented by Commission Decision 96/302/EC).
- 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).

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.
- Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption.
- Council Directive 75/440/EEC of 16 June 1975 concerning the quality required of surface water intended for the abstraction of drinking water in the Member States (as amended by Council Directives 79/869/EEC and 91/692/EEC).

- Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community (as amended by Council Directive 91/692/EEC).
- Council Directive 79/869/EEC of 9 October 1979 concerning the methods of and measurements and frequencies of sampling and analysis of surface water intended for the abstraction of drinking water in the Member States (as amended by Council Directive 91/692/EEC).
- ③ Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances (as amended by Council Directive 91/692/EEC).
- ③ Directive establishing a new framework for Community action in the field of water policy [2000/60/EC](#) –Water Framework Directive

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

- ③ Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management.
- ③ Council Directive 1999/30/EC of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air (amended by Commission Decision 2001/744/EC of 17 October 2001).

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 1213/2006 (published in M.Of. no. 802 of 25/09/2006). Framework procedure for environmental impact assessment, and approval of list of public and private projects subject to this procedure.
- New MO under elaboration-Procedures for approval of the EIA and the issuance of environmental agreement.
- 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 978/2003 (published in MO 3 on 01/05/04) Rule that attests physical and juridical persons that develop the EIA
- MO 97/2004, published in M.Of. no.504 of 06/04/2005

- MO 876/2004 (published in MO 31 on 01/1/05) Methodology for the approval of the Environmental Permit for activities with significant impact on the environment

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 programmes subject to the environmental assessment procedure.

Nature Protection

- EO 236/2000 regarding the management of protected natural areas and the conservation of natural habitats, wild flora and fauna
- Law 462/2001, regarding the management of protected areas and the conservation of natural habitats, wild flora and fauna
- GD 230/2003
- MO 552/2003
- MO 850/2003

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 modifications (Law 112/2006 and 310/2004)
- MO no. 1012/19 October 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
- MO no. 241/MoEWM and 196/2005 MoAFRD for the approval of the list containing the localities by counties where there are sources of nitrates from the agricultural activities and of the list containing the localities from the basins/hydrographical spaces where there are sources of nitrates from the agricultural activities
- MO no. 296/2005 MoEWM and 216/2005 MoAFRD regarding the framework Programme of actions for the elaboration of the action programmes in vulnerable zones at the pollution with nitrates from agricultural sources
- MO no. 242/2005 MoEWM and 197/2005 MoAFRD regarding the monitoring system of the sole from the vulnerable and potential vulnerable zones
- Law 456/2002 regarding drinking water quality, modified by law 311/2004
- GD 974/2004 on inspection and monitoring of drinking water
- GD 168/2005 on inspection of monitoring systems
- GD 162/2002 regarding management of solid waste, amended by GD 349/2005
- GD 188/2002 for the approval of certain norms concerning the conditions of discharging waste water into the aquatic environment
- GD 662/2002 regarding management of oil waste
- GD 349/2002 regarding management of collection and storage of solid waste

- GD 856/2002 regarding records of disposal and collection of solid waste and approval of list including hazardous waste
- Law 426/2001 approval of EGO 78/2000 regarding classification of solid waste
- GD 1159/2003 Modification of GD 662/2001 regarding disposal of oily waste published in O.M. 715/October 14, 2003
- Law 294/2003 Approval of UGO 91/2002 regarding modification and completion of Environmental Protection Law 137/1992
- MO 592/2002 Norms regarding minimum permissible values and evaluation methods for SO₂, NO_x and NO₂, suspended solids (PM₁₀ and PM_{2.5}), Pb, CO, O₃, and benzene in the air.
- Law 655/2001 Law for approval of UGD 243/2000 regarding environmental protection
- GD 1470/2004 (MO 954/2004) 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
- Law 43/2000 on protection of the archaeological heritage (as amended by Law 462/2003)
- Law 150/1997 ratification of the European Convention on the Protection of Archeological Heritage (Valetta, 1996)

Romanian Licensing and Permitting Procedures²

1. Introduction

In conformity with the Law of Environmental Protection No.137/1995 including the respective updates - the Emergency Ordinance No.152/2005, the Governmental Decision No. 918/2002, and the Ordinance of the Ministry of Environment and Water Management No. 860 and 863/2002, 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 Law sets out the EIA requirements and principles; the GD 918/2002 sets out the procedures, while the OM 860/2002 and 863/2002 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. 918/2002), the LEPAs or REPAs 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 918/2002 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.

