Republic of Moldova
Agriculture Competitiveness Project
Third Additional Financing

Environmental and Social Management Framework

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Acronyms

ABP	Animal-By Product
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
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EU	European Union
FI	Financial Intermediary
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GMO	Genetically Modified Organisms
GoM	Government of Moldova
GRM	Grievance Redress Mechanism
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 (former)
MADRM	Ministry of Agriculture, Regional Development and Environment
MDL	Moldovan Lei
ME	Ministry of Environment (former)
NGO's	Non-governmental Organizations
OP	Operational Policy
PDO	Project Development Objective
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

Executive Summary

Project objective

The original Project Development Objective (PDO) – enhance the competitiveness of the country's agro-food sector by supporting the modernization of the food safety management system, facilitating market access for farmers, and mainstreaming agro-environmental and sustainable land management practices – allows the necessary scope to incorporate the newly proposed activities and will not require any changes.

Project description

The AF would be used for scaling up project activities under Component 1: Enhancing Food Safety Management aimed at strengthening human, institutional, and technical capacities of the country's food safety and quality management systems and ensuring regulatory and system compliance with sanitary and phytosanitary (SPS) standards on premium food export markets (primarily European Union [EU] and EU-aligned markets). To this end, the proposed AF would finance a series of activities and investments aiming to establish a comprehensive, EU-compliant system for the management of *animal by-products* (ABPs) unintended for human consumption. The AF would also finance costs related to Component 4: Project Management. In addition, the proposed AF would provide the necessary space for a series of activities related to the evolving COVID-19 situation and its potential impacts on the country's agriculture sector and food supply under Component 5: Compensatory Sales Support Grants.

The Project was originally designed to support the country's efforts in strengthening export competitiveness, attracting investment and enhancing access to premium food export markets. More specifically, the MACP set out to support reforms of the country's food safety management system, efforts to enhance access to markets through investment financing (to stimulate upgrades in post-harvesting infrastructure) and institutional development support (to create and strengthen productive partnerships), and efforts to mainstream the use of good agricultural practices and sustainable land management. The objective of the first AF was to support farmers affected by export restrictions on the Russian Federation market in order to avoid a collapse of the fruit growing sector. The objective of the second AF was to scale up activities of Component 2: Enhancing Market Access Potential. Now, the third AF will help the Republic of Moldova to implement an ABP management system.

The MACP is currently structured around five components:

Component 1: Enhancing Food Safety Management is supporting activities aimed at improving human, institutional and technical capacity of the country's food safety management system, as well as ensuring regulatory harmonization with EU requirements on food safety.

Component 2: Enhancing Market Access Potential is supporting activities aimed at improving marketability and market integration of Moldova's high value, horticultural products, where the country has proven comparative advantages in the production of fresh fruits and vegetables.

Component 3: Enhancing Land Productivity Through Sustainable Land Management is supporting activities aimed at mainstreaming sustainable land management practices and technologies, and rehabilitation of anti-erosion shelterbelts.

Component 4: Project Management is supporting costs associated with project implementation and coordination across various government agencies.

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

Location

The project activities under all components will be implemented country wide.

Project environmental 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 under this AF, and therefore, the Bank requires the client to screen all proposed subprojects and to ensure that subproject beneficiaries/implementing partners carry out appropriate *Environmental and Social Impact Assessment* (ESIA) for each subproject. For this purpose, the Client has prepared an Environmental and Social Management Framework (ESMF) to guide environment and social due diligence for the project supported interventions. The third AF will not require changes into the project safeguards category.

Potential project impacts

While generally the Project will provide many environmental and social benefits (such as increased food safety, including the implementation of a safe management of ABPs and increase in farmers' 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, including the construction of an ABPs management system; 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 project intervention areas, if not adequately implemented, may cause some environmental and social impacts related to: (a) increased pollution of ground and surface waters due to unsafe disposal of ABPs, 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; (d) solid wastes during processing of agricultural products; (e) community safety and health issues due to establishing ABPs management facilities closer to human habitats, settlements, nature conservation areas, pasture lands etc.; and (f) social and cultural values that might be detrimental to innovative approaches in agriculture and livestock processing investments. Additionally, the Project will support the rehabilitation of border control points, laboratory facilities and the construction of an ABP management facility, which may include 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 Safeguards

The Project triggers two WB safeguards policies 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 ESMF (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 ESMF includes 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. Such measures are described in the section VI of the ESMF.

