



Environmental Management Framework

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Acronyms

ACSA	National Agency for Rural Development
AF	Additional Financing
APCP	Agriculture Pollution Control Project
BSECO	Black Sea Economic Cooperation Organization
CAPMU	Consolidated Agriculture Project Management Unit
EA	Environmental Assessment
EAMG	Environmental Assessment and Management Guidelines
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EU	European Union
FI	Financial Intermediary
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GMO	Genetically Modified Organisms
GoM	Government of Moldova
IDA	International Development Association
IEC	Important Environmental Component
IFAD	International Fund for Agricultural Development
IPM	Integrated Pest Management
MAFI	Ministry of Agriculture and Food Industry
MDL	Moldovan Lei
ME	Ministry of Environment
NGO's	Non-governmental Organizations
OP	Operational Policy
PFI	Participating Financial Institutions/ Intermediaries
RISP	Rural Investment and Services Project
SEE	State Ecological Expertise
SEI	State Ecological Inspectorate
SEIA	Statement on the Environmental Impact Assessment
SER	Sectorial Environmental Review
SME	Small and Medium Enterprise
TA	Technical Assignment
US	United States
USA	United States of America
USAID	United States Agency for International Development
WB	World Bank
WUA	Water Users Association

Summary

Project objective

The development objective of the project, and of the proposed Additional Financing, is to enhance the competitiveness of the country's agro-food sector by supporting the modernization of food safety and quality management systems, facilitating market access, and promoting agro-environmental and sustainable land management practices.

Project description

The Project AF would be used for scaling up the highly successful activities under Component 2 of the project, including (i) technical assistance for supporting emerging productive partnerships; (ii) providing matching investment grants for formally established producer groups; and (iii) assistance to the Ministry of Agriculture and Food Industry (MAFI) in promoting consumption and recognition of Moldovan produce. The project includes the following components and activities:

Component 1: Food Safety and Quality Management System.

- 1.1 *Support to the Food Safety Agency:*
 - (i) technical assistance for continued legislative and regulatory harmonization with EU directives;
 - (ii) training and other capacity enhancing activities to agency staff; and
 - (iii) investments in the physical rehabilitation of the agency's premises and necessary office and specialized equipment;
- 1.2 *Support for the Creation of Border Inspection Points (BIPs):*
 - (i) investments in construction and/or rehabilitation of premises/facilities for the BIPs; and
 - (ii) investments in specialized equipment;
- 1.3 *Support to the Laboratory System* – key reforms of the system, as identified by the assessment, along the following lines:
 - (i) training and other capacity enhancing activities for laboratory staff;
 - (ii) support for domestic and international accreditation of laboratories; and
 - (iii) investment support for physical rehabilitation of facilities and equipment;
- 1.4 *Information Technology Systems for Food Safety and Quality:*
 - (i) investments in basic hardware and software for the Food Safety Agency and its outlets;
 - (ii) a feasibility study and design of an integrated information management system for the Food Safety Agency and its outlets;
 - (iii) investments in software and hardware required to build the information management system; (iv) software adjustments required to ensure interoperability with existing databases and systems (ex. the Customs Service ASICUDA).

Component 2: Access to Markets.

- 2.1 *Investment Support for Post-harvest Technologies.* Investment support under this sub-component is envisaged to take the form of investment grants for the modernization of post-harvest technologies aimed at improving quality, consistency and quantity of primary supply (washing, grading, packing, pre-cooling, ripening room equipment, cold storage, minor-processing). The AF would expand eligibility for matching investment grants to bee-keeping and milk-collection to allow for higher integration and aggregation of supply by small producers;

- 2.2 *Business Development Support* – would support capacity building activities that target primary horticultural producers and intermediaries aiming to assist them in setting up and further developing producer groups, providing consulting and training services for business planning and development, and providing initial brokerage support for contracts between producers and wholesalers and/or retailers. The sub-component would also support activities aimed at strengthening the capacity of producer associations to represent the interests of the fruit and vegetable industry of Moldova; encourage efficient production, packing handling, storing and processing of produce; support the development and proliferation of applied research that benefits the industry. As specified above the project AF under this subcomponent will also support TA activities aimed at supporting emerging productive partnerships and providing assistance to the MAFI in promoting consumption and recognition of Moldovan produce.

Component 3: Component 3: Sustainable land management and enhancing land productivity. The component will support mainstreaming of sustainable land management (SLM) and best agro-environmental practices as part of the broader push of the Project to increase the competitiveness of the agriculture sector. It will support strengthening human, institutional and technical capacities (both locally and nationally) for the implementation of such activities, and provide direct financial incentives to farmers for the adoption of sustainable resource management and best agricultural practices. Finally, the component would provide investment support for the rehabilitation of anti-erosion protection strips (hedges) with the purpose of maintaining and enhancing the productivity of agricultural land. The focus of such support will be on the creation of two mobile machinery squads that will specialize in the rehabilitation of protective strips with appropriate vegetation in the most degraded and delicate eco-agro systems in the South of the country. This will allow local forestry enterprises and local councils to further rehabilitate and create of new protection strips.

Component 4: Project Management. This component will support the costs associated with implementation, including operational costs for a project management unit that will provide fiduciary support to MAFI and MOE, and consulting costs for component coordinators that will provide technical backstopping for the implementation of component activities.

Component 5: Compensatory Sales Support Grants (supported by the 1st AF) is supporting farmers who sold apple, plums and grapes for domestic processing in the fall of 2014, in response to the circumstances surrounding trade restrictions on Moldovan agro-food exports imposed by the Russian Federation in 2013-2014.

Location

While the project activities under the components will be implemented country wide, the main focus of the sub-component 3.3 will be implemented in the most vulnerable Southern eco-systems of the country with the highest potential for land degradation and deterioration of agricultural productivity.

Project category

In accordance with the Bank's safeguard policies and procedures, including OP/BP/GP 4.01 Environmental Assessment, the project is placed into the Bank's *Category B*. As at this stage are not yet identified the subprojects and location of activities to be financed, the Bank requires that client will screen all proposed subprojects and ensures that subproject beneficiaries carry out appropriate Environmental Assessment for each subproject. For this purpose the client has to prepare an Environment Management Framework.

Potential environmental impacts

While generally the project will provide many environmental and social benefits (such as increased food security and farmer income due to higher agricultural productivity, enhanced agricultural competitiveness, improved farmer skills in land conservation and climate change adaptation technologies

or increased opportunity for engagement in small scale agri-businesses by farmers), it may also cause some negative impacts. These impacts might be associated with the project's competitive and matching grant schemes which are expected to finance: (a) producer-mobilization interventions on a pilot basis and supporting post-harvesting investments aimed at improving quality, consistency and quantity of primary supply (washing, grading, packing, ripening room equipment, cold-storage, minor-processing); (b) farm- or enterprise-based investments for food safety compliance; and, (c) investments in technologies and equipment for soil conservation-friendly agriculture as well as for soil and pasture management activities.

The proposed activities under these schemes, if not adequately implemented, may cause some environmental impacts related to: (a) increased pollution of ground and surface waters due to soil erosion, use of fertilizers and pesticide, as well as the processing of agricultural products; (b) threats to human health and wildlife due to poor handling of fertilizers and pesticides; (c) increased siltation of water bodies due to soil erosion; (c) solid wastes during processing of agricultural products. Additionally the project will support the rehabilitation of border control points and laboratory facilities which may include minor civil works which also might generate solid wastes, air pollution and health hazards.

The project will also have positive impacts on the environment and natural resource base of the project area: prevention of soil degradation; increase of soil moisture; increase in biomass and organic matter of soils; reduction of sediment loads to the rivers; and a decrease of run-off and soil losses. This would result in a series of economic benefits: (a) increased soil productivity due to the adoption of SLM; (b) the value of nutrient recovery in the soil; and, (c) increased agricultural crops yields.

Triggered WB OPs

The project triggers two WB OPs and specifically OP 4.01 on Environmental Assessment and OP 4.09 on Pest Management. The OP 4.01 is triggered as the project will support a series of activities which will generate some environmental and social impacts. To address these impacts the borrower prepared the EMF (see point above). While the project will not finance the purchasing and/or application of pesticides, it is possible that pesticide use will increase due to the increased intensity of cropping supported by the Project's grant schemes of the project and/or due to promoting conservation agriculture. To address the issues related to this OP the EMF includes measures to raise awareness and educate potential beneficiaries regarding safe pesticide handling and use of Integrated Pest/Farm Farm Management to enhance sustainability and reduce human and environmental exposure to dangerous products. Such measures are described in the section VI of the EMF.

The borrower confirmed the project will not support activities and sub-projects that might result in resettlement. The EMF clearly indicates that any infrastructure constructed/rehabilitated under the project will be: (a) located on land already owned by participants, or will be bought or leased on a willing buyer-willing seller basis, and, (b) will be screened to ensure that it is free of legal encumbrance, or informal use or occupation by others who lack formal title. Furthermore, these documents will also specify pasture improvement will not entail any form of involuntary pasture closure or diminishment of access.

As is stated in the EMF prepared by the borrower, OP/BP4.04 on Natural Habitats also would not be triggered as the project will not support any activities which might involve conversion of natural areas. The OP/BP 4.36 on Forests policy also will be not triggered as all project activities will be implemented on existing agricultural lands and on the currently functioning border control points and laboratory facilities. Similarly, there will be no impact on physical cultural resources as all proposed activities will be implemented on existing agricultural lands and/or within the laboratory facilities.

Environment Management Framework (EMF)

To address these potential negative impacts the project beneficiary prepared an EMF which specifies the Environmental Impact Assessment (EIA) requirements for the project activities and subprojects to be financed. This document covers the following: rules and procedures for environmental screening; guidance for preparing subprojects EIA and/or simple EMPs as well as of EMP Checklist for identified

small scale construction and reconstruction activities; possible mitigation measures for different types of sub-projects; requirements for monitoring and supervision of implementing of EIA/EMPs.

Measures to raise awareness and educate potential beneficiaries regarding safe pesticide handling and use of Integrated Pest Management

These measures are targeted at providing a framework for educating farmers regarding pesticides handling and promoting integrated pest management (IPM) and thus, understanding and managing pest problems in the horticultural sector, reducing human and environmental health risks associated with pesticide use, and protecting ecosystem by conserving beneficial agents such as natural enemies of pests and pollinators to increase productivity. The project will hire a national research institution and/or an NGO with necessary expertise in horticultural crop and IPM capabilities as well as with capacity to deliver training for farmers. Based on the research and technical support, needs of the project beneficiaries, the selected company will develop IPM packages for horticultural systems, develop and deliver a training program with the aid of demonstrations, adaptive research trials and experiential learning in the farmer fields. This institution will train the trainers and project specialists, as well as subproject beneficiaries and assist the PMU in designing a monitoring and evaluation program. The proposed activities would also cover field demonstrations with improved pesticides usage as well as IPM technologies. CAPMU will be the coordinator for the implementation of these activities.

Integration of the EMF into project design and implementation

The EMF will be integrated into the Project's Operational Manual and will be used as part of all contracts involving proposed activities and selected subprojects. The Bank is expected to provide a special training to the CAPMU team, so they can promote compliance with the EMF and EMP. The subproject EMPs will be also integrated into the contracts for approved activities, both into specifications and bills of quantities and the Contractors will be required to include the cost in their financial bids and grant proposals.

EA institutional arrangements and capacity

The proposed Project will be implemented by the Ministry of Agriculture and Food Industry (MAFI) and the Ministry of Environment (ME). MAFI has extensive experience in successfully implementing World Bank projects (ex. on-going RISP-II and RISP-IIAF, Avian Influenza projects) while the ME has extensive experience in implementing GEF funded projects (ex. Moldova Agricultural Pollution Control and POPs projects). The Consolidated Agricultural Project Management Unit (CAPMU), which has nearly 10 years of experience in implementing World Bank and GEF projects will serve as a fiduciary agent for both implementation agencies. CAPMU has a highly qualified Environmental Specialist, being responsible for project safeguards issues. Up to now the CAPMU environmental and social performances have been qualified as adequate. The WB team will continue closely monitor EMF implementation, providing, if needed, relevant assistance. The EMF and subprojects EMPs implementation will remain under the direct responsibility of the CAPMU, including responsibilities for supervision and monitoring of construction activities. Compliance with the EMF and EMPs and monitoring of the impact during the construction phase will be undertaken by the CAPMU Environmental Specialist as part of his contract supervisory duties.

EA report disclosure and consultation

Before appraisal the EMF was disclosed and consulted in the country. On January 18, 2011, the CAPMU has disseminated the draft summary EMF to key project stakeholders (Ministry of Environment; Ministry of Agriculture and Food Industry; State Ecological Inspectorate) for review and comments, also posting it in the same day its full English version along with the EMF Summary in Romanian for wide public on CAPMU web site (www.capmu.md). On January 26, 2012, the CAPMU conducted a public briefing and consultation meeting on the EMF document. The meeting concluded that the draft EMF document covers practically all potential impacts and possible mitigation measures. The draft document was revised after the meeting, taking into account outputs from the consultation. The

final version of the EMF (Romanian) and its English version were posted on the CAPMU website and submitted to the World Bank for its disclosure in the Infoshop. EMF will be used by the client during the project implementation.

I. Project Context

1.1 Project objective

The development objective the Project is to enhance the competitiveness of the country's agro-food sector by supporting the modernization of food safety and quality management systems, facilitating market access, and promoting agro-environmental and sustainable land management practices. This objective will be achieved through:

- (i) strengthened country capacity to manage the increasingly complex food safety and quality agendas;
- (ii) improved post-harvesting infrastructure and increased levels of farmer organization; and
- (iii) higher levels of adoption of sustainable land management agronomic practices by farmers and a strengthened soil management response by public authorities.

1.2 Project key results

Outcomes indicators:

- A modern and integrated food quality and safety assurance system in place, with effectively functioning institutions as to be initially demonstrated through:
 - clearly identified institutional competencies,
 - human and technical capacity for risk-based approach to inspection and controls,
 - development, adoption and application of technical regulations and application of voluntary standards for agricultural products;
- Increased domestic sales and/or exports of targeted HVA horticultural products over the life of the Project;
- Increased land area of farms with sustained productivity and reduced vulnerability to climate variability.

1.3 Project description

The Project will focus on three priority enabling areas and their elements:

- Firstly, it will focus on the *modernization of the public system of quality management, food safety, and animal and plant health* which are critically necessary to maintain domestic market share and increase access of food exports to traditional markets in the FSU countries and the EU market.
- Secondly, it will focus on *facilitating investments for modern agronomical technologies and equipment, post-harvesting and processing facilities, enterprise-level food safety compliance, and support for international quality certification.*
- Thirdly, it will focus on *providing services to farmers aimed at dissemination of critical market information and technology, as well as incentives for mainstreaming of agro-environmental practices.*

The three areas above are modeled according to the EU's CAP pillars.

The proposed project would be financed by an International Development Association (IDA) Credit of US\$18.0 million equivalent, a GEF Grant of US\$4.4 million, and a SIDA Grant of approximately US\$4.0 million equivalent. It is envisaged that the implementation of the proposed project will take 5 years. The Project AF would be used for scaling up the highly successful activities under Component 2, including (i) technical assistance for supporting emerging productive partnerships; (ii) providing matching investment grants for formally established producer groups; and (iii) assistance to the Ministry

of Agriculture and Food Industry (MAFI) in promoting consumption and recognition of Moldovan produce. It includes the following components and activities:

Component 1: Food Quality and Safety Management System (US\$7.0 million). This component will support the Government's agenda in engendering critically necessary adjustments in the food quality and safety management system. At present, the country has many institutions with overlapping responsibilities and unclear institutional attributions leading to an exacerbated regulatory load and repetitive inspections, high costs to the Government and the private sector, and opportunities for rent seeking. There are no clearly delineated competencies between health and agricultural authorities, and there is no separation of responsibilities between standard-setting and food safety management. On the regulatory side, further robust actions are necessary to ensure the country's compliance with its international commitments, particularly towards the EU requirements for the negotiations of a Deep and Comprehensive Free Trade Agreement. The continued ubiquitous and informal application of GOST standards is ill-suited to the current day needs and feeds into an inspection, monitoring and surveillance system which becomes irrelevant in the context of trade based on international standards and market principles. The country's inspection services should rather be based on risk assessment tools for determining density and intensity of controls. The Government is currently working on a set of reform measures aimed at eliminating such institutional and regulatory inefficiencies, including the adoption and implementation of a food safety strategy and the Project will extend support for these efforts. Specifically, financing would be provided for

- (i) the implementation of regulatory and institutional reforms (TA), training and capacity building to complement, when necessary, activities supported by the EU Comprehensive Institution Building Program.
- (ii) methodological and analytical work for soil quality and land degradation risk assessment, land quality certification, and standard setting to ensure that best soil and land management practices are integrated in the policy and regulatory framework for food safety and quality assurance. This work will be financed by the GEF and will lead to preparing and adopting a series of legal documents, harmonized with the EU requirements, for creation and functioning of the national land certification system, including the relevant methodology and a special regulation in this regard. For this purpose it will be hired a local Company/NGO which will help the Food Safety Agency prepare and promote through the GoM these documents;
- (iii) investments, training and capacity building for the operation and national and international accreditation of laboratory facilities;
- (iv) support to the rehabilitation of border control points and improvements in customs clearance mechanisms; and
- (v) development of software for disease surveillance and early warning, and integrating software for the food safety system as a whole.