2. 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/regional EPA or MEWM a Technical File including the following documentation:

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

- Request Form of the EA in conformity with the MO No. 860/2002; this request is attention to the local or regional EPA or to the MEWM 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;
- 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 II.2 of the MO No. 860/2002 (prepared by the Consultant/Firm that developed the Feasibility Study);
- Technical Note (standard technical form) in conformity with the OMEWM No. 1943/2001 (prepared by the Consultant/Firm that developed the Feasibility Study);
- Fee (differs depending on the stage of the EA process);
- Public announcement regarding the request to obtain the Environmental Permit in conformity with Annex II.4 of the MO No. 860/2002.

Within the EPA, a Technical Review Committee (TRC) is formed based on the Ordinance of Prefect, which includes members of the local/regional EPA, the National Environmental Guard (NAG), the National Water Company „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 OMEWM 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 OMEWM 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 (as defined in the Annex 4 of the OM No. 978/2003) including the legal conditions stipulated in the OM No. 978/2003 and 97/2004;

- 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. 918/2002;
- 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 OMEWM No. 876/2004. 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.

4. 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.

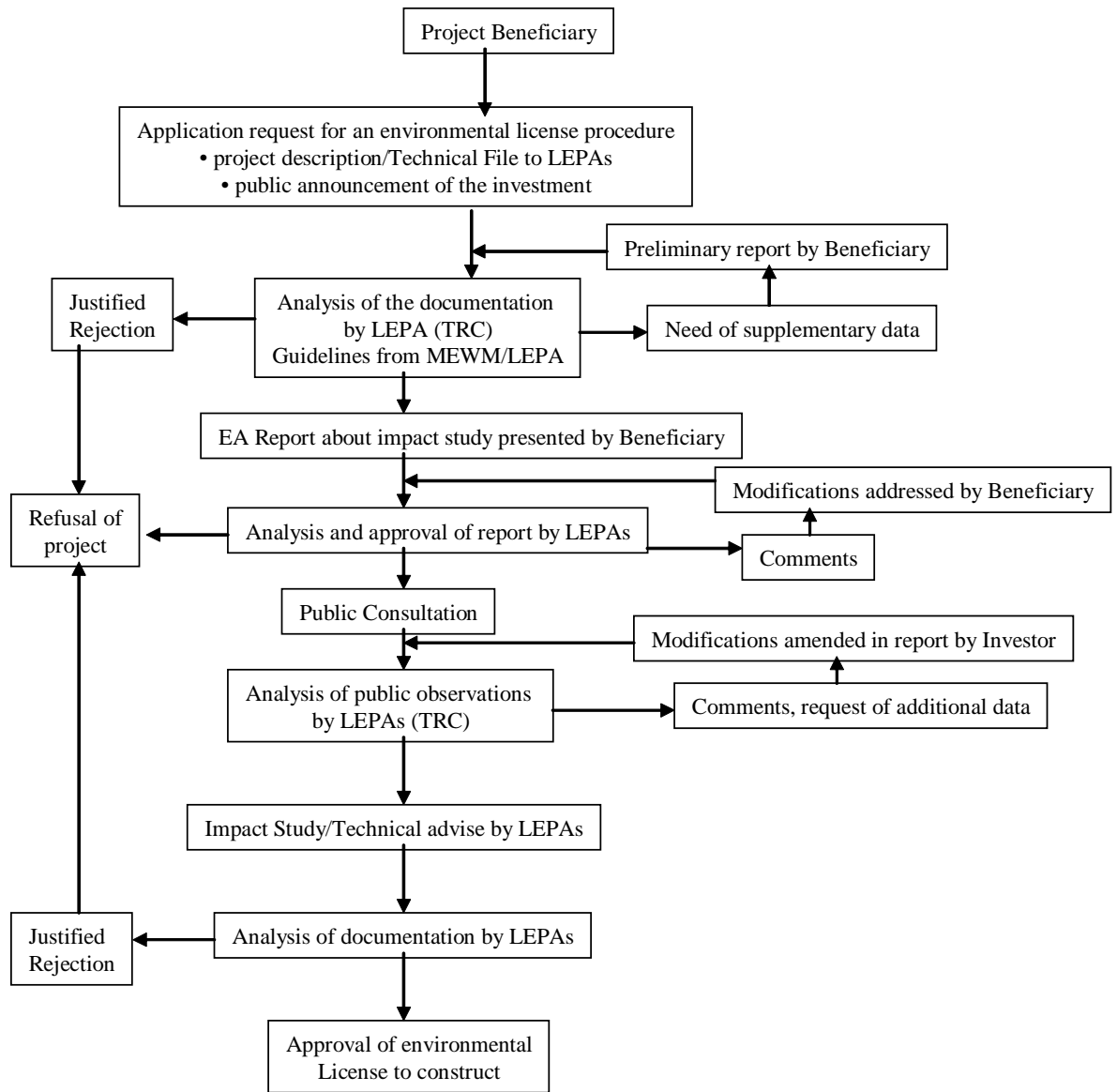


Figure. Procedures for issuing the environmental license to start-up investments of a new facility

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.