Component 2: Access to Markets (US\$7.5 million). This component will support activities at primary production, post-production, processing and marketing/sales levels aimed at achieving an enhanced degree of commercialization of selected value chains, with a focus on horticulture. The idea will be to assist Moldovan farmers to: (i) transit from current limited and rudimentary supply chains to more complex domestic and/or external systems, i.e. "from markets to supermarkets"; and (ii) transform current quality of supply from largely "bulk commodities" to products with increased value-added. Specific activities will include:

- (a) competitive grant scheme for piloting producer-mobilization interventions and supporting post-harvesting investments aimed at improving quality, consistency and quantity of primary supply (washing, grading, packing, ripening room equipment, cold-storage, minor-processing). The AF would expand eligibility for matching investment grants to bee-keeping and milk-collection to allow for higher integration and aggregation of supply by small producers;
- (b) matching grant facility for farm- or enterprise-based investments for food safety compliance;
- (c) matching grant facility for produce certification;
- (d) facilitation of trade by means of contract farming brokerage, providing access to supermarket shelf space, and support to Government plans for regional wholesale markets; and

- (e) access to knowledge, business advice and market information;
- (f) TA activities aimed at supporting emerging productive partnerships and providing assistance to the MAFI in promoting consumption and recognition of Moldovan produce; and
- (g) piloting and cost-benefit assessment of different land conservation practices for horticultural sector which might include: zero till/strip till, multi-cropping/intercropping, windbreakers/protective soil belts rehabilitation, building slope-separated orchard terraces along the contour, water accumulation/preservation mulching and grass planting, etc. This will allow not only to identify the best for Moldova conditions land conservation practices in the sector but also to estimate all potential benefits and associated costs. Based on the results of this study there will be conducted a series of trainings of producers and field-based government officers on integrated SLM in horticultural sector. For this purpose it will be hired a local company/NGO with experience in such studies and training. The selected company would also produce necessary guiding materials to be distributed among producers groups and other interested parties.

Component 3: Sustainable land management and enhancing land productivity. (US\$6.0 million, including GEF Trust Fund of about \$4.9 million). The component will support mainstreaming of sustainable land management (SLM) as part of the Project goal to increase the competitiveness of the agriculture sector. It will help strengthen human, institutional and technical capacities (both locally and nationally) for the implementation of such activities, and provide direct financial incentives to farmers for the adoption of sustainable resource management and agro-environmental practices. Finally, the component would provide investment support for the rehabilitation of anti-erosion protection strips with the purpose of preventing soil degradation and maintaining and enhancing the productivity of agricultural land. The focus of such support will be on the creation of two mobile machinery squads that will specialize in the rehabilitation of protective strips with appropriate vegetation in the most degraded Southern eco-agro systems of the country. This will allow local forestry enterprises and local councils to further rehabilitate and create of new protection strips.

3.1 Capacity building for Sustainable Land Management (SLM)

(i) *Analytical work on site-specific SLM technologies* for replication and dissemination of associated knowledge and best practice. This work will be done first of all based on local knowledge on the SLM technologies as well as on advanced international experience. The objective of this activity is to provide an evaluation of existing SLM technologies for the agriculture cropping sector in the conditions of the Southern region of the country which would include all potential benefits and associated costs, as well as causes and barriers for their large application. For this purpose it will be hired a specialized research company which would conduct necessary studies and prepare relevant guiding documents.

(ii) *Strengthening the beneficiaries' capacities to monitor and evaluate the expected economic as well as global environmental benefits.* The objective of this activity is to provide relevant assistance and training for participating farmers in conducting baseline analysis as well as in measuring both economic and environmental benefits. For this purpose the company selected under the 3.1.(i) will organize a special training session of mentioned issues and provide as needed assistance to the grant beneficiaries in conducting these activities. The results of the soil monitoring will be annually collected by CAPMU and presented in a special Summary at the end of the project implementation.

(iii) *SLM capacity building and awareness raising activities.* The objective of this activity would be to strengthen national SLM capacities and raise awareness about project's benefits at local and global level, encourage behavioral changes with the purpose to prevent land degradation and promote soil conservation. These will be achieved through: (a) organizing field visits to the SLM demonstrational sites SLM and training for farmers in the Southern part of the country as well as for policy makers at the national level; (b) preparation and dissemination of guiding and lessons learned materials (including manuals, brochures, posters); (c) creating and maintaining of a special SLM web site; and, (d) organizing a national conference on SLM to be held in Chisinau with the high level Governmental support and with the participation of the representatives of local public authorities, farmers association, NGOs and other stakeholders. For implementing these activities CAPMU will hire a NGO with grassroots, with large experience in conducting environmental public awareness activities, seminars and conferences, and experience in preparing and disseminating various environmental materials.

3.2 SLM Financial Support Products

This subcomponent would support two types of incentives to farmers for sustainable land management activities. The approach differentiates based on the character of such activities, i.e. capital intensive vs. non-capital intensive. For capital intensive activities ex. investments in low-till machinery and implements, support from the project would be opened to all crop-growing operations, as the typology of such investments can in fact be more relevant for field-crops than for horticulture. This will also allow the Project to address more efficiently the sustainable land management agenda supported with GEF funding. For non-capital intensive activities, ex. cover crops, incentives provided by the Project would focus only on horticulture to complement the activities of Component 2.

(i) *A Pilot SLM Incentives Program for stimulating the adoption of non-capital intensive sustainable agricultural practices in horticultural sector* such as - cover crops, hedging, polyculture, activities addressing improvement of soil fertility, crop diversification, adoption of mixed cropping systems, water accumulation/preservation, establishment of windbreaks, buffer strips, and filter strips to reduce water or wind erosion, improved management of agricultural waste to improve soil and water conservation, composting, banding and land mulching to improve soils, etc. The Operational Manual (OM) to be prepared by CAPMU before project effectiveness will specify the rules and criteria for Program implementation. It is expected this Program will operate three years, providing annually by about 50 grants for farmers which would have great performance in adoption of SLM practices. The overall Program management will be done by a special Committee chaired by MoE with the participation of representatives from MAFI, research institutes and environmental NGOs, while the financial management - by MAFI's Agricultural Intervention and Paying Agency.

(ii) *A competitive grant scheme for producer groups and individual producers for investments in capital intensive soil conservation* – low-till implements and anti-erosion machinery, irrigation, drainage, rehabilitation of protective anti-erosion strips, implementation of strip cropping and crop rotation schemes; integrated application of fertilizers based on soil testing; contribution to soil improvement through nitrogen fixation, organic matter, and improved soil structure, etc. As in the case of the SLM Incentives Program, the Operational Manual (OM) to be prepared by CAPMU before project effectiveness will specify the rules, procedures and eligibility and selection criteria applicable to the proposed grant scheme. In addition the OM will include provisions related to the management, implementation and supervision of the scheme. It is expected provision of about 200 matching grants to farmers and communities of not less than 50% of the total investment need (US\$3 million beneficiary contribution). The grant scheme management also will be similar with the proposed arrangements for the SLM Incentives Program.

(iii) *An Outreach and Training Campaign*, explaining the objectives and operating principles of the Incentive Program and of Matching grant Program, as well as training on how to draft sub-project proposals in compliance with the OM for the potential project beneficiaries in the Southern part of the country. The campaign would be carried out on three levels - national, rayon and local, and would include public distribution of information about these Programs, as well as guiding materials on preparing the subproject proposals. This activity will be done by the selected NGO for the activity proposed under the subcomponent 3.1 (iii).

3.3 Investment support for and rehabilitation of anti-erosion protection strips. The agricultural practice in the region of the last two centuries show among the best techniques for soil conservation in the steppe and forest steppe zones is to build anti-erosion strips. Such strips composed by tree, bush and grass vegetation might, to a very large extend, contribute to prevention of water and wind soil erosion and to retention of nutrients during torrential rains, provide moisture conservation, improve microclimatic conditions, etc. Furthermore it was proved the agricultural yields on the fields with protective shelterbelts are in average with 15 % higher that on the fields without such belts. Based on that in 50-60th years of the last century in Moldova was created about 30.0 thousand ha of agricultural protective shelterbelts, from which about 12 thousand are in the Southern part of the country. These lands are kept under the local public ownership and were not privatized. Currently most of these shelterbelts are in very poor

condition, being illegally deforested as well as overgrazed. This problem is recognized by national and local public authorities as one of priority environmental as well as agricultural issue and the National Soil Conservation Programs adopted in 2003 and in 2011 specify in particular their rehabilitation as well as creation of new protective strips. In particular in the Southern part of the country it is planned to create about 4000 ha of new such protective strips. The project will support these efforts by:

(i) *Investing in specialized machinery for the creation of two mobile mechanized squads* for the targeted rehabilitation of heavily degraded anti-erosion protective strips in the most vulnerable Southern ecosystems of the country that have highest potential for land degradation and deterioration of agricultural productivity. In particular the project would finance purchasing of specialized agricultural machinery to be supplied to two state forest enterprises, which would be able to efficiently conduct such activities in this part of the country. Currently all forestry enterprises in the country do not have relevant machinery for this purpose.

(ii) *Rehabilitation and creation of new anti-erosion protection strips.* State Forestry Agency “Moldsilva” and its local forestry enterprises on their own resources as well as with the support from the local councils will rehabilitate about 1 thousand ha of most degraded protective anti-erosion strips as well as in planting new ones on the area of about 1 thousand ha during the project implementation. It was agreed these activities will be done taking into account the needs for creation of the ecological network in the region, by connecting the existing various natural habitats and forests through establishment of new strips. This will be in ways that maximize biodiversity values. It was also agreed the rehabilitation/creating of new protective strips will be done by Moldsilva and its forestry enterprises on contract basis, signed with local authorities. These contracts would stipulate both Moldsilva’s responsibilities with regard to activities to be implemented, as well as to building local capacities to maintain such strips and local councils’ responsibilities regarding their protection and management.

Component 4: Project Management (\$1.5 million). This component will provide technical and financial support for project management. The implementation agencies for the proposed Project will be the Ministry of Agriculture and Food Industry (MAFI) and the Ministry of Environment (ME). The Consolidated Agricultural Project Management Unit (CAPMU), which has nearly 10 years of experience in implementing World Bank and GEF Projects will serve as a fiduciary agent for both implementation agencies. This component will finance activities such as: (a) the PMU staff and operations; (b) Monitoring and Evaluation activities; (c) training programs, and (d) audits.

Component 5: Compensatory Sales Support Grants (supported by the 1st AF) is supporting farmers who sold apple, plums and grapes for domestic processing in the fall of 2014, in response to the circumstances surrounding trade restrictions on Moldovan agro-food exports imposed by the Russian Federation in 2013-2014.

II. Baseline Situation

2.1 Overview of the environment¹

The Republic of Moldova is located in the South-Eastern part of Europe at the intersection of Central Europe with Eastern and Southern Europe. The territory of the country is crossed in the middle by the meridian 28°50'E and the parallel 47°N. The Republic of Moldova is a country situated in the Black Sea and Danube River basins, and neighbored by Ukraine and Romania. During the reference period, the population of the Republic of Moldova decreased from 3,581,110 inhabitants on January 01, 2007, down to 3,563,695 inhabitants on January 01, 2011. The territory of the Republic of Moldova is organized in villages, cities, districts, and two autonomous territorial units – the Gagauzia Autonomous Unit and the Administrative Territorial Unit on the left side of the Nistru River.

The majority of the Republic of Moldova's territory is covered by the eastern part of an integral relief unit, the Moldovan Plateau, which extends from the Bucovina Piedmont and the Moldovan Sub-Carpathians in the West to the Nistru River in the East. The South-Western regions of the Podolian Plateau penetrate the left side of the Nistru. Besides the plateau relief, these major units also cover hill and valley reliefs. The climate is temperate-continental.

The Republic of Moldova has modest water reserves. The rivers are part of the Black Sea basin. The small rivers prevail. The biggest rivers are: Nistru, Prut, Raut, Bic, Botna, Ialpug. A few natural lakes are found in the territory of the country.



The majority of them are the lakes from the river meadows of the Prut (Beleu, Rotunda, Foltane) and Nistru (Old Nistru), which are called meadow lakes and river-lagoon lakes, such as the Salas, Cahul, and Cuciurgan lakes. The number of anthropic lakes is large (over 3000). An important role is played by the phreatic water, which is used for the drinking water supply to the majority of the rural population. The deep underground water, with a more constant regime as compared to the phreatic water, is sometimes highly mineralized, having even curative qualities (Cahul, Camenca, Varnita, and others).

The vegetation, animal world, and soils have a zonal distribution on the territory of the country depending on the climate and are divided into levels based on the relief. Two vegetation zones are distinguished in the Republic of Moldova: steppe and forestry steppe. The following animals and birds live in the forests: deer, boar, fox, badger, squirrel,

¹ Source: National Report on the State of the Environment in the Republic of Moldova 2007–2010, Chișinău.

marten, wild cat, oriole, magpie, hoopoe, nightingale, blackbird, and others. Some rodents are characteristic in the steppe regions: field mouse, hamster, rabbit, ground squirrel; as well as some birds: lark, quail, francolin, and sometimes bustard. Some forest animals are found in the steppe as well: fox and badger. The lakes and the ponds shelter wild geese and ducks, storks, swans, herons, and sometimes pelicans in the valley of the Lower Prut. Fish are found in the rivers and lakes: carp, crucian, pike, zander, salmon, bream, and others. The reptiles are represented by lizards, adders, and home snakes. Some rare and endangered animals are protected by the legislation in the area, prohibiting the hunting of such animals. The scientific and natural reserves that aim to protect the vegetation also protect the animals.

The variability of the natural conditions led to heterogeneous and complicated soil coverage formation. The zonal peculiarities of the soils are represented by three types of soil: brown and grey soils, and chernozem. Soil resources are heavily exploited and are subject to different types of degradation, the most dangerous being erosion. The total area of the land found in the Republic of Moldova, as of 01.01.2010, accounted for 3384.6 thousand ha, including 2501.14 thousand ha (73.9%) of agricultural land, out of which 1816.78 thousand ha (72.6%) are arable fields, 300.99 thousand ha (12.0%) are multi-annual plantations, 354.29 thousand ha (14.2%) are grassland and hay fields, and 29.08 thousand ha (1.2%) are fallow land.

According to the Land Cadastre (Cadastrul Funciar al Republicii Moldova), on January 1, 2010, the area of the agricultural land accounted for 2007.6 thousand ha, or 59.3% of the total area of the country.

The land reform has increased the number of participants in land relations, and has generated multiple varieties of ownership and management of land resources. On January 1, 2010, there were 233 agricultural production cooperatives in the country with a total managed area of 142.5 thousand ha, 170 joint stock companies with a total area of 54.3 thousand ha, 2038 limited liability companies with a total area of 657.4 thousand ha, and 399,800 farms with a total area of 553.5 thousand ha.

This parceling of the land fund, in case of reduced value shares, does not allow for efficient use of the land, implementation of crop rotation, use of advanced phyto-technologies, or soil protection. Consolidation of the agricultural land is necessary to organize anti-erosion protection, and to observe a conservative crop rotation.

The forestry resources of the Republic of Moldova are important strategic natural resources. In 2010 the area of forestry accounted for about 3% of the land fund, and together with the fields meant for environmental protection – about 13.3% of the country's area, a value close to that which ensures the ecological balance maintenance – 15%.

The area of the land covered by forests accounts for 374.5 thousand ha, or 11.4% of the land area of the country. The composition of the Moldovan forests is represented mainly by lamellar species (97.8%), including cvercinee – 39.6%, locust – 36.1%, ash – 4.6%, hornbeam – 2.6%, poplar – 1.6% etc., and mastic representing only 2.2%.

To keep the biota resources at a level which would be favorable for the ecologic balance in the ecosystems populated by these organisms, the forest-covered areas, the steppe sectors, meadow and swamp areas, and the share of the state protected natural areas all need to increase from 4.65% up to 5.5% of the country's territory, which is still lower than the average from Central and Eastern Europe (9%), and Western Europe (15%) (Europe's environment: The Third Assessment, 2003).

The analysis of the air annual average temperature during 2007–2010, as compared to the multiannual average, shows that this period is characterized by significant thermal anomalies, especially in 2007, when it registered 2.5°C in the center of the country. Thus, 2007 is considered to be the hottest year in the last 120 years, and the average annual air temperature was 10.1°C in the north and 12.3°C in the south of the Republic.

The pluviometric anomalies compared to the multiannual average for a period of one century in the central part of the country (1891-2010) show a level from -105-118 mm in 2007, 2009 up to 210 mm in 2010.

2008 ranks in third place (after 2007 and 2009) in the series of the hottest years from the entire period of instrumental observations. As compared to 2007, the air annual average temperature in 2008 was 0.4–0.8°C lower, and the volume of precipitation on a large part of the territory exceeded the value of precipitations registered during the previous year by 50–340 mm. Just like other reference years, 2010 was comparatively hot as well, being ranked in ninth place in the series of the hottest years from the entire period of instrumental observations.

In 2007 and 2009 the water discharge of the Nistru and Prut Rivers, the medium rivers (Raut), and the small rivers was below the multiannual average values (80–95%, and respectively, about 50% of the average values). The long-term torrential rains from the mountain region of the Nistru and Prut basins generated exceptionally high floods on these rivers, provoking floods on the territory of the country by the end of July and beginning of August 2008, and end of June to the first half of July 2010. The high flood wave in the Prut basin reached the border of the Republic of Moldova on July 2, 2010, with a water flow of 1930 m³/s, while the main high flood wave was created during the period of June 22 – July 13, 2010, with a total volume of over 1372 billion m³ (Sirauti hydrometric station).

Human health conditions are determined by four major categories of factors: lifestyle (a share of 50–55%), environmental conditions (20–25%), genetic factors (15–20%) and activity of medical-sanitary institutions (8–10%). The environment factors affecting human health may be of chemical, physical, biological, and other natures. During 2000–2008, the general mortality rate registered an increasing trend up to 2005 and a decreasing trend until 2008. The mortality distribution is not uniform throughout the territory of the country. Over the last few years, the lowest mortality indicators were registered in Chisinau and Balti, and the highest ones were in the Donduseni, Soldanesti, and Briceni districts.

Due to the intensive processes of urbanization, technologization, economic instability and other factors, some more specific diseases appeared and developed: the so-called civilization diseases. This category includes a number of pathologies at a global level: diseases of the circulatory system, malignant tumors, psychological, nutritive, endocrine, and metabolic diseases, as well as chronic diseases of the respiratory, digestive, and dental systems, etc.

The improvement of the natural and anthropoid ecosystems, optimization of relations with humans, as well as increasing population awareness, may contribute to a significant decrease in mortality, improvements in human health, an increase in work capacities, and prolonged life expectancy.

Southern eco-systems specific

The Southern zone of the country incorporates the Bugeac Plain in the South and the Tigech Highland in the south-western region of Moldova. The area is undulating with hilly terrain interspersed with plains and large valleys and hence the vegetation ranges from step to meadow ecosystems. Soil erosion is also a serious issue in this area. The two major soils subtypes occupying this zone are typical and calcareous (carbonate) chernozems. These soils are highly fertile with a high waterholding capacity, although they are not as fertile as the chernozems in the northern zone. Annual mean temperature ranges from 8.3-11.5°C, with the area receiving between 3200-3400 day degrees during the crop vegetative period. The length of the frost free period ranges between 181-190 days. Annual mean precipitation for the majority of the zone ranges from 450-550 mm, with between 235-275 mm falling during the crop vegetative period. Current climatic hazards, include flooding from May-August, spring frost between April 10 and May 10, summer hail events and frequent droughts throughout the growing period from spring through to fall. This zone is more marginal for production due to higher temperatures and lower rainfall. Tobacco and grapes are grown widely in this area, as well as cereal crops, like maize and wheat. Due to the more marginal agricultural production environment, this zone has higher rates of rural poverty compared with other zones and increased risk of drought, floods, heat waves, water scarcity and other extreme hazardous natural events.

2.2 Impact of the agriculture on the environment²

One of the most important peculiarities of agriculture is its almost uniform distribution across the entire territory of the country. This also determines the intensity of the agricultural influence on the environment. According to official statistics, the level of chemicals used in agriculture has decreased significantly during the transition period.

Based on the obvious demand for ecological agro-food products at the international level, and starting with the measures undertaken, a special trend is noted enlarging the area occupied by ecological agriculture and extending the number of producers involved (National Report..., 2011).

Taking into account the opportunity presented by ecological agriculture for the Republic of Moldova and the high interest by farmers, some calculations were made for the likely development of this type of activity, and the volume of ecologically-certified vegetable products is presented in Table 1. below.

Volume of ecologically-certified vegetal products, tons

Indicators	Years		
	2005	2006	2010
Total volume, including:	30500	35000	74575
Oil crops	2890	4000	6150
Bee products	10	15	75
Fruit (cherries, sour cherries, apricots)	200	300	750
Forest fruit, mushrooms	1500	1600	7450
Other crops	25900	29085	60150

Source: S. Florea, L. Nicul, V. Crismaru etc. Agriculture and food industry // National Report on the State of the Environment in the Republic of Moldova 2007–2010, Chisinau, p. 205.

Of utmost importance for ecological agriculture is to maintain a steady pace of development in ecological agriculture, and this pace is kept in the Republic of Moldova, although it is a rather slow one. The information on projections regarding the number of producers involved in ecological agriculture is presented in Figure above.

Thus, to improve the situation in the environment-agriculture arena, integration of environmental provisions into agricultural policy is necessary to reduce the risks of environmental degradation and to improve the sustainability of the agricultural ecosystems. In this respect, it is important to promote production, processing, and efficient development of ecological agro-food products to increase the revenues and the well-being of the farmers (promotion of land consolidation, creation of a market for ecological agro-food products, provision of irrigation systems, etc.). Also required are the organization of training and awareness programs for farmers in the ecological area; development of mechanisms for agricultural waste management, especially waste from livestock activity; and continuation of activities related to POPs' (persistent organic pollutants) stock clearing.

² *Source: National Report on the State of the Environment in the Republic of Moldova 2007–2010, Chisinau.*

III. Environmental Assessment Policies, Rules and Procedures

3.1 National EA system

In Moldova, the Environmental Impact Assessment procedure was established by the Law on Ecological Expertise and Environmental Impact Assessment in 1996. The EIA procedures are applicable to complex and potentially dangerous (to the environment) projects which could lead to significant impacts and aim to prevent and mitigate impacts even on the projects' design stage. The EIA should be conducted at an early stage of the project in case new construction, upgrading, reconstruction, modernization, production profile changes, conservation or liquidation of existing enterprises or new development planning is expected to be implemented.

Project environmental screening

Following to the national environmental approval practices, all projects may be conventionally divided into three main categories:

First category (A) – projects which may have significant impacts on the environment. They are specified in a special Annex to the law on SEE and EIA and require a full Environmental Impact Assessment (EIA) before designing and can be further developed (detailed engineering design) with a positive approval of the EIA findings by the State Ecological Expertise (SEE) – this conventional category mainly corresponds to WB Category A projects as well as partly, to Category B projects, e.g., electrical transmission, nature protection projects, some watershed projects (e.g., protection strips along river and water bodies), some rural water supply projects (for grouped water intakes with 1 thousand m³/day and more for underground water intake and 10 thousand m³ per day for surface water intake), etc. As mentioned above such projects will be not supported under the project.

Second category (B) – projects which not listed in the Annex 1 to the Law on SEE and EIA which may have less significant impact on environment. They require ecological substantiation of project activities. This might be presented in a special Environmental Chapter which has to contain information on potentially affected environment as well as outline main potential environmental impacts and mitigation measures. This Chapter has to be included in the project design documentation and respectively, to be passed through the State Ecological Expertise before project implementation – this conventional Category mainly corresponds to WB Category B projects. The Environmental Chapter in the documentation for such type of projects, to great extent, corresponds to “some environmental assessment/ environmental analysis” presumed for the Category B projects.

Third category (C) – the rest of projects which are expected to have minor impacts on environment and therefore do not need to be passed through the formal procedures of EIA and SEE. This conventional Category mainly corresponds to WB Category C projects.

According to the Law on Ecological Expertise and Environmental Impact Assessment (1996), project documentation for the objects that may adversely affect environment is a subject of a *State Ecological Expertise* to determine whether documentation complies with environmental protection requirements. The principal objective of the SEE is to check whether all environmental standards/ principles are adhered, and the environmental protection measures are addressed. Ecological Expertise is conducted prior to making decision on planned economic activity and is compulsory for project and planning documentation with regard to planned economic objects and activities that affect or may affect environmental conditions and/or envisage use of natural resources, regardless destination, placement, type of ownership and subordination of these objects, the amount of capital investments, source of funding and method of execution of construction works.

Decision on ecological expertise can be considered as basis for further approval or refusal project documentation. In case the objects may severely affect the environment, their planning documentation is a subject of EIA to be conducted prior to Ecological Expertise. The purpose of the EIA is to identify impacts effects that objects/ activities may have on the environment and to provide solutions to mitigate any significant effects that could occur as a result of the project implementation.

The list of objects, buildings and installations which has to be presented to the relevant sub-divisions of the Ministry of Environment for conducting of the State Ecological Expertise is presented the Table 2 below.

Table 2. List of objects, buildings, installations documentation on which has to be presented to the relevant sub-divisions of the Ministry of Environment

№	Title of branch and object	Ministerial divisions		
		Division for Pollution Reduction	Division of the Ecological Expertise and Environmental Authorisation of the SEI	Territorial Ecological Agencies and Inspections of the SEI
A	OBJECTS OF THE SOCIO-CULTURAL AND COMMUNAL DESTINATION			+
B	OBJECTS OF THE INDUSTRIAL, COMMUNAL, TRANSPORTATION, ENERGY, COMMUNICATION, WAREHOUSE AND OTHER			
I	Industrial destination:			
1	Enterprises of metallurgical, chemical, engineering, electro-technical industries		+	
2	Enterprises of forestry, woodworking, light, food, meet and dairy and construction materials industries		+	
3	Agricultural objects		+	
a	Cattle and pig farms, poultries		+	
b	Cattle and pig farms		+	
c	processing: - in towns, cities and district centers - in rural localities		+	+
d	Oil and flour mills in rural areas			+
4	Irrigation and other water management objects		+	
a	Projects, construction working projects, construction, re-construction, enlargement of irrigation systems, hydro-technical installations, etc.		+	
b	Projects: fish protection installation, sedimentation and flood prevention ponds as well as projects to prevent dangerous geological processes		+	
5	Open pits and mines for extraction of mineral resources		+	
6	Exploration and exploitation of gas- and oilfields		+	
7	Documentation on other objects not listed in items A & B		+	
II	Objects of communal destination			
1	Water intakes and waste water treatment plants, sewage		+	
2	Water supply systems; industrial, municipal and storm sewage, heating, sanitary treatment, transport: - on the national level - towns, cities, district centers, rural localities	+	+	
3	Municipal solid waste incineration plants, polygons on treatment and disposal of industrial, municipal and toxic wastes: - for municipalities Chisinau, Balti, Tiraspol, Bender - for other localities.	+	+	
III	Warehouses of any destination, objects of communication, transportation service, ports, tunnels		+	
IV	Energy objects			
1	Power station 330/110/35 kV, district, industrial and heating houses		+	
2	Other energy enterprises, objects and installations			+
C	Linear objects and facilities			
1	Transport, energy, communication			
1	River bridges, crossroads in urban localities, international roads		+	
2	Roads of national and inter-district significance, etc.		+	
3	Roads in rural localities and between them		+	
4	Oil filling stations (regardless their location)		+	
5	Sites for open parking and garages for cars: - with technical service - without technical services		+	+
6	High-voltage power lines:			
a	110 kV and more	+		
6	35 kV and less			+

№	Title of branch and object	Ministerial divisions		
		Division for Pollution Reduction	Division of the Ecological Expertise and Environmental Authorisation of the SEI	Territorial Ecological Agencies and Inspections of the SEI
7	Heating networks:			
a	From or municipal and district heating houses		+	
b	From local heating houses		+	
8	Communication lines on pylons and underground:			
a	Main (magisterial)		+	
b	Between localities and inside them			+
9	Gas pipelines:			
a	Main of high and medium pressure, international and inter-district, gas distribution stations		+	
b	Gas pipelines from gas distribution points to customers in rural and urban areas		+	
10	Water supply and waste water collection systems in bounds of localities (without installations)			+
11	Oil pipelines		+	
D	DOCUMENTATION ON TOWN BOUILDING AND URBAN DEVELOPMENT			
V	Schemes of a complex use and protection of water resources and river basins	+		
VII	Drafts of the environmental laws and other regulatory documants, including standards as well as those regarding environmental conitions and/ or regulating potentially hazardous for environment activities, use of natural resources and enviornmental protection	+		
VIII	Drafts of international Conventions and concession agreements presuming use of natural resources	+		
IX	Projects of the national and special importance as well as ones developing by foreign economic agents	+		
X	Documentation on Environmental Impact Assessment	+		
XI	Other documts and materials not listed in items A, B, C & D		+	

Remarks:

1. Volume, content and composition of the project documentation on construction, re-construction, technical modernisation, re-profiling of enterprise should correspond to requirements of normative, metodical, instruction and directive documents and environmental legislation in force.
2. Ecological Expertise of the projects, materials and documents related to development and adoption of new technologies, equipment and matrials, including foreign ones, is being implemented by the Institute of Ecology at the initial stage of the elaboraion of project documentation.

According to the Law on SEE and EIA, not later than in 10 days after making a decision (positive or negative) on Environment Impact Assessment documentation, the central environmental authority through the mass media, in an obligatory order inform the public about results of the ecological expertise on Environmental Impact Assessment.

Public consultations for the projects liable to EIA (those listed in the Annex to the Law on Ecological Expertise and Environmental Impact Assessment) are compulsory at the initial stage of the project before conducting EIA and on a later stage, when the Statement on Environmental Impact Assessment is disclosed for public prior to complying of the final (corrected) documentation on Environmental Impact Assessment. It should be mentioned that in relation to the projects liable to EIA, national public consultation procedure complies with the Bank's one. In relation to projects which are not listed in the Law, public consultation is not compulsory.

Besides, in addition to compulsory State Ecological Expertise, so called "ministerial" and/ or "public" expertise can be voluntarily applied.

Based on the results of the State Ecological Expertise of the Environmental Impact Assessment documentation and consideration of results of public consultations, the opinion letter is being complied. A positive opinion letter/ decision of SEE on the Environmental Impact Assessment documentation serves as official basis to proceed with further project's design.

Obviously, the EIA procedure is a complex one and consists of subsequent steps of documentation submission and approval. The national EIA procedure is illustrated in the Figure below.

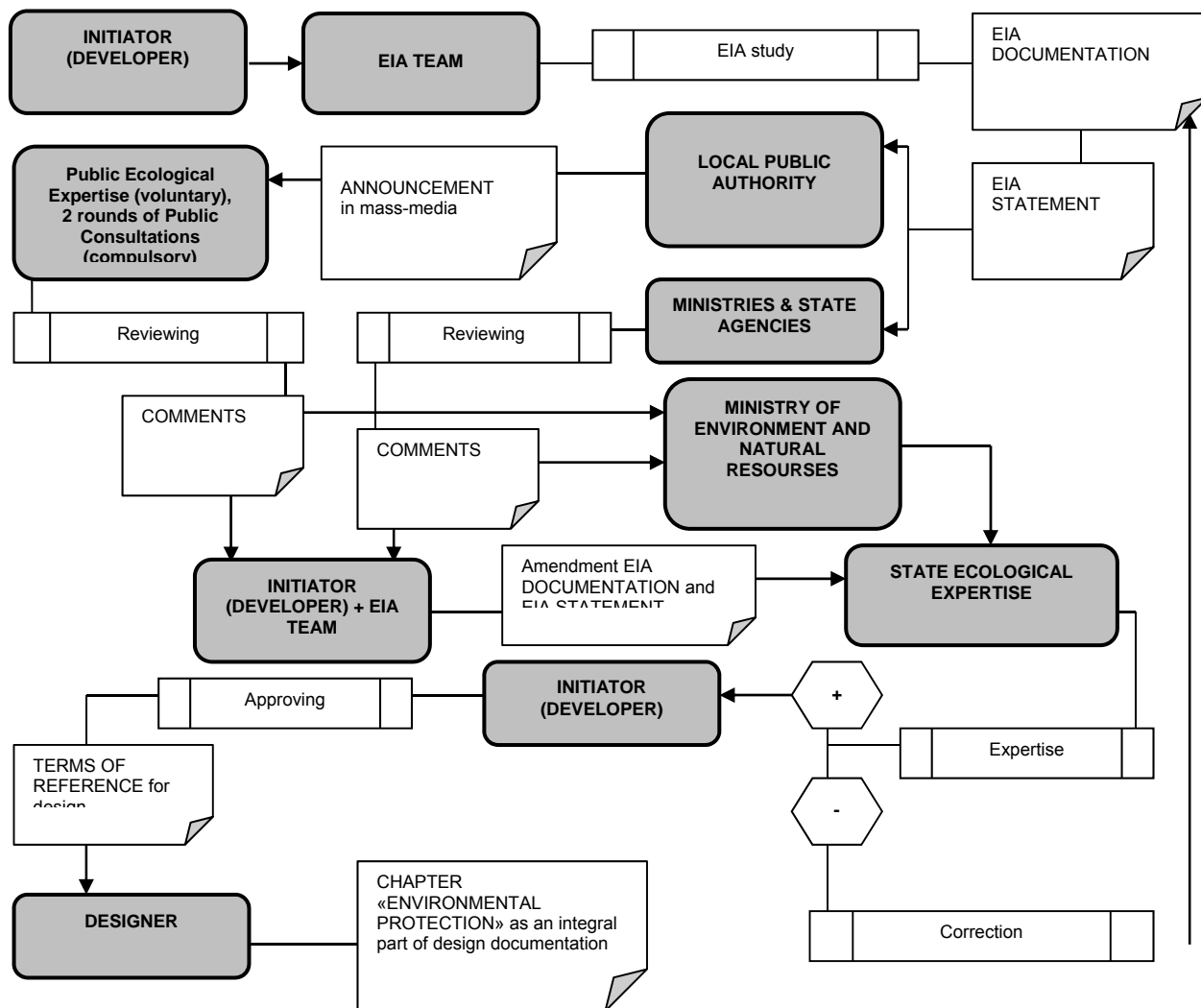


Figure. The national EIA procedure
(design by R. Melian, Acvaproject Design Institute, Moldova)

The developer (initiator of the planned activity) is responsible for organization of EIA study, conducting of consultations, presentation of EIA documentation and SEIA to the SEE, including its financing.

Projects that require SEE of design documentation

All projects, which may have negative impact to environment, but not listed in Regulation on Environmental Impact Assessment, will require applying of SEE procedures before implementation. The SEE procedures are usually applied after feasibility and engineering design stages. The design documentation for these projects usually linked with construction, reconstruction and enlargement is being developed in conformity with a technical documentation.

Sections “Environment Protection” and “Environment Protection during Construction” in the project documentation should be developed only by specialists in the fields. Technical solutions, reflected in the submitted for SEE technical documentation have to be sufficiently substantiated in relation to mitigation of impact on environment.

Projects that not require EIA and SEE of the design documentation

Projects that do not meet criteria for the full EIA study and/or SEE of design documentation normally relate to activities when no (re)construction takes place, e.g., purchase of machinery for crop cultivation, small-scale horticulture and viticulture, beekeeping, agro-mechanization services, woodworking, infrastructure maintenance projects, etc.

Procedure for environmental approval in case the full process of the State Ecological Expertise is not necessary

In case the full process of Environmental Impact Assessment including Ecological Expertise stipulated by the Law on Ecological Expertise and Environment Impact Assessment and the Instruction on the Order of Organization and Conducting of the State Ecological Expertise is not required the next steps are to be followed:

Step 1. Sub-project applicant presents a project description (location and intention) to relevant local (raional or municipal) authority where it is going to be located to get its approval to proceed.

Note: It relates to cases when there should be a new business activity to be registered or authorized, or new building, or/and new technological device or process, or extension of buildings/devices, or new placing of activity, or water use in technology.

Step 2. Applicant submits the sub-project business plan to the district authority (often, in order to review the business plan, a commission is being established, and one member of the commission should be a representative of ecological authority) to receive its approval. The commission or a chief-architect, or environmental inspector determines whether an EA is required. If the commission disagree approval the plan, the applicant may have to provide additional information and/or the commission may request input from other interested parties.

Notes: a) If it is confirmed that no EA is required (as per list provided in the Instruction on the Order of Organization and Implementation of the State Ecological Expertise) the applicant can proceed with the implementation of sub-project in case he/she received all other needed approval and permits.

b) If the commission requires some EA, then the applicant shall hire an authorized body to conduct the EA on his/her behalf.

c) After the draft EA is ready the project beneficiary organizes its disclosure and public consultation.

Step 3. Once the EA is conducted, the applicant submits it the central or local (as per Instruction's guidance) environmental authorities for EA approval. The EA is submitted to the Division of Ecological Expertise and Environmental Authorizations for its review and comments. Comments may be followed by the i) approval, ii) approval under certain condition/ conditions to be met, or iii) outright rejection of EA, and hence, the project.

Step 4. Upon approval from environmental authority and obtaining permits issued by all concern institutions (the officers of entities which applicant visit to get an approval determine what kind of special permits on maximum admissible discharges of wastewater, maximum admissible emissions to air - both are calculated for each particular case; water use; construction certificate as well as license on other than water natural resources use should be obtained from specialized institutions), the sub-project implementation is allowed to commence.

Note: The institutions issued relevant permits might be: State Ecological Inspectorate (wastewater discharge volumes, pollutants in effluent and emissions to air), State Geological Agency (AGeoM) (use of underground water resources), water management Agency "Apele Moldovei" (surface water use), local public authorities/ mayoralties (construction certificates), etc.

3.2 World Bank EA rules and procedures

Main provisions of the EA

Per the WB safeguards policies Environmental Assessment (EA) is a process of the pre-implementation stage which evaluates a project's potential environmental risks and impacts in its area of influence; examines project alternatives; identifies ways of improving project selection, sitting, 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 is mandatory for projects, which may potentially have negative impacts. Furthermore, a well-organized public participation is mandatory in all the stages of the process. Depending on the project, a range of instruments can be used to satisfy the Bank's EA requirements: Strategic Environmental Assessment (SEA), Environmental Impact Assessment (EIA), regional or sectorial EA, environmental audit, hazard or risk assessment and/or Environmental Management Plan (EMP).

In the case when the projects activities to be financed are not identified at the design stage, the Bank applies an Environmental Management Framework (EMF) which should: provide details on procedures, criteria and responsibilities for subproject screening, preparing, implementing and monitoring of subproject specific EIAs. The EMF should also include Environmental Guidelines for proposed subprojects, containing an assessment of potential impacts and generic mitigation measures to be undertaken for identified subprojects in all stages – from identification and selection, through the design and implementation phase, to the monitoring and evaluation of results. EA applies one or more of these instruments, or elements of them, as appropriate. When the project is likely to have sectorial or regional impacts, EA is required to cover sensitive sectors or regions.

Environmental screening

The Bank undertakes environmental screening of each proposed project to determine the appropriate extent and type of EA. The Bank classifies the proposed project into one of four categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts. The Bank's OP/BP/GP 4.01 provides for the following environmental categories of projects:

Category A: A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. EA for a Category A project requires a full EIA Assessment. *Within this project such subprojects are not expected and will be not financed.*

Category B: A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas - including wetlands, forests, grasslands, and other natural habitats – are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigatory measures can be designed more readily than for Category A projects. The EA for a Category B projects examines the project's potential negative and positive environmental impacts and recommends specific measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. The findings and results of Category B EA are described in the project documentation (Project Appraisal Document and Project Information Document).

Category C: A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.

FI Category: Finally, there is a special case of Category FI, when investment of Bank funds is made through a financial intermediary (FI), of subprojects that may result in adverse environmental impacts.

Based on the results of the study the following WB OPs will be triggered by the projects (see table 3 below):

Table 3. World Bank's Safeguard Policies and their relevance to the project

Safeguard Policies	Relevance
Environmental Assessment (OP/BP 4.01) This Policy aims to ensure that projects proposed for Bank financing are environmentally and socially sound and sustainable; to inform decision makers of the nature of environmental and social risks; to increase transparency and participation of stakeholders in	Yes (refer to the description below)

<i>Safeguard Policies</i>	<i>Relevance</i>
the decision-making process	
<i>Natural Habitats (OP/BP 4.04)</i> This Policy aims to safeguard natural habitats and their biodiversity; avoid significant conversion or degradation of critical natural habitats, and to ensure sustainability of services and products which natural habitats provide to human society	No – The borrower confirmed that activities involving conversion of areas which are important wildlife habitat would not be eligible for financing.
<i>Forestry (OP/BP 4.36)</i> This Policy is to ensure that forests are managed in a sustainable manner; significant areas of forest are not encroached upon; the rights of communities to use their traditional forest areas in a sustainable manner are not compromised	No – as all project activities will be implemented on existing agricultural lands.
<i>Pest Management (OP 4.09).</i> This policy is to ensure pest management activities follow an Integrated Pest Management (IPM) approach, to minimize environmental and health hazards due to pesticide use, and to contribute to developing national capacity to implement IPM, and to regulate and monitor the distribution and use of pesticides	Yes. OP 4.09 would be triggered due to potential for increased use of pesticides. No separate Pest Management Plan is needed, but the Environmental Management Framework should include measures to raise awareness and educate potential beneficiaries regarding safe pesticide handling and use of Integrated Pest/Farm Management to enhance sustainability and reduce human and environmental exposure to dangerous products.
<i>Physical Cultural Resources (OP/BP 4.11)</i> This policy is to ensure that: Physical Cultural Resources (PCR) are identified and protected in World Bank financed projects; national laws governing the protection of physical cultural property are complied with; PCR includes archaeological and historical sites, historic urban areas, sacred sites, graveyards, burial sites, unique natural values; implemented as an element of the Environmental Assessment	No. It is expected there will be no physical cultural resources in the vicinity of the project sites
<i>Indigenous Peoples (OP/BP 4.10)</i> IP – distinct, vulnerable, social and cultural group attached to geographically distinct habitats or historical territories, with separate culture than the project area, and usually different language. The Policy aims to foster full respect for human rights, economies, and cultures of IP, and to avoid adverse effects on IP during the project development.	No. This Policy is not applicable for Moldova
<i>Involuntary Resettlement (OP/BP 4.12)</i> This policy aims to minimize displacement; treat resettlement as a development program; provide affected people with opportunities for participation; assist displaced persons in their efforts to improve their incomes and standards of living, or at least to restore them; assist displaced people regardless of legality of tenure; pay compensation for affected assets at replacement cost; the OP Annexes include descriptions of Resettlement Plans and Resettlement Policy Frameworks	No. The borrower confirmed the project will not support any activities and sub-projects that might result in resettlement. Any pasture improvement will not entail any form of involuntary pasture closure or diminishment of access. Similarly, any infrastructure constructed under the project will be: (a) located on land already owned by participants, or will be bought or leased on a willing buyer-willing seller basis, and (b) will be screened to ensure that it is free of legal encumbrance, or informal use or occupation by others who lack formal title.
<i>Safety of Dams (OP/BP 4.37)</i> This Policy is to ensure due consideration is given to the safety of dams in projects involving construction of new dams, or that may be affected by the safety or performance of an existing dam or dams under construction; important considerations are dam height & reservoir capacity	No. The project will not support any activities which might have impact on dam safety.
<i>Projects on International Waterways (OP/BP 7.50)</i> The Policy aims to ensure that projects will neither affect the efficient utilization and protection of international waterways, nor adversely affect relations between the Bank and its Borrowers and between riparian states	No. The project activities will not results in adversely change the quality or quantity of water flows to the other riparians.
<i>Disputed Areas (OP/BP 7.60)</i> The Bank may support a project in a disputed area if governments concerned agree that, pending the settlement of the dispute, the project proposed for one country should go forward without prejudice to the claims of the other country	No project activities in a disputed areas.
<i>Disclosure Policy (BP 17.50)</i> supports decision making by the borrower and Bank by allowing the public access to information on environmental and social aspects of projects and has specific requirements for disclosure	Yes. The EMF will be disclosed and consulted in the country before project appraisal and will be also disclosed in the WB Infoshop.

IV. Potential Environmental Impacts

4.1 Potential environmental impacts and project environmental category

As mentioned above the project will a series of activities which might cause some adverse environmental impacts that would fall under the *Category B* subprojects in accordance with the Bank OP/BP 4.01 (small scale agro-industries; small scale rehabilitation, maintenance, and upgrading of various premises, storages; animal production; plantation of new orchards and/or vineyards, etc.). For such activities the Bank requires a simple and/or a partial Environmental Assessment and/or preparing an Environmental Management Plan. It is also expected that many of supported subprojects will not have environmental impacts and will fall under the *Category C* in accordance with OP/BP 4.01 (especially those related to purchasing of new agricultural machinery). Furthermore, it is expected the selected subprojects will not be located in protected areas, critical habitats or culturally or socially sensitive areas, this will be ensured during the subprojects screening and EA.

The potential adverse environmental impacts of proposed types of subprojects might be summarized as follows:

- (i) *agricultural production*: soil erosion, loss of soil productive capacity, soil compaction, soil pollution, surface and underground water pollution, loss of biodiversity;
- (ii) *agro-processing*: contribution to surface water pollution, wastes generation, odor;
- (iii) *small scale construction and/or rehabilitation of the existing premises*: soil and air pollution; acoustic, construction wastes, and potential asbestos issues, etc.

These potential impacts are summarized in the Table 4 below.

Table 4. Potential negative impacts generated by sectorial and construction activities

Enterprise Category	Potential Impacts	Level of Significance
Agro-processing	<ul style="list-style-type: none"> • water and energy consumption • water pollution • waste disposal • air quality • human health and safety 	High High High Moderate Moderate
Agriculture	<ul style="list-style-type: none"> • soil degradation (soil erosion, loss of soil organic content, compaction, etc.) • soil and water pollution • loss of agricultural biodiversity (e.g., due to cattle grazing) • human health and safety 	High High High Moderate
Construction (construction phase)	<ul style="list-style-type: none"> • soil erosion • soil pollution • land degradation/ aesthetics • air pollution • acoustic • water pollution 	Moderate High High Moderate High Moderate

All these impacts are expected to be easily mitigated through good projects design and implementation practices (see Annexes 7-8).

4.2 Potential social impacts

The activities to be implemented under the project will generate a great number of both direct and indirect positive impacts. *Direct positive impacts* will be generated by increased production, products and goods which would result in creation of new jobs and respectively, more employment and increased

income. *Indirect positive impacts* will relate to overall improving of business environment, increased exports and secured enterprises domestic market position, introduction of advanced technologies and techniques, creating new opportunities for access to foreign markets, enhancement competitiveness of domestic production and products, contribution to poverty reduction and food safety, and improvement of country's socio-economic conditions.

4.3 Cumulative impacts

Cumulative impacts are not likely to be an issue attention will have to be given to activities within the same watershed and within the same region due to their characteristic common impacts resulting from soil processing, plant protection, solid waste disposals, effluent discharges, air emissions and others.

The impacts of subprojects to be financed under the MACP are expected to be prevented and mitigated through appropriate project design and good operational practices complying with the World Bank's and national environmental protection requirements.

Cumulative impacts are not likely to be an issue as the project distributes its loan activities more or less evenly throughout the country.

V. Environmental Guidelines

The Environmental Guidelines (EG) section of the EMF would serve as a guiding document for conducting subprojects EA and details the following:

- Screening procedure for identifying subprojects which do not require any special EA as well as Category B subprojects for which it is necessary to conduct an EIA and prepare a simple EMP;
- Generic mitigation measures for potential environmental impacts of the project activities and subprojects;
- Description of the EMP Checklist to be applied for subprojects and activities related to small scale (re)construction activities;
- Description of the EMP format for Category B subprojects; and
- Requirements for conducting supervision, monitoring and reporting activities.

5.1 Subprojects environmental screening

The screening should be done at the initial stage of the subprojects selection. Based on the description of the proposed activities and on their potential environmental impacts, the CAPMU will decide which project category should be attributed. For that purpose it should be used a special Environmental Screening Checklists (see Annexes 1-7). These documents will be attached to all submitted subprojects (Table 5).

Table 5. Environmental Assessment Procedure Documents by project categories

Pre-parer	EA Document	Subproject activities and categories					
		New facilities		Upgrading existing facilities		Construction/re-construction	
		C	B	C	B	C	B
B	Environmental Screening Checklist Part 1 (Annex 1)	X	X			X	X
FI	Environmental Screening Checklist Part 2 (Annex 1)	X	X			X	X
PIU	Environmental Screening Checklist Part 3 (Annex 1)	X	X			X	X
FI	Field Inspection Checklist (Annex 2)		X				X
B	Environmental Impact Assessment Study (Annex 3)		X				X
B	Environmental Screening Checklist Part 1 (Annex 4)			X	X		
FI	Environmental Screening Checklist Part 2 (Annex 4)			X	X		
PIU	Environmental Screening Checklist Part 3 (Annex 4)			X	X		
B	Environmental Audit Protocol (Annex 5)				X		
B	Environmental Management Plan (Annex 6)		X		X		X
B	EMP Checklist for small constructions (Annex 7)					X	X

Note: B – sub-borrower; FI – financial institution; PIU – project implementation unit.

5.2 Generic mitigation measures for proposed types of activities and subprojects

The full set of preventive and mitigatory measures for activities in Agricultural & Agro-processing sectors developed by the World Bank Group in 2007³ in its Environmental, Health, and Safety Guidelines, as well as outlined in the Best Available Techniques to the EU Integrated Pollution Prevention Control Directive⁴, documents which could be consulted while conducting the EIA studies and preparing the Environmental Management Plans (see Annexes 6-7).

³ See: <http://www.ifc.org/ifcext/sustainability.nsf/Content/EnvironmentalGuidelines>

⁴ See: http://europa.eu/legislation_summaries/environment/waste_management/128045_en.htm

5.3 Environmental Management Plan (EMP)

A project's environmental management plan consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels (see Annex 6). An EMP is a key element of an EA report for all Category B subprojects.

EMP Checklists

In the case when the project would involve typical small scale (re)construction activities it is proposed to be used a generic EMP checklist-type format ("EMP Checklist"), developed by the World Bank to provide "pragmatic good practice" and designed to be user friendly and compatible with safeguard requirements (see it presented in the Annex 7). The checklist-type format attempts to cover typical preventive and mitigation approaches to common civil works contracts with localized impacts. It is anticipated that this format provides the key elements of an Environmental Management Plan to meet Environmental Assessment requirements of the World Bank (under OP/BP/GP 4.01). Such EMPs will be applied for rehabilitation of analytical laboratory facilities as well as the border cross points.

The EMP Checklist (see Annex 7) has four sections:

- *Part 1* constitutes a descriptive part ("site passport") that describes the project specifics in terms of physical location, the project description and list of permitting or notification procedures with reference to relevant regulations. Attachments for additional information can be supplemented if needed;
- *Part 2* includes safeguards information;
- *Part 3* – includes the environmental and social screening and mitigation measures in a simple Yes/No EMS format; and
- *Part 4* is a site-specific monitoring plan for activities carried out during the rehabilitation activities.

EMP disclosure and consultation

In case of Category B subprojects which involve new constructions, pasture improvement activities and/or alternative energy subprojects it is necessary to disclose the EIA/EMP document and to conduct public consultations with key stakeholders, including local population. The purpose of the public consultation is to inform locally affected groups about the sub-project and offer them the opportunity to voice their views of any adverse environmental issues they feel may develop during subproject implementation. Any legitimate issue raised at the public consultation should be included in the EMP. In this way, "the voice of the people" will be heard and reflected in the sub-project implementation. In the case of reconstruction activities, although no need for a special public hearing the project beneficiary should provide information to all interested parties about the construction by installing a notice plate placed at the rehabilitation. Additionally all subproject's specific information will be also publicly available on-line on the CAPMU website. Documentation of the public consultation outcome is critical and is included in the EMP. Annex 6 describes information requirements to be included in the documentation of the public consultation.

5.4 Subprojects monitoring

Environmental monitoring during project implementation provides information about key environmental aspects of the project activities, particularly on the environmental impacts and effectiveness of mitigation measures. Such information enables the client and the Bank to evaluate the success of mitigation as part of project supervision, and allows corrective action to be taken when needed. Therefore, the EMF identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the EA report and the mitigation measures described in the EMF.

Specifically, the monitoring section of the subprojects EMP provides (see Annex 6): (a) details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations,

frequency of measurements; and, (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

Subprojects environmental supervision and reporting

The subprojects implementation will be supervised by the CAPMU periodically, as well as by the WB (during its supervision missions) and by the local ecological and environmental construction inspectors. Semiannually the PMU will present short information about the EMF implementation and subprojects environmental performances as part of the Progress Reports to be presented to the WB by the client.

Integration of the EMP into project documents

The EMP provisions would be used for the following: (a) inclusion of the EMF requirements in the Project Operational Manual; (b) inclusion of Environmental guidelines in construction contracts for individual subprojects, both into specifications and bills of quantities, and the Contractors will be required to include the cost in their financial bids; (c) highlighting of EMP follow-up responsibility within the CAPMU; (d) specifying mitigation and avoidance measures during the implementation of the proposed activities; and (e) monitoring and evaluation of mitigation/avoidance measures identified in the site-specific review and in the EMP. The necessary mitigating measures would constitute integral part of the subproject implementation including the contracts binding the contractors to carry out the environmental obligations during construction works. All contractors will be required to use environmentally acceptable technical standards and procedures during carrying out of works. Additionally, contract clauses shall include requirements towards compliance with all national construction, health protection, safeguard laws and rules as well as on environmental protection.

5.5 Implementing arrangements and funding

Overall implementing responsibilities

The project will be implemented by the CAPMU, which is presently responsible for projects related to agriculture and poverty alleviation. The CAPMU is a specialized unit created to implement Bank-funded projects. As such, it has received capacity building in environmental management, financial administration, procurement, and implementation of projects. Its performance in planning and implementing measures necessary to address safeguard policy issues has been found satisfactory to the Bank. The PMU has a highly qualified Environmental Specialist, being responsible for projects safeguards issues. The parent project environmental and social performances up to now have been qualified as adequate.

Major responsibilities of the CAPMU

The CAPMU will ensure that the project activities are being assessed from environmental point of view and that the EMP are adequately implemented. In this regard this body will be responsible for:

- (a) coordination of environmental and EA related issues;
- (b) monitoring of the environmental impacts within the overall monitoring of the subprojects implementation;
- (c) communication with an EIA competent authority (ME, SEI); and
- (d) ensuring the links between an EIA and the subprojects i.e. to support the proper implementation of the conditions given by an EIA within the subproject realization.

In particular the PMU will conduct the following:

- (a) subprojects environmental screening;
- (b) carry out the evaluation of the subproject's eligibility from the environmental point of view;

- (c) provide necessary information on the environmental issues to the subprojects applicants (especially inform them about the environmental criteria to be used, explain all obligations regarding the EIA procedure etc.).

Additionally the CAPMU will be also responsible for supervising independently or jointly with the State Ecological Inspectorate the mitigation and environmental protection measures stipulated in Environmental Management Plan.

EA Review and Approval

CAPMU will submit the subproject EMPs to the local authority of SEI for State Ecological Expertize (SEE). No sub-project will be permitted to start (re)construction until a favorable official written approval is received. Documentation of successful SEE should be placed in the subproject file.

Supervision and monitoring activities

During subproject implementation CAPMU will have overall supervision responsibility for assuring that the measures indicated in the EMP are being properly performed. In collaboration with the local environmental authorities will perform the subproject environmental monitoring during both construction and operation phases as specified in the monitoring plan of the EMP.

Reporting

Regular subproject progress reports should include a section entitled “Environmental Management”. The section should be as brief as possible: providing a condensed description of the monitoring activities, any issues identified and how they were or are planned to be resolved.

Funding for EMPs implementation

During the (re)construction/implementation phase, the EMP implementation will be funded by the project beneficiaries. All (re)construction and installation activities will be provided by contracted companies. They are responsible for full and qualitative implementation of the EMP provisions.

VI. Integrated Pest Management

The pest management issues which can be potentially raised by the project may relate to possible indirect effect of stimulating greater use of agro-chemicals associated with more intensive cultivation and/ or higher crop value.

The objective of EMF in this regard is to encourage adoption of Integrated Pest Management (IPM) approach and increase beneficiaries' awareness of pesticide-related hazards and good practices for safe pesticides use and handling as well as to provide relevant training and information dissemination activities.

6.1 Principles of the Integrated Pest Management⁵

The primary aim of pest management is to manage pests and diseases that may negatively affect production of crops so that they remain at a level that is under an economically damaging threshold. Pesticides should be managed to reduce human exposure and health hazards, to avoid their migration into off-site land or water environments and to avoid ecological impacts such as destruction of beneficial species and the development of pesticide resistance. One important strategy is to promote and facilitate the use of Integrated Pest Management (IPM) through preparation and implementation of an Integrated Pest Management Plan (PMP).

Integrated pest management consists of the judicious use of both chemical and nonchemical control techniques to achieve effective and economically efficient pest management with minimal environmental contamination. IPM therefore may include the use of:

- a) Mechanical and Physical Control;
- b) Cultural Control;
- c) Biological Control, and
- d) Rational Chemical Control.

Integrated Pest Management is the use of multiple techniques to prevent or suppress pests in a given situation. Although IPM emphasizes the use of nonchemical strategies, chemical control may be an option used in conjunction with other methods. Integrated pest management strategies depend on surveillance to establish the need for control and to monitor the effectiveness of management efforts. World Bank Group in the Environmental, Health, and Safety Guidelines prepared in 2007 provides the following stages should be considered when designing and implementing an Integrated Pest Management Strategy, giving preference to alternative pest management strategies, with the use of synthetic chemical pesticides as a last option. As a first essential step, those who make pest management decisions should be provided with training in identification of pests and beneficial (e.g. natural enemy) species, identification of weeds, and field scouting methods to evaluate which pests are present and whether they have reached an economic control threshold (the density at which they begin to cause economically significant losses).

6.2 Alternatives to Pesticide Application

Where feasible, the following alternatives to pesticides should be considered:

- Rotate crops to reduce the presence of pests and weeds in the soil ecosystem;
- Use pest-resistant crop varieties;
- Use mechanical weed control and / or thermal weeding;

⁵ This section is based on the World Bank Group in the Environmental, Health, and Safety Guidelines prepared in 2007.

- Support and use beneficial organisms, such as insects, birds, mites, and microbial agents, to perform biological control of pests;
- Protect natural enemies of pests by providing a favorable habitat, such as bushes for nesting sites and other original vegetation that can house pest predators and by avoiding the use of broad-spectrum pesticides;
- Use animals to graze areas and manage plant coverage;
- Use mechanical controls such as manual removal, traps, barriers, light, and sound to kill, relocate, or repel pests.

6.3 Pesticide Application

If pesticide application is warranted, users are recommended take the following actions:

- ✓ Train personnel to apply pesticides and ensure that personnel have received applicable certifications or equivalent training where such certifications are not required;
- ✓ Review and follow the manufacturer's directions on maximum recommended dosage or treatment as well as published reports on using the reduced rate of pesticide application without loss of effect, and apply the minimum effective dose;
- ✓ Avoid routine "calendar-based" application, and apply pesticides only when needed and useful based on criteria such as field observations, weather data (e.g. appropriate temperature, low wind, etc.),
- ✓ Avoid the use of highly hazardous pesticides, particularly by uncertified, untrained or inadequately equipped users. This includes:
 - ✓ Pesticides that fall under the World Health Organization Recommended Classification of Pesticides by Hazard Classes 1a and 1b should be avoided in almost all cases, to be used only when no practical alternatives are available and where the handling and use of the products will be done in accordance with national laws by certified personnel in conjunction with health and environmental exposure monitoring;
 - ✓ Pesticides that fall under the World Health Organization Recommended Classification of Pesticides by Hazard Class II should be avoided if the project host country lacks restrictions on distribution and use of these chemicals, or if they are likely to be accessible to personnel without proper training, equipment, and facilities to handle, store, apply, and dispose of these products properly;
- ✓ Avoid the use of pesticides listed in Annexes A and B of the Stockholm Convention, except under the conditions noted in the convention and those subject to international bans or phaseouts;
- ✓ Use only pesticides that are manufactured under license and registered and approved by the appropriate authority and in accordance with the Food and Agriculture Organization's (FAO's) International Code of Conduct on the Distribution and Use of Pesticides;
- ✓ Use only pesticides that are labeled in accordance with international standards and norms, such as the FAO's Revised Guidelines for Good Labeling Practice for Pesticides;
- ✓ Select application technologies and practices designed to reduce unintentional drift or runoff only as indicated in an IPM program, and under controlled conditions;
- ✓ Maintain and calibrate pesticide application equipment in accordance with manufacturer's recommendations. Use application equipment that is registered in the country of use;
- ✓ Establish untreated buffer zones or strips along water sources, rivers, streams, ponds, lakes, and ditches to help protect water resources;
- ✓ Avoid use of pesticides that have been linked to localized environmental problems and threats.

6.4 Pesticide Handling and Storage

Contamination of soils, groundwater, or surface water resources, due to accidental spills during transfer, mixing, and storage of pesticides should be prevented by following the hazardous materials storage and handling recommendations. These are the following:

- Store pesticides in their original packaging, in a dedicated, dry, cool, frost-free, and well aerated location that can be locked and properly identified with signs, with access limited to authorized people. No human or animal food may be stored in this location. The store room should also be designed with spill containment measures and sited in consideration of potential for contamination of soil and water resources;

- Mixing and transfer of pesticides should be undertaken by trained personnel in ventilated and well lit areas, using containers designed and dedicated for this purpose.
- Containers should not be used for any other purpose (e.g. drinking water). Contaminated containers should be handled as hazardous waste, and should be disposed in specially designated for hazardous wastes sites. Ideally, disposal of containers contaminated with pesticides should be done in a manner consistent with FAO guidelines and with manufacturer's directions;
- Purchase and store no more pesticide than needed and rotate stock using a “first-in, first-out” principle so that pesticides do not become obsolete. Additionally, the use of obsolete pesticides should be avoided under all circumstances; A management plan that includes measures for the containment, storage and ultimate destruction of all obsolete stocks should be prepared in accordance to guidelines by FAO and consistent with country commitments under the Stockholm, Rotterdam and Basel Conventions.
- Collect rinse water from equipment cleaning for reuse (such as for the dilution of identical pesticides to concentrations used for application);
- Ensure that protective clothing worn during pesticide application is either cleaned or disposed of in an environmentally responsible manner;
- Maintain records of pesticide use and effectiveness.

6.5 Pest Management Plan

The entity which will be dealing with pest management within the projects to be supported under the project has to be guided by the Pest Management Plan. The content of the Pest Management Plan should apply to all the activities and individuals working. It should be emphasized also that non-chemical control efforts will be used to the maximum extent possible before pesticides are used.

The Pest Management Plan should be a framework through which pest management is defined and accomplished. The Plan should identify elements of the program to include health and environmental safety, pest identification, and pest management, as well as pesticide storage, transportation, use and disposal. Management Plan is to be used as a tool to reduce reliance on pesticides, to enhance environmental protection, and to maximize the use of integrated pest management techniques.

The Pest Management Plan shall contain pest management requirements, outlines the resources necessary for surveillance and control, and describes the administrative, safety and environmental requirements. The Plan should provide guidance for operating and maintaining an effective pest management program/ activities. Pests considering in the Plan may be weeds and other unwanted vegetation, crawling insects and other vertebrate pests. Without control, these pests provoke plants' deceases. Adherence to the Plan will ensure effective, economical and environmentally acceptable pest management and will maintain compliance with pertinent laws and regulations. The recommended structure of a *Pest Management Plan* is presented in the Annex 9.

6.6 Measures to raise awareness and educate potential beneficiaries regarding safe pesticide handling and use of Integrated Pest Management

These measures are targeted at providing a framework for educating farmers regarding pesticides handling and promoting integrated pest management (IPM) and thus, understanding and managing pest problems in the horticultural sector, reducing human and environmental health risks associated with pesticide use, and protecting ecosystem by conserving beneficial agents such as natural enemies of pests and pollinators to increase productivity. The project will hire a national research institution and/or an NGO with necessary expertise in horticultural crop and IPM capabilities as well as with capacity to deliver training for farmers. Based on the research and technical support, needs of the project beneficiaries, the selected company will develop IPM packages for horticultural systems, develop and deliver a training program with the aid of demonstrations, adaptive research trials and experiential learning in the farmer fields. This institution will train the trainers and project specialists, as well as subproject beneficiaries and assist the PMU in designing a monitoring and evaluation program. The proposed activities would also cover field demonstrations with improved pesticides usage as well as IPM technologies. CAPMU will be the coordinator for the implementation of these activities.

The proposed information dissemination and training activities are presented in the table 6 below.

<i>Nr.</i>	<i>Items of the training and information dissemination activities</i>	<i>Target group</i>	<i>Number of training sessions and participants</i>	<i>Requested financing</i>
<i>Training</i>				
1	Pest characteristics (for horticultural sector)	Representatives of raion agricultural departments; participating farmers; ACSA specialists	3 sessions in North; South and Central agroclimatic zones with the participation of about 60 participants	
2	Control measures, including IPM approaches in horticultural sector, involving agricultural, physical, biological, and chemical control methods	Representatives of raion agricultural departments; participating farmers; ACSA specialists	3 sessions in North; South and Central agroclimatic zones with the participation of about 60 participants	
3	Safety issues (for pest handling, transportation, usage and storage)	Representatives of raion agricultural departments; participating farmers; ACSA specialists; Local environmental inspectors	3 sessions in North; South and Central agroclimatic zones with the participation of about 70 participants	
<i>Field demonstrations with improved pesticides usage and IPM technologies</i>				
4	Field demonstrations on Pest problems diagnosed and related IPM opportunities identified in horticultural sector, pest management practices, including agricultural, physical, biological and chemical control methods	Representatives of raion agricultural departments; participating farmers; ACSA specialists	3 sessions in North; South and Central agroclimatic zones with the participation of about 60 participants	
<i>Preparing and disseminating information materials</i>				
5	Preparing and publishing a special publication on Pest Management in horticultural sector	One comprehensive publication and a series of small leaflets on Pest Management for particular horticultural crops		
6	Organizing a series of media events on Pest Management in horticultural Sector	A series of TV; Radio and newspapers' events and publications		

VII. EMF Disclosure and Public Consultation

7.1 EMF disclosure

Prior public consultation and final approval of the EMF, on January 18, 2011, the CAPMU has disseminated the draft summary of the document to key project stakeholders (Ministry of Environment; Ministry of Agriculture and Food Industry; State Ecological Inspectorate) for review and comments, also posting it in the same day its full English version along with the EMF Summary in Romanian for wide public on CAPMU web site (www.capmu.md). The revised version of the EMF for the project AF was disclosed on CAPMU site on April 11, 2016.

7.2 EMF consultations

On January 26, 2012, the CAPMU conducted a public briefing and consultation meeting on the EMF document. The meeting concluded that the draft EMF document covers practically all potential impacts and possible mitigation measures. The draft document was revised after the meeting, taking into account outputs from the consultation. The final version of the EMF (Romanian) and its English version were posted on the CAPMU website and submitted to the World Bank for its disclosure in the Infoshop. EMF will be used by the client during the project implementation.

**Moldova Agriculture Competitiveness Project
Environmental Management Framework**

Annexes

Annex 1. Environmental Screening Checklist (for new facilities)**ENVIRONMENTAL SCREENING CHECKLIST****Part 1.1***(to be completed by Sub-borrower)***1. Project Name:**

2. Brief Description of Sub-project to include: nature of the project, project cost, physical size, site area, location, property ownership, existence of on-going operations, plans for expansion or new construction.

3. Will the project have impacts on the environmental parameters listed below during the construction or operational phases? Indicate, ***with a check*** , during which phase impacts will occur and whether mitigation measures are required.

Environmental Component	Construction Phase	Operational Phase	Mitigation Measures
Terrestrial environment			
Soil Erosion & Degradation: Will the project involve ploughing/plant cultivation on the slopes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitats and Biodiversity Loss: Will the project involve use or modification of habitats (pasturing on and ploughing up the steppe areas, cutting or removal of trees or other natural vegetation, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land degradation: Will the project applies pesticides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land, habitats & ecosystems degradation: In case of cattle production, will the project contribute to land, habitats and ecosystems degradation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land & soil degradation: Will the project involve land excavation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generation of solid wastes, including toxic wastes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biodiversity and Habitats Loss: Will the project located in vicinity of protected areas or other sensitive areas supporting important habitats of natural fauna and flora?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Erosion & Degradation: agricultural crop production & plantation crop production - will the project presume appropriate agricultural practices?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biodiversity Loss: enlargement of area under the agricultural crop production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil & underground water pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land degradation, water pollution & aesthetics: Construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air quality			
Will the project provide pollutant emissions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Will the project generate specific air pollution (dioxins, furans, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquatic environment			
Water Quantity: Will the project involve water use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Quality/Pollution: Will the project contribute to surface water pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Underground and Surface Water Pollution: Will the project applies pesticides and inorganic fertilizers contributing to surface water pollution?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of Biodiversity: Will the project involve introduction of alien species (e.g., in case of aquaculture projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of Biodiversity: Will the project located in vicinity of protected area or wetlands supporting both local avifauna and birds on passage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Degradation of natural aquatic ecosystems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Weeds, pests, diseases: will the project contribute to spreading of weeds, pests and animal and plant diseases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sedimentation of waterbodies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Socio-economic environment			
Will the project assure non-deterioration of human health, occupational safety and non-disturbance of residents living near project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the project require public consultation to consider local people environmental concerns and inputs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. For the environmental components indicated above, and using the information (examples) provided in the table below **describe the mitigation measures that will be included during the construction (C) or operational (O) phase of the project or both (B)**

Environmental Component	Phase (C, O or B)	Mitigation Measures

Sub-borrower:

Signature:

Date:

Examples of Mitigation Measures

(for more detailed description of listed below and other potential mitigation measures refer to *EMF Annexes 7-8*)

Environmental Component	Mitigation Measures
Terrestrial ecosystems	
Soil Erosion & Degradation: Will the project involve ploughing/plant cultivation on the slopes stimulating soil erosion and landslides?	1) Ploughing across the slope 2) Contour tillage 3) Avoid creation of new terraces since it is linked with loss of topsoil, etc.
Habitats and Biodiversity Loss: Will the project involve use or modification of habitats (pasturing on and ploughing up the steppe areas, cutting or removal of trees or other natural vegetation, etc.)	1) Avoiding use of remained natural or semi-natural steppe areas for pasturing and crop production 2) Avoid, where possible, cutting of trees and other natural vegetation, etc. 3) Minimize loss of natural vegetation/ Maximal preservation of vegetation during construction
Land degradation: Will the project applies pesticides?	1) Use of less harmful (non-persistent) pesticides 2) Not to apply more pesticides than needed 3) To ensure appropriate pesticides handling to avoid contaminated surface runoff, etc.
In case of cattle production, will the project contribute to land, habitats and ecosystems degradation?	1) Not to exceed pastures' capacity (on degraded lands this is 0,3-0,5 conv. cap/ha; on good lands – 1,5 conv. cap/ per ha) and avoid overgrazing 2) Where possible, use of stabling 3) To develop sown pastures 4) Where possible, to fence grazing areas to use them subsequently, giving to others possibility to restore, etc. 5) Not to graze in natural areas in early spring and late autumn, etc.
Land & soil degradation: Will the project involve land excavation?	1) To dislocate excavated topsoil to adjacent agricultural lands
Generation of solid wastes, including toxic wastes?	1) Wastes reuse and recycling 2) Disposal on authorized landfills including on special toxic wastes disposal sites

Environmental Component	Mitigation Measures
Biodiversity and Habitats Loss: Will the project located in vicinity of protected areas or other sensitive areas supporting important habitats of natural fauna and flora?	<ol style="list-style-type: none"> 1) Consideration of alternative locations, where possible 2) Careful timing of works and work seasonally, as appropriate: to avoid construction during breeding season 3) Where possible, to fence the area under construction to lessen occasional disturbance on habitats and biodiversity 4) Use natural meadows and grasslands rather for mowing than grazing 5) Inform personnel about importance of adjacent environmentally important area, if any, etc.
Land Erosion & Degradation: Agricultural Crop Production & Plantation Crop Production - Will the project presume appropriate agricultural practices?	<ol style="list-style-type: none"> 1) Appropriate crop rotation: fallow land – wheat – maize – sunflower – lucerne – lucerne (2 years long) – legumes (pea, haricot, etc.) / wheat maize, etc./ or rye-maize-sunflower-Lucerne-Lucerne-legumes-rye, etc 2) Ploughing and tillage: ploughing across the slope & contour tillage 3) On lands which are subject to erosion preferable cultivation of plants with require dense sowing (e.g. wheat, rye, etc.) and avoid cultivation of tilled crops (e.g., maize, sunflower) 4) Orchards: creation of grass strips between the rows, deep cultivation between the rows 5) Where possible, to prefer agricultural land arrangement as follows: areas with cultivated crops alternated with areas used for pasturing and orchards, etc.
Biodiversity Loss: enlargement of area under the agricultural crop production	Where possible, to plant (or maintain) green corridors to ensure movement of terrestrial fauna
Soil & underground water pollution	<ol style="list-style-type: none"> 1) Fuel and lubricants: use of specially arranged sites (with concrete floor) for their handling and storage to avoid their leakages into the soil and runoff into waterbodies 2) Pesticides: see above 3) Use of special platforms and tanks with a waterproof bottom for accumulation of manure and preparing of organic fertilizers, etc.
Land degradation, water pollution & aesthetics: Construction	<ol style="list-style-type: none"> 1) Careful selection of location for and planning of the project 2) To minimize construction site's size and design work to minimize land affected 3) Where possible, to execute construction works during dry season to avoid excessive contaminated runoff 4) Properly arranged waste disposal sites 5) Cleaning of construction site, replacing the lost trees, re-vegetation of work area, etc.
Other impacts?	Other measures?
Air quality	
Will the project provide pollutant emissions?	<ol style="list-style-type: none"> 1) Use of approved methods and techniques to prevent and control emissions (e.g. absorption) 2) Where possible, enclosure of dust producing equipment, and use of local exhaust ventilation 3) Where possible, arrange barriers for wind protection (if raw material is stored and processed in open areas) 4) Where possible, use of fuels with a low sulfur content, such as natural gas or liquefied petroleum gas and use of low-sulfur raw material 5) Where possible, installation of dedicated filtration systems, etc.
Will the project generate specific air pollutants (furans, dioxins)?	<ol style="list-style-type: none"> 1) Selection of materials or processes with no or low demand for VOC-containing products 2) Where possible to substitute the use of solvents and other materials which have a high VOC content 3) Where possible, to install and modify equipment to reduce solvent use in manufacturing process 4) To execute strict primary and secondary control of air emissions, etc.
Aquatic Ecosystems	
Water Quantity: Will the project involve water use?	<ol style="list-style-type: none"> 1) To ensure natural flow of water/ minimum disruption of natural streams flows 2) To install water meters to control and minimize water use 3) Avoid or minimize surface water abstraction in case downstream the wetland is situated. etc.
Water Quality / Pollution: Will the project contribute to surface water pollution	<ol style="list-style-type: none"> 1a). For small rural enterprises: to install local wastewater treatment facilities (e.g., septic tanks) 1b). For big enterprises: not to exceed established limits of pollutants in effluents

Environmental Component	Mitigation Measures
	2) To minimize water and mud collection 3) Where possible, to renovate existing sewerage system/ensure connection to municipal sewerage system 4) To arrange properly waste disposal sites
Underground and Surface Water Pollution: Will the project applies pesticides and inorganic fertilizers contributing to surface water pollution?	1) See above 2) Where possible, to plant at least bush vegetation downslope to reduce pollutants surface runoff into waterbodies
Loss of Biodiversity: Will the project involve introduction of alien species (e.g., in case of aquaculture projects)?	1) Where possible, to avoid introduction of alien species 2) In case of use of already introduced alien species to ensure their non-coming into natural ecosystems, e.g., during water discharge from the ponds, etc.
Loss of Biodiversity: Will the project located in vicinity of protected area or wetlands supporting both local avifauna and birds on passage?	1) Not to exceed established limits of pollutants in effluents and emissions 2) To avoid or minimize construction and operational activities during breeding and migration periods, etc.
Degradation of natural aquatic ecosystems	1) Avoid application of pesticides in the strip with width of 300 m along the natural surface waterbodies, 2) Avoid cutting of trees and other natural vegetation along the waterbodies 3) Avoid coming of alien species into natural waterbodies, 4) Properly arranged waste disposals sites, etc.
Weeds, pests, diseases: will the project contribute to spreading of weeds, pests and animal and plant diseases?	1) Avoid cultivation of plant mono-culture on agricultural lands 2) Appropriate pest management 3) Giving the priority to the agro-technical and biological measures for the control of weeds, pests, and diseases 4) In cattle farms, to adhere established veterinary rules to prevent or minimize animal diseases, etc.
Sedimentation of waterbodies	1) To avoid excessive soil erosion: see above 2) Minimize soil processing 3) Provide retention/ sedimentation ponds, as necessary 4) To control reed harvesting (to avoid over-harvesting)
Other impacts?	Other measures?
Socio-economic environment	
Will the project assure non-deterioration of human health, occupational safety and non-disturbance of residents living near project area?	1) To ensure collective and individual protective measures (work clothes, masks, shoes), when needed. 2) To adhere established occupational safety requirements as well as simple rules, e.g.: a. water spaying twice a day during construction to avoid dust b. Permanent ventilation of internal areas c. timing of work 3) To conduct regular instructing of personnel on health and occupational safety requirements 4) To restrict vehicle speeds and trough-traffic in residential areas, especially trucks 5) Restrict trough-traffic in residential areas 6) Work timing to minimize disturbance/ restrict construction to certain hours 7) Restrict movement of hazardous materials in residential areas/ regulation of transportation of materials; apply any load restriction required during and post construction periods 8) Incorporate safety and environment protection requirements in the project contract documents, etc.
Does the project require public consultation to consider local people environmental concerns and inputs?	If yes, anticipated public concerns, e.g., project location, waste disposal sites, harmful emissions into environment, aesthetic arrangement of site under construction activities? etc.
Social impacts	Appropriate project design: location, methods of construction, use of safe technologies during operation period, work timing, careful decommissioning, etc.

ENVIRONMENTAL SCREENING CHECKLIST

Part 2

(to be completed by the CAPMU based on the findings of the environmental screening and scoping process)

5. Project Environmental Category (B or C) []
6. Environmental Assessment Required (Yes or No) []
7. Type of Environmental Assessment:
- 7.1 Partial EIA for Category B projects
 - 7.2 EMP Checklists for small scale construction/reconstruction activities
8. Types of EA documents:
- 8.1 Partial EIA, including site assessment and EMP for category B projects
 - 8.2 Site assessment and EMP checklists for small scale category B projects
9. What environmental issues are raised by the sub-project?
10. If an environmental assessment is required, what are the specific issues to be addressed?
11. What is the time frame and estimated cost of conducting the environmental assessment?

Environmental Screener:

Signature:

Date:

ENVIRONMENTAL SCREENING CHECKLIST

Part 3

(to be completed by the CAPMU (in consultation with Environmental Authority if needed) based on review of the mitigation proposed and the Environmental Assessment, if required).

- 12. Was an Environmental Impact Assessment needed? (Y/N) ___ If “Yes”, was it done? ___
- 13. Have national and World Bank requirements for public consultation been met and fully documented? (Y/N) _____
- 14. Was an Environmental Management Plan prepared? (Y/N) ___
- 15. Are the mitigation measures to be included in project implementation adequate and appropriate? (Y/N) ___
- 16. Will the project comply with existing pollution control standards for emissions and wastes? (Y/N) ___ If “No”, will an exemption be sought? _____
- 17. Is an Environmental Monitoring Plan necessary? (Y/N) ___ If so, has it been prepared? (Y/N) ___ Approved by the PIU? _____
- 18. What follow-up actions are required by the proponent and CAPMU?

19. Were public consultations held concerning potential environmental impacts of the proposed sub-project? (Y/N) ___ Were minutes recorded? (Y/N) _____

Dates:	Participants:
_____	_____
_____	_____
_____	_____

Environmental Screener

Date:

Annex 2. Field Inspection Checklist

FIELD INSPECTION CHECKLIST

(to be completed by the CAPMU in consultation with Environmental Authority – if needed, - for subproject Categories B)

Project Name:

Date/time of Visit:

Raion:

Visitors:

Current activity and site history

- Who is the site contact (name, position, contact information)?
- What is the area of the site to be used for project activities?
- What are current uses of the site?
- What were previous uses of the site (give dates if possible)?

Environmental Situation

- Are there sensitive sites nearby (nature reserves, cultural sites, historical landmarks)?
- Are there water courses on the site?
- What is the terrain or slope?
- Does the site experience flooding, waterlogging or landslides? Are there signs of erosion?
- What are the neighboring buildings (e.g. schools, dwellings, industries) and land uses? Estimate distances.
- Will the proposed site affect transportation or public utilities?

Licenses, Permits and Clearances

- Does the site require licenses or permits to operate the type of activity proposed? Are these available for inspection?
- What environmental or other (e.g., health, forestry) authorities have jurisdiction over the site?

Water Quality Issues

- Does the proposed activity use water for any purposes (give details and estimate quantity). What is the source?
- Will the proposed activity produce any effluent? (estimate quantity and identify discharge point)
- Is there a drainage system on site for surface waters or sewage? Is there a plan available of existing drainage or septic systems?
- How waste water is managed (surface water courses, dry wells, septic tanks)?

Soils

- What is the ground surface (agricultural land, pasture, etc.)?
- Will the project damage soils during construction or operations?
- Will the project affect the landscape significantly (draining wetlands, changing stream courses)

Biological environment

- Describe vegetation cover on the site.
- Is there information about rare or threatened flora and fauna at or near the site? If yes, would the project have an impact or increase risk to the species?
- Obtain a list of vertebrate fauna and common plants of the site (if available).
- Note potential negative impacts on biota if project proceeds.

Visual Inspection Procedures

- Try to obtain a site map or make a sketch to mark details.
- Take photos, if permitted.
- Walk over as much of the site as possible, including boundaries, to note adjacent activities.
- Note any odors, smoke or visual dust emissions, standing water, etc.

Annex 3. Terms of Reference for conducting an Environmental Impact Assessment Study

TERMS OF REFERENCE

For conducting an Environmental Impact Assessment study for Categories B of subprojects

An Environmental Assessment Report Categories B projects focuses on the significant environmental issues raised by a Sub-project. Its primary purpose is to identify environmental impacts and those measures that, if incorporated into the design and implementation of a project can assure that the negative environmental effects will be minimized. The scope and level of detail required in the analysis depend on the magnitude and severity of potential impacts.

The environmental assessment report should include the following elements:

- a. *Executive Summary.* This summarizes the significant findings and recommended actions.
- b. *Policy, legal and administrative framework.* This section summarizes the legal and regulatory framework that applies to environmental management in the jurisdiction where the study is done.
- c. *Project Description.* Describes the nature and scope of the project and the geographic, ecological, temporal and socioeconomic context in which the project will be carried out. The description should identify social groups that will be affected, include a map of the project site, and identify any off-site or support facilities that will be required for the project.
- d. *Baseline data.* Describe relevant physical, biological and social condition including any significant changes anticipated before the project begins. Data should be relevant to project design, location, operation or mitigation measures.
- e. *Environmental impacts.* Describe the likely or expected positive and negative impacts in quantitative terms to the extent possible. Identify mitigation measures and estimate residual impacts after mitigation. Describe the limits of available data and uncertainties related to the estimation of impacts and the results of proposed mitigation.
- f. *Analysis of Alternatives.* Systematically compare feasible alternatives to the proposed project location, design and operation including the "without project" alternative in terms of their relative impacts, costs and suitability to local conditions. For each of the alternatives quantify and compare the environmental impacts and costs relative to the proposed plan.
- g. *Environmental Management Plan (EMP).* If significant impacts requiring mitigation are identified, the EMP defines the mitigation that will be done, identifies key monitoring indicators and any needs for institutional strengthening for effective mitigation and monitoring to be carried out.
- h. *Appendices.*

This section should include:

- (i) The list of EA preparers;
- (ii) References used in study preparation;
- (iii) A chronological record of interagency meetings and consultations with NGOs and effected constituents;
- (iv) Tables reporting relevant data discussed in the main text, and;
- (v) A list of associated reports such as resettlement plans or social assessments that were prepared for the project.

Annex 4. Environmental Screening Checklist (for existing facilities)

ENVIRONMENTAL SCREENING CHECKLIST
For existing facilities

Part 1

(to be completed by Sub-borrower)

1. **Subproject title** _____

2. **Brief Description of sub-project** *(nature of the project, project cost, physical size, site area, location, facility history, operational/production activities, technological processes etc.)*

3. **Inputs, output (products) and waste stream** *(raw materials, natural resources (e.g. water) and energy used in operational/production activities, final products, effluents and technological wastes, secondary materials, waste disposal etc.)*

4. **Key Environmental, Health and Safety aspects of the facility’s operation** *(potential impacts and risks caused by operational activities (e.g. industrial solid wastes, contaminated waste waters, air emissions, noise pollution), mitigation measures during operational/technological processes, preventive actions etc.)*

5. **Regulatory Compliance Status** *(per local environmental and sanitary inspection conclusions)*

6. **Environmental authorizations, licenses and permits** *(as requested by the national legislation and relevant to proposed sub-project activities: check ✓ and specify if any)*

- a. State Ecological Expertise
- b. Special water use and waste water discharge authorization
- c. Air emissions authorizations
- d. Waste disposal permit
- e. License for special type of activity (specify)
- f. License for mineral resources usage
- g. Permit for usage of wild fauna and flora
- h. Sanitary operational authorization
- i. Sanitary and veterinary operational authorization
- j. Other as per national legislation (specify)

7. **Environmental expenditures** *(for Environmental management and Environmental pollution and/or for Natural resources usage; please fill a table)*

Expenditure Item	Total Calculated per Year, MDL	Last payment, Date/MDL
1.		
2.		
3.		

Sub-borrower: _____ **Signature:** _____ **Date:** _____

ENVIRONMENTAL SCREENING CHECKLIST
For existing facilities

Part 2

(to be completed by the CAPMU)

- 1. Sub-project category (B or C)
- 2. Environmental compliance with environmental standards *(yes / no)*
- 3. Environmental Auditing *(conducted or not)*
- 4. Environmental authorizations, licenses and permits *(check ✓ and specify if any)*

- a. State Ecological Expertise
- b. Special water use and waste water discharge authorization
- c. Air emissions authorizations
- d. Waste disposal permit
- e. License for special type of activity (specify)
- f. License for mineral resources usage
- g. Permit for usage of wild fauna and flora
- h. Sanitary operational authorization
- i. Sanitary and veterinary operational authorization
- j. Other as per national legislation (specify)

- 5. Facility’s Environmental and Sanitary inspections *(main conclusions regarding EHS compliance)*
- 6. Payments for the environmental pollution *(done or not)*

Project officer: _____ *Signature:* _____ *Date:* _____

ENVIRONMENTAL SCREENING CHECKLIST
For existing facilities

Part 3

(to be completed by the CAPMU Environmental Specialist)

1. Was an Environmental Auditing conducted? *(yes / no)* []
2. Was an Environmental Action Plan prepared? *(yes / no)* []
3. Will the project comply with existing pollution control standards for emissions and wastes? *(yes / no)* []
If “no”, will an exemption be sought? []
4. Is an Environmental Monitoring Plan necessary? *(yes / no)* []
If so, has it been prepared? *(yes or no)* []
Approved by the PIU Environmental Consultant? []
5. Are all relevant environmental authorizations, licenses and permits obtained? *(yes / no)* []
6. Is the facility in compliance with the environmental standards? *(yes / no)* []
7. What follow-up actions are required by the proponent, the PFI or the PIU?

8. Conclusions:

PIU Environmental Consultant: _____ **Signature:** _____ **Date:** _____

Annex 5. Environmental Audit Protocol Outline (for existing facilities)**ENVIRONMENTAL AUDIT PROTOCOL OUTLINE**
for existing facilities*(to be completed by Sub-borrower for Categories B subprojects)***Executive Summary****1.0 Nature of operation (2 pages)**

- 1.1 Brief description of the facility
- 1.2 Key Environmental, Health and Safety aspects (*potential impacts and risks caused by operational activities (e.g. industrial solid wastes, contaminated waste waters, air emissions, noise pollution), mitigation measures during operational/technological processes, preventive actions etc.*)
- 1.3 Brief description of operational/technological processes
- 1.4 Facility Location and Description of Environs
- 1.5 Facility and Site History

2.0 Corporate Environmental, Health and Safety Management (1 page)

- 2.1 Organization of EHS Management (*responsible person(s)/unit(s)*)
- 2.2 Contingency Planning and Emergency Procedures
- 2.3 Staff Training and Supervision

3.0 Environmental Performance of the Company/Facility (3 pages)

- 3.1 National Regulatory Requirements, Polices and Procedures (*list the Environmental relevant regulations*)
- 3.2 Applicable WB/ Other Requirements and Standards
- 3.3 Inputs, products, and Waste Stream (*Raw Materials Consumption and Sources (where appropriate); Water Consumption and Source (where applicable); Energy Consumption and Source; Intermediate products; Effluent Amounts and Quality; Emission Sources and Quality; GHG Contribution; Solid and Hazardous Wastes; Noise and Vibration; Electromagnetic Issues etc.*)
- 3.4 Waste Management, Disposal of Wastes (*describe the existing procedures and practices, list the relevant documents and contracts*)
- 3.5 Management of Hazardous Materials (including PCBs and Asbestos) (*describe the existing procedures, list the relevant documents and contracts*)
- 3.6 Soil and Groundwater Contamination (*describe existing risks and sources, mitigation measures, list the relevant documents etc.*)
- 3.7 Environmental Monitoring Activities (*e.g. Water&Soil quality monitoring (testing), effluent and emission control, internal and external environmental audit and inspection*)
- 3.8 Regulatory Compliance Status (*per local environmental inspection conclusions*)
- 3.9 Environmental Expenditures (*for Environmental management and Environmental pollution and/or for Natural resources usage; please indicate item and amount per year*)

4.0 Public and Occupational Health and Safety Performance (1 page)

- 4.1 Local/National Regulatory Requirements (*list the Labor safety and Public health relevant regulations (e.g. Labor Code)*)
- 4.2 Applicable WB and/or other Requirements and Standards
- 4.3 Current H&S Monitoring Practice (*e.g. monitoring program, internal/external inspections, supervisor visits, list the relevant documents etc.*)
- 4.4 Summary of Regulatory Compliance Status (*per local Labor safety and Public health inspection conclusions*)

5.0 Conclusions and Recommendations (1 page)

- 5.1 Regulatory Compliance (*per local EHS inspection general conclusions and recommendations*)
- 5.2 Environmental Management Issues
- 5.3 Health and Safety Issues
- 5.4 Stakeholder Dialogue and External Reporting
- 5.5 EHS Performance Monitoring Protocol
- 5.6 Environmental Action Plan
- 5.7 Required further actions/studies

Annexes: (i) Photo/video/CD log; (ii) Copies of Environmental Authorizations, Permits and other Documentation; Copies of Environmental and of Sanitary Inspection Protocols; (iii) Copies of made environmental payments; etc.

Sub-borrower: _____ *Signature:* _____ *Date:* _____

Environmental Consultant: _____ *Signature:* _____ *Date:* _____

Annex 6. Environmental Management Plan (EMP)

Scope and objectives of an Environmental Management Plan. An Environmental Management Plan (EMP) should outline the mitigation, monitoring and administrative measures to be taken during project implementation to avoid or eliminate negative environmental impacts. The EMP identifies feasible and cost-effective measures that may reduce potentially significant adverse environmental impacts to acceptable levels. The plan includes compensatory measures if mitigation measures are not feasible, cost-effective, or sufficient. Specifically, the EMP (a) identifies and summarizes all anticipated significant adverse environmental impacts (including those involving indigenous people or involuntary resettlement); (b) describes--with technical details--each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; (c) estimates any potential environmental impacts of these measures; and (d) provides linkage with any other mitigation plans (e.g., for involuntary resettlement, indigenous peoples, or cultural property) required for the project.

The EMP format provided below (see *Attachment 1*) represents a model for development of an EMP document. The model divides the project cycle into three phases: construction, operation and decommissioning. For each phase, the preparation team identifies any significant environmental impacts that are anticipated based on the analysis done in the context of preparing an environmental assessment. For each impact, mitigation measures are to be identified and listed. Estimates are made of the cost of mitigation actions broken down by estimates for installation (investment cost) and operation (recurrent cost). The EMP format also provides for the identification of institutional responsibilities for "installation" and operation of mitigation devices and methods.

Monitoring Plan. To keep track of the requirements, responsibilities and costs for monitoring the implementation of environmental mitigation identified in the analysis included in an environmental assessment a monitoring plan is necessary. Environmental monitoring during project implementation provides information about key environmental aspects of the project, particularly the environmental impacts of the project and the effectiveness of mitigation measures. Such information enables the borrower and the Bank to evaluate the success of mitigation as part of project supervision, and allows corrective action to be taken when needed. Therefore, the EMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the EA report and the mitigation measures described in the EMP. Specifically, the monitoring section of the EMP provides: (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and, (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

A Monitoring Plan format is provided in *Attachment 2* below and includes a row for baseline information that is critical to achieving reliable and credible monitoring. The key elements of the matrix are: (a) what is being monitored? (b) where is monitoring done? (c) how is the parameter to be monitored to ensure meaningful comparisons? (d) when or how frequently is monitoring necessary or most effective? (e) why is the parameter being monitored (what does it tell us about environmental impact)? In addition to these questions, it is necessary to identify the costs associated with monitoring (both investment and recurrent) and the institutional responsibilities. When a monitoring plan is developed and put in place in the context of project implementation, the PIU will request reports at appropriate intervals and include the findings in its periodic reporting to the World Bank and make the findings available to Bank staff during supervision missions.

Capacity Development and Training. To support timely and effective implementation of environmental project components and mitigation measures, the EMP draws on the EA's assessment of the existence, role, and capability of environmental units on site or at the agency and ministry level. If necessary, the EMP recommends the establishment or expansion of such units, and the training of staff, to allow implementation of EA recommendations. Specifically, the EMP provides a specific description of institutional arrangements--who is responsible for carrying out the mitigatory and monitoring measures

(e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). To strengthen environmental management capability in the agencies responsible for implementation, most EMPs cover one or more of the following additional topics: (a) technical assistance programs, (b) procurement of equipment and supplies, and (c) organizational changes.

Implementation Schedule and Cost Estimates. For all three aspects (mitigation, monitoring, and capacity development), the EMP provides (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the EMP. These figures are also integrated into the total project cost tables.

Integration of EMP with Project. The borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the EMP will be executed effectively. Consequently, the Bank expects the plan to be specific in its description of the individual mitigation and monitoring measures and its assignment of institutional responsibilities, and it must be integrated into the project's overall planning, design, budget, and implementation. Such integration is achieved by establishing the EMP within the project so that the plan will receive funding and supervision along with the other components.

Resource: OP 4.01, Annex C – Environmental Management Plan.
<http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/EXTPOLICIES/EXTOPMANUAL>

Attachment 1. Environmental *Management* Plan Format

Phase	Environmental Impact	Mitigating Measure(s)	Cost		Institutional Responsibility		Remarks
			<i>Install</i>	<i>Operate</i>	<i>Install</i>	<i>Operate</i>	
<i>Construction</i>							
<i>Operation</i>							
<i>Decommissioning</i>							

Sub-borrower:

Signature:

Date:

Attachment 2. Environmental *Monitoring* Plan Format

Phase	What parameter is to be monitored?	Where will the parameter be monitored?	How will the parameter be monitored?	When will the parameter be monitored?	Why is the parameter being monitored?	Cost		Institutional Responsibility	
						<i>Install</i>	<i>Operate</i>	<i>Install</i>	<i>Operate</i>
<i>Baseline</i>									
<i>Construction</i>									
<i>Operation</i>									
<i>Decommissioning</i>									

Sub-borrower:

Signature:

Date:

Annex 7. EMP Checklist for Small Scale Construction and Rehabilitation Activities**PART 1: INSTITUTIONAL & ADMINISTRATIVE**

Country				
Project title				
Scope of project and activity				
Institutional arrangements (Name and contacts)	WB (Project Team Leader)	Project Management	Local Counterpart and/or Recipient	
Implementation arrangements (Name and contacts)	Safeguard Supervision	Local Counterpart Supervision	Local Inspectorate Supervision	Contactor
SITE DESCRIPTION				
Name of site				
Describe site location	Attachment 1: Site Map []Y [] N			
Who owns the land?				
Geographic description				
LEGISLATION				
Identify national & local legislation & permits that apply to project activity				
PUBLIC CONSULTATION				
Identify when / where the public consultation process took place				
INSTITUTIONAL CAPACITY BUILDING				
Will there be any capacity building?	[] N or []Y if Yes, Attachment 2 includes the capacity building program			

*Sub-borrower:**Signature:**Date:*

PART 2: SAFEGUARDS INFORMATION

ENVIRONMENTAL /SOCIAL SCREENING			
	Activity	Status	Triggered Actions
Will the site activity include/involve any of the following?	A. Building rehabilitation	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	B. Minor new construction	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	C. Individual wastewater treatment system	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section B below
	D. Historic building(s) and districts	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section C below
	E. Acquisition of land ⁶	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section D below
	F. Hazardous or toxic materials ⁷	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section E below
	G. Impacts on forests and/or protected areas	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section F below
	H. Handling / management of medical waste	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section G below
	I. Traffic and Pedestrian Safety	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section H below

PART 3: MITIGATION MEASURES

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
0. General Conditions	Notification and Worker Safety	(a) The local construction and environment inspectorates and communities have been notified of upcoming activities (b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works) (c) All legally required permits have been acquired for construction and/or rehabilitation (d) The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. (e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots) (f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.
A. General Rehabilitation and /or Construction Activities	Air Quality	(a) During interior demolition debris-chutes shall be used above the first floor (b) Demolition debris shall be kept in controlled area and sprayed with water mist to reduce debris dust (c) During pneumatic drilling/wall destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site (d) The surrounding environment (side walks, roads) shall be kept free of debris to minimize dust

⁶ Land acquisitions includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

⁷ Toxic / hazardous material includes but is not limited to asbestos, toxic paints, noxious solvents, removal of lead paint, etc.

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		(e) There will be no open burning of construction / waste material at the site (f) There will be no excessive idling of construction vehicles at sites
	Noise	(a) Construction noise will be limited to restricted times agreed to in the permit (b) During operations the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible
	Water Quality	(a) The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers.
	Waste management	(a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities. (b) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers. (c) Construction waste will be collected and disposed properly by licensed collectors (d) The records of waste disposal will be maintained as proof for proper management as designed. (e) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)
B. Individual wastewater treatment system	Water Quality	(a) The approach to handling sanitary wastes and wastewater from building sites (installation or reconstruction) must be approved by the local authorities (b) Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment (c) Monitoring of new wastewater systems (before/after) will be carried out (d) Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.
C. Historic building(s)	Cultural Heritage	(a) If the building is a designated historic structure, very close to such a structure, or located in a designated historic district, notification shall be made and approvals/permits be obtained from local authorities and all construction activities planned and carried out in line with local and national legislation. (b) It shall be ensured that provisions are put in place so that artifacts or other possible “chance finds” encountered in excavation or construction are noted and registered, responsible officials contacted, and works activities delayed or modified to account for such finds.
D. Acquisition of land	Land Acquisition Plan/Framework	(a) If expropriation of land was not expected but is required, or if loss of access to income of legal or illegal users of land was not expected but may occur, that the Bank’s Task Team Leader shall be immediately consulted. (b) The approved Land Acquisition Plan/Framework (if required by the project) will be implemented
E. Toxic Materials	Asbestos management	(a) If asbestos is located on the project site, it shall be marked clearly as hazardous material (b) When possible the asbestos will be appropriately contained and sealed to minimize exposure (c) The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust (d) Asbestos will be handled and disposed by skilled & experienced professionals (e) If asbestos material is to be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately. Security measures will be taken against unauthorized removal from the site. (f) The removed asbestos will not be reused
	Toxic / hazardous waste management	(a) Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information (b) The containers of hazardous substances shall be placed in an leak-proof container to prevent spillage and leaching (c) The wastes shall be transported by specially licensed carriers and disposed in a licensed facility. (d) Paints with toxic ingredients or solvents or lead-based paints will not be used
F. Affected forests,	Protection	(a) All recognized natural habitats, wetlands and protected areas in the immediate vicinity of the activity will not be damaged or exploited,

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
wetlands and/or protected areas		<p>all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities.</p> <p>(b) A survey and an inventory shall be made of large trees in the vicinity of the construction activity, large trees shall be marked and cordoned off with fencing, their root system protected, and any damage to the trees avoided</p> <p>(c) Adjacent wetlands and streams shall be protected from construction site run-off with appropriate erosion and sediment control feature to include by not limited to hay bales and silt fences</p> <p>(d) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.</p>
G. Disposal of medical waste	Infrastructure for medical waste management	<p>(a) In compliance with national regulations the contractor will insure that newly constructed and/or rehabilitated health care facilities include sufficient infrastructure for medical waste handling and disposal; this includes and not limited to:</p> <ul style="list-style-type: none"> ▪ Special facilities for segregated healthcare waste (including soiled instruments “sharps”, and human tissue or fluids) from other waste disposal; and ▪ Appropriate storage facilities for medical waste are in place; and ▪ If the activity includes facility-based treatment, appropriate disposal options are in place and operational
H Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	<p>(b) In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to</p> <ul style="list-style-type: none"> ▪ Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards ▪ Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. ▪ Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement ▪ Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public. ▪ Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public.

PART 4: MONITORING PLAN

Phase	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Cost (if not included in project budget)	Who (Is responsible for monitoring?)
During activity preparation							
During activity implementation							
During activity supervision							

Sub-borrower:

Signature:

Date:

Annex 8. Anticipated Environmental Impacts and Mitigation Measures (by project categories)

I. Procurement/construction/upgrading of cold storages and/or equipment related to cold storage

Activity	Potential impact	Proposed mitigation measures
Construction	Loss of fertile soil resources, land/soil degradation and contamination	<ul style="list-style-type: none"> ● Compliance of the construction/reconstruction technical project with the national environmental, industrial safety, construction, architectural, technological and public health regulations ● Location of buildings in sites with low soil productivity ● Proper design to minimize area under construction ● Ensure that no new construction will be located on hillsides, riverbanks, or otherwise unstable soils. If unfeasible, ensure soil protection through dead and live soil protection structures ● Dislocate excavated fertile topsoil (if any) to adjacent agricultural lands ● Incorporate protective design features (e.g., drainage structures and plant vegetation on slopes) ● A proper rainwater/drainage system should be installed in order to exclude the flooding potential, landslide and/or erosion processes ● Avoid, where possible, cutting of trees and other natural vegetation, etc.
	Health and safety hazards	<ul style="list-style-type: none"> ● Ensure construction workers are given safety instruction, equipment and working clothes ● Special instruction/warning signs must be installed on the facility ● Ensure safety officers on site ● Provide appropriate sanitary and solid waste disposal facilities for use by construction workers ● Provide first aid and protection kits ● Ensure effective signage for the public and ensure that all exposed construction areas are barricaded from public access
	High energy consumption	<ul style="list-style-type: none"> ● Insulate refrigeration room/areas and use of automatically closing doors and airlocks ● Optimize processes for energy efficiency ● Reduce the size of refrigeration rooms where feasible, but still taking food safety into consideration
	Generation of wastes	<ul style="list-style-type: none"> ● Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities ● Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers ● Construction waste will be collected and disposed properly on authorized landfills by licensed collectors ● The records of waste disposal will be maintained as proof for proper management as designed ● Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos) ● Adequate asbestos management: <ul style="list-style-type: none"> – If asbestos is located on the project site, mark clearly as hazardous material – When possible the asbestos will be appropriately contained and sealed to minimize exposure – The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust – Asbestos will be handled and disposed by skilled & experienced professionals – If asbestos material is be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately – The removed asbestos will not be reused
	Ozone depletion	<ul style="list-style-type: none"> ● Convert refrigerants from ozone depleting substances (NH₃ and chlorofluorocarbons) to a hydrofluorocarbon

Activity	Potential impact	Proposed mitigation measures
Operation	High energy consumption	<ul style="list-style-type: none"> • Use of high-efficiency refrigeration compressors that use more-efficient electric motors and have lower compressor losses • Use high-efficiency motors that release less heat into the refrigerated room than conventional induction motors • High-efficiency lighting can reduce energy use and reduce the cooling load on the compressor • Utilize refrigeration units with low emissions/energy efficiency certifications • Avoid refrigeration of fruits, vegetables and byproducts intended for animal feed by storing outside in clean covered areas or in containers, when climate conditions and plant design allow • Train the local staff on maintenance of cooling equipment and proper application of sublimation and controlled atmosphere technologies
	Generation of organic wastes	<ul style="list-style-type: none"> • Proper application of cold storage technologies, implement good management practices • Ensure adequate storage of damaged fruits and their safe reutilization or transportation
	Noise	<ul style="list-style-type: none"> • During operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed, and equipment placed as far away from residential areas as possible
	Impact on human health	<ul style="list-style-type: none"> • Conduct regular instructing of personnel on health and occupational safety requirements • An Emergency Preparedness Plan (EPP) for Refrigerant/Freon Management should be displayed in a proper place and the staff must be trained in handling of refrigerants leakage should it occur • Avoid air pollution and worker poisoning, special indicators of the potential refrigerant/Freon spillage should be installed near the freezing equipment • Ensure gas masks and protective gear to comply with safety rules for ammonia/Freon refrigerating systems • Annual medical examination of the facility personnel

II. Procurement of processing equipment: sorting, washing, juice-making, essential oils-making, sun-flower oil-making, bio-fuel-making, packing etc.

Activity	Potential impact	Proposed mitigation measures
Operation	Over use of water	<ul style="list-style-type: none"> • Install water meters to control and minimize water use • Minimize water consumed during production processes • Optimize product conveying systems to reduce contact of raw material and product with water • Optimize process line operations to avoid spills of raw materials and water, reducing the need to wastewater treatment and associated energy consumption • Reuse water streams in the production processes to the maximum extent possible while avoiding water contamination or compromising food safety • Adopt best-practice methods for plant cleaning chemicals and (or) detergents with minimal environmental impact and compatibility with subsequent wastewater treatment processes • When economically viable, consider the use of physical refining instead of chemical refining to reduce water consumption • Application of water saving technologies, where possible: <ul style="list-style-type: none"> – Recover condensate from heating processes and reuse – Close the cooling water circuit and re-circulate cooling waters
	Water contamination	<ul style="list-style-type: none"> • Minimize water consumed during production processes • Optimize product conveying systems to reduce contact of raw material and product with water • Optimize process line operations to avoid spills of raw materials and water, reducing the need to wastewater treatment and associated energy consumption • Reuse water streams in the production processes to the maximum extent possible while avoiding water contamination or

Activity	Potential impact	Proposed mitigation measures
		<ul style="list-style-type: none"> • compromising food safety • Adopt best-practice methods for plant cleaning chemicals and (or) detergents with minimal environmental impact and compatibility with subsequent wastewater treatment processes • When economically viable, consider the use of physical refining instead of chemical refining to reduce water consumption • Use uncontaminated sludge and effluent from on-site wastewater treatment as fertilizer in agricultural applications • Dispose of contaminated sludge from wastewater treatment at a sanitary landfill or by incineration • Use emulsion breaking techniques to segregate high BOD and COD oils from wastewater • Use grids to cover drains in the production area and to prevent solid wastes and concentrated liquids from entering the wastewater stream • Select disinfection chemicals to match the cleaning operation being applied on the process equipment to the type of problem • Apply cleaning chemicals using the correct dose and application • When economically viable, consider the use of physical refining instead of chemical refining to reduce water consumption • When feasible, replace phosphoric acid with citric acid in degumming
	High energy consumption	<ul style="list-style-type: none"> • Use energy saving technologies and equipment • High-efficiency lighting can reduce energy use • Optimize process line operations to avoid spills of raw materials and water, reducing the need to wastewater treatment and associated energy consumption • Train the operators on energy saving good practices
	Generation of wastes	<ul style="list-style-type: none"> • Reduce product losses through better production control (e.g., monitor and adjust air humidity to prevent product losses caused by the formation of molds on edible materials) • Minimize inventory storage time for raw materials to reduce losses from putrefaction • Monitor and regulate refrigeration and cooling systems during storage and processing activities to minimize product loss, optimize energy consumption, and prevent odors • Clean, sort, and grade raw foodstuffs at an early stage in order to reduce organic waste and substandard products at the processing facility • Collect and reuse rejected raw materials for manufacturing other products • Provide leak-proof containers for collected solid and liquid waste • Train the personnel on best waste management practices
	Noise	<ul style="list-style-type: none"> • During operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed, and equipment placed as far away from residential areas as possible
	Air pollution	<ul style="list-style-type: none"> • Prevent and control dust: ensure proper maintenance of cleaning, screening, and crushing equipment to reduce emissions of fugitive dust, and use of local exhaust ventilation • Reduce odor emissions with a caustic, alkaline, or ozone scrubber system • Use of approved methods and techniques to prevent and control emissions (e.g., absorption) • Arrange barriers for wind protection (if raw material is stored and processed in open areas) • Use of fuels with a low sulfur content, such as natural gas or liquefied petroleum gas and use of low-sulfur raw material • Installation of dedicated filtration systems, etc. • Prevent and control VOCs: ensure the efficient recovery of solvent by distillation of the oil from the extractor • Selection of materials or processes with no or low demand for VOC-containing products • Substitute the use of solvents and other materials which have a high VOC content • Install and modify equipment to reduce solvent use in manufacturing process • Conduct strict primary and secondary control of air emissions, etc.
	Impact on human health	<ul style="list-style-type: none"> • Conduct regular instructing of personnel on health and occupational safety requirements

Activity	Potential impact	Proposed mitigation measures
		<ul style="list-style-type: none"> • Safety signs/instructions, safety clothing where appropriate (e.g., hard hats), protective guards on all machinery • Ensure safety officers on site • Provide appropriate sanitary facilities for use by local staff • Provide adequate first aid and protection kits • Proper ventilation system should be installed in the production facility • Annual medical examination of the facility personnel

III. Procurement of HVA products' quality control equipment for laboratories

Activity	Potential impact	Proposed mitigation measures
Operation	Impact on human health	<ul style="list-style-type: none"> • Conduct regular instructing of personnel on health and occupational safety requirements • Safety signs/instructions, safety clothing where appropriate (e.g., hard hats), protective guards on all machinery • Proper ventilation system should be installed in the production facility • Annual medical examination of the facility personnel
	High energy consumption	<ul style="list-style-type: none"> • Select and use energy saving technologies and equipment • High-efficiency lighting can reduce energy use • Optimize process line operations to avoid spills of materials and water, reducing the need to wastewater treatment and associated energy consumption • Train the operators on energy saving good practices
	Air pollution	<ul style="list-style-type: none"> • Use of approved methods and techniques to prevent and control emissions (e.g., absorption) • Installation of dedicated filtration systems, etc. • Selection of materials or processes with no or low demand for VOC-containing products • Substitute the use of solvents and other materials which have a high VOC content • Install and modify equipment to reduce solvent use in technological process • Conduct strict primary and secondary control of air emissions, etc.
	Generation of toxic wastes (incl. solvents and reagents)	<ul style="list-style-type: none"> • Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information • The containers of hazardous substances should be placed in a leak-proof container to prevent spillage and leaching • The wastes are transported by specially licensed carriers and disposed in a licensed facility, on authorized special toxic wastes disposal sites • Paints with toxic ingredients or solvents or lead-based paints will not be used

IV. Procurement/construction/upgrading of processing and/or storage facilities

Activity	Potential impact	Proposed mitigation measures
Construction	Loss of fertile soil resources, land/soil degradation and contamination	<ul style="list-style-type: none"> • Compliance of the construction/reconstruction technical project with the national environmental, industrial safety, construction, architectural, technological and public health regulations • Location of buildings in sites with low soil productivity • Proper design to minimize area under construction

Activity	Potential impact	Proposed mitigation measures
		<ul style="list-style-type: none"> • Ensure that no new construction will be located on hillsides, riverbanks, or otherwise unstable soils. If unfeasible, ensure soil protection through dead and live soil protection structures • Dislocate excavated fertile topsoil (if any) to adjacent agricultural lands • Incorporate protective design features (e.g., drainage structures and plant vegetation on slopes) • A proper rainwater/drainage system should be installed in order to exclude the flooding potential, landslide and/or erosion processes • Avoid, where possible, cutting of trees and other natural vegetation, etc.
	Health and safety hazards	<ul style="list-style-type: none"> • Ensure construction workers are given safety instruction, equipment and working clothes • Special instruction/warning signs must be installed on the facility • Ensure safety officers on site • Provide appropriate sanitary and solid waste disposal facilities for use by construction workers • Provide first aid and protection kits • Ensure effective signage for the public and ensure that all exposed construction areas are barricaded from public access
	High energy consumption	<ul style="list-style-type: none"> • Insulate storage room/areas and use of automatically closing doors and airlocks • Optimize processes for energy efficiency
	Generation of construction wastes	<ul style="list-style-type: none"> • Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities • Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers • Construction waste will be collected and disposed properly on authorized landfills by licensed collectors • The records of waste disposal will be maintained as proof for proper management as designed • Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos) • Adequate asbestos management: <ul style="list-style-type: none"> – If asbestos is located on the project site, mark clearly as hazardous material – When possible the asbestos will be appropriately contained and sealed to minimize exposure – The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust – Asbestos will be handled and disposed by skilled & experienced professionals – If asbestos material is to be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately – The removed asbestos will not be reused
Operation	High energy consumption	<ul style="list-style-type: none"> • Use energy saving technologies and equipment • High-efficiency lighting can reduce energy use • Optimize process line operations to avoid spills of raw materials and water, reducing the need to wastewater treatment and associated energy consumption • Train the operators on energy saving good practices
	Water pollution	<ul style="list-style-type: none"> • A proper sewerage system and a constant water supply should be installed in the washing/sorting/ packaging building during facility renovation must be approved by the local authorities • Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment • Monitoring of new wastewater systems (before/after) will be carried out
	Generation of organic wastes	<ul style="list-style-type: none"> • Reduce product losses through better production control (e.g., monitor and adjust air humidity to prevent product losses caused by the formation of molds on edible materials) • Minimize inventory storage time for raw materials to reduce losses from putrefaction

Activity	Potential impact	Proposed mitigation measures
		<ul style="list-style-type: none"> ● Monitor and regulate refrigeration systems during storage and processing activities to minimize product loss, optimize energy consumption, and prevent odors ● Clean, sort, and grade raw foodstuffs at an early stage in order to reduce organic waste and substandard products at the processing facility ● Collect and reuse rejected raw materials for manufacturing other products ● Provide leak-proof containers for collected solid and liquid waste ● Train the personnel on best waste management practices
	Noise	<ul style="list-style-type: none"> ● During operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed, and equipment placed as far away from residential areas as possible
	Impact on human health	<ul style="list-style-type: none"> ● Conduct regular instructing of personnel on health and occupational safety requirements ● Safety signs/instructions, safety clothing where appropriate (e.g., hard hats), protective guards on all machinery ● Ensure safety officers on site ● Provide appropriate sanitary facilities for use by local staff ● Provide first aid and protection kits ● Proper ventilation system should be installed in the production facility ● Annual medical examination of the facility personnel

References:

World Bank Environmental, Health, and Safety Guidelines – <http://www.ifc.org/ifcext/sustainability.nsf/Content/EnvironmentalGuidelines>

World Bank Operational Polices OP 4.01 Environmental Assessment –

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/9367A2A9D9DAEED38525672C007D0972?OpenDocument>

Annex 9. Recommended Structure of a Pest Management Plan

1 **Background** which would outline

- i) the *purpose* of the Plan,
- ii) indicate *pest management authorities*, and
- iii) pest management program *objective*;

2. **Responsibilities of individuals** (e.g., Program Director, Health Chair, Pest Management Coordinator, Pest Management Personnel, etc.)

3. **General Information** which should provide data on land use and soil, in the area where the pesticides are applied; climate, geo-morphology, settlements in the area of concern, population, surface water, etc. as well as inventory of land use and layout of facilities

4. **Priority of Pest Management** (e.g., undesirable vegetation, vertebrate pests, etc.)

5. **Integrated Pest Management**

5.1 *Principles of the Integrated Pest Management* are:

- a) **Mechanical and Physical Control.** This type of control alters the environment in which a pest lives, traps and removes pests where they are not wanted, or excludes pests. Examples of this type control include: harborage elimination through caulking or filling voids, screening, etc..
- b) **Cultural Control.** Strategies in this method involve manipulating environmental conditions to suppress or eliminate pests. For example, spreading manure from stables onto fields to dry prevents fly breeding. Elimination of food and water for pests through good sanitary practices may prevent pest populations from becoming established or from increasing beyond a certain size.
- c) **Biological Control.** In this control strategy, predators, parasites or disease organisms are used to control pest populations. Sterile flies may be released to lower reproductivity. Viruses and bacteria may be used which control growth or otherwise kill insects. Parasitic wasps may be introduced to kill eggs, larvae or other life stages. Biological control may be effective in and of itself, but is often used in conjunction with other types of control.
- d) **Chemical Control.** Pesticides kill living organisms, whether they will be plants or animals. At one time, chemicals were considered to be the most effective control available, but pest resistance rendered many pesticides ineffective. The trend is to use pesticides which have limited residual action. While this has reduced human exposure and lessened environmental impact, the cost of chemical control has risen due to requirements for more frequent application. Since personal protection and special handling and storage requirements are necessary with the use of chemicals, the overall cost of using chemicals as a sole means of control can be quite costly when compared with nonchemical control methods.

5.2 *Integrated Pest Management Outlines.*

This sub-chapter addresses each major pest or category of similar pests is addressed, by site, in separate outlines.

5.3 *Annual Workload for Surveillance, Prevention, and Control.*

In this sub-chapter has to be indicated the number of man-hours expended for surveillance, prevention, and control of pests.

6. **Health and Safety.** This chapter should contain health and safety requirements as follows:

6.1 **Medical Surveillance of Pest Management Personnel.** All personnel who apply pesticides have to be included in a medical surveillance program.

6.2 **Hazard Communication.** Pest management personnel are given hazard communication training, to include hazardous materials in his workplace. Additional training is to be given to new employees or when new hazardous materials are introduced into the workplace.

6.3 *Personal Protective Equipment.*

In this chapter has to be described approved masks, respirators, chemical resistant gloves and boots, and protective clothing (as specified by applicable laws, regulations and/or the pesticide label) are provided to pesticide applicators. These items are used as required during the mixing and application of pesticides. Pesticide-contaminated protective clothing is not be laundered at home but commercially. Severely contaminated clothing is not laundered, but is considered a pesticide-related waste and disposed, as applicable for hazardous waste.

6.4 **Fire Protection.** The fire safety protection requirements has to be established; the pest management coordinator has to control implementation of measures to prevent fire.

7. **Environmental Considerations.**

7.1 **Protection of the Public.** Precautions are taken during pesticide application to protect the public, on and off the installation. Pesticides should not be applied outdoors when the wind speed exceeds 155 m/min. Whenever pesticides are applied outdoors, care is taken to make sure that any spray drift is kept away from individuals, including the applicator. Pesticide application indoors is accomplished by individuals wearing the proper

personal protective clothing and equipment. At no time are personnel permitted in a treatment area during pesticide application unless they have met the medical monitoring standards and are appropriately protected.

7.2. *Sensitive Areas.* No pesticides are applied directly to wetlands or water areas (lakes, rivers, etc.) unless use in such sites is specifically approved.

7.2. *Endangered/Protected Species and Critical Habitats.* Protected migratory birds which periodically occur on the installation cannot be controlled without a permit. The Pest Management Coordinator periodically evaluates ongoing pest control operations and evaluates all new pest control operations to ensure compliance with the list of endangered species. No pest management operations are conducted that are likely to have a negative impact on endangered or protected species or their habitats without prior approval from environmental authorities.

7.3. *Environmental Documentation.* An environmental assessment which specifically addresses the pesticide use program on the installation has been prepared. This plan is referenced in the assessment as documentation of pesticide use.

Annex 10. Report on Consultation on the Draft EMF with interested parties**Date:** January, 2012**Venue:** Chisinau

Location/ venue	Objective	Invitees	Participants	Summary, conclusions and comments
Chisinau/raion	To describe the project, including EMF and Environmental Guidelines and solicit feedback	<p>There were not sent personal invitations. The invitation to participate in Consultation was sent electronically to the following institutions:</p> <ul style="list-style-type: none"> • Ministry of Environment • State Environmental Inspectorate • National environmental NGOs • Interested agencies 		<p>During the meeting, there were made presentations on: project activities and Environmental Management Framework.</p> <p>The attendees actively participated in discussions which were mainly focused on the environmental screening procedure and capability of environmental authorities to perform monitoring of sub-projects.</p> <p>After the meeting, on the basis of input from participants as well as electronically received comments from interested parties on Summary Draft EMF posted one week earlier on PMU and other websites, there were made relevant corrections both in the EMF main text and EMF Annexes to better meet stakeholders' concern.</p>

Annex 11. Reference Documents for World Bank Operational Policies (OP)

OP 4.01 Environmental Assessment

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/9367A2A9D9DAEED38525672C007D0972?OpenDocument>

BP 4.01 Environmental Assessment

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/C4241D657823FD818525672C007D096E?OpenDocument>

OP 4.04 Natural Habitats

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/71432937FA0B753F8525672C007D07AA?OpenDocument>

BP. 4.04 Natural Habitats

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/62B0042EF3FBA64D8525672C007D0773?OpenDocument>

OP 4.09 Pest Management

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/665DA6CA847982168525672C007D07A3?OpenDocument>

OP 4.11 Cultural Property

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/55FA484A98BC2E688525672C005BCBDB?OpenDocument>

OP 4.12 Involuntary Resettlement

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/CA2D01A4D1BDF58085256B19008197F6?OpenDocument>

BP 4.12 Involuntary Resettlement

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/19036F316CAFA52685256B190080B90A?OpenDocument>

OD 4.20 Indigenous Peoples

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/0F7D6F3F04DD70398525672C007D08ED?OpenDocument>

OP 4.36 Forests

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/C972D5438F4D1FB78525672C007D077A?OpenDocument>

BP 4.36 Forests

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/0AE075DC916559D985256C79000BDEF0?OpenDocument>

OP 4.37 Safety of Dams

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/C12766B6C9D109548525672C007D07B9?OpenDocument>

BP 4.37 Safety of Dams

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/D3448207C94C92628525672C007D0733?OpenDocument>

OP 4.76 Tobacco

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/DBE1A283D3BF9D078525672C007D075E?OpenDocument>

OP 7.50 Projects on International Waterways

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/5F511C57E7F3A3DD8525672C007D07A2?OpenDocument>

BP 7.50 Projects on International Waterways

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/47D35C1186367F338525672C007D07AE?OpenDocument>

OP 7.60 Projects in Disputed Areas

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/72CC6840FC533D508525672C007D076B?OpenDocument>

BP 7.60 Projects in Disputed Areas

<http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/5DB8B30312AD33108525672C007D0788?OpenDocument>