The borrower confirmed the Project will not support activities and subprojects that might result in resettlement. The ESMF 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 ESMF 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.

Environmental and Social Management Framework (ESMF)

To address these potential negative impacts the project beneficiary prepared an ESMF, which specifies the *Environmental and Social Impact Assessment* (ESIA) requirements for the project activities and subprojects to be financed. This document covers the following: procedures for environmental and social screening; guidance for preparing subprojects ESIA and/or simple ESMPs as well as of ESMP Checklist for identified small scale construction and reconstruction activities; possible mitigation measures for different types of subprojects; establishment and functioning of a *Grievance Redress Mechanism* (GRM), requirements for monitoring and supervision of implementing of ESIA/ESMPs.

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 *Project Management Unit* (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 ESMF into project design and implementation

The ESMF 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 ensure compliance with the ESMF and site-specific ESMPs. The subproject ESMPs will be also integrated into the works 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.

ESM institutional arrangements and capacity

The proposed Project will be implemented by the Ministry of Agriculture, Regional Development and Environment (MARDE). MARDE has extensive experience in successfully implementing World Bank/GEF funded projects (ex. RISP-I/II, Avian Influenza, Moldova Agricultural Pollution Control and POPs projects). The Consolidated Agricultural Project Management Unit (CAPMU), which has nearly 15 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 with knowledge in social risk management, 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 to monitor ESMF implementation, providing, if needed, relevant guidance and support for safeguards management. The ESMF and subprojects ESMPs implementation will remain under the direct responsibility of the CAPMU, including responsibilities for supervision and monitoring of construction activities. Compliance with the ESMF and ESMPs and monitoring of the impact during the construction phase will be undertaken by the CAPMU Environmental Specialist as part of his contract supervisory duties.

ESM report disclosure and consultation

The Environmental Management Framework (EMF) prepared for the parent Project was disclosed and consulted in the country. On January 18, 2012, 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 updated version of the ESMF include additional mitigation measures to cover environment and social risks of the AF related tasks and its Romanian and English versions were posted on the CAPMU website and submitted to the World Bank for its disclosure on June 30, 2020 on its website. This revised ESMF will be used by the client during the Project implementation.

I. Project Context

1.1 Project objective

The development objective the proposed 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.

The safe ABP management agenda is aligned with the original MAC-P mandate, and as such the third AF will not trigger a change in the PDO as it is fully harmonized with its food safety aspirations for enhanced competitiveness through, among other, modernization of food safety and quality management systems.

1.2 Project key results

The project's result framework will be updated to include relevant indicators related to the scaled-up food safety activities.

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 continue to 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.

Original project. The MAC-P was approved by the World Bank (WB Board of Executive Directors on May 1, 2012. It is financed through: (i) an International Development Association (IDA) credit #50950 in the original amount of US$18.0 million; (ii) a fully-blended Global Environment Facility (GEF) grant #TF12145 of US$4.4 million; and (iii) a Swedish International Development Cooperation Agency (SIDA) grant #TF14946 in the original amount of US$3 million. A first AF in the amount of US$12 million of IDA credit #56390 was approved by the Board on May 19, 2015. A second AF in the amount of US$10 million of IDA credit #58580 was approved by the Board on July 8, 2016. The current Closing Date of the project is June 30, 2021.

This third AF in the amount of US$15 million of IBRD/IDA loan for Animal-By-Products Management will have the closing date on December 31, 2023.

The current Project includes the following components and activities:

Component 1: ***Food Quality and Safety Management System*** 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.*** 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 form 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:

i) 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;
ii) matching grant facility for farm- or enterprise-based investments for food safety compliance;
iii) matching grant facility for produce certification;
iv) 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
v) access to knowledge, business advice and market information;
vi) TA activities aimed at supporting emerging productive partnerships and providing assistance to the MAFI in promoting consumption and recognition of Moldovan produce; and
vii) 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 allows 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.* 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 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 Campaig*n, 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 Sothern 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 Sothern 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 eco-systems 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.* This Component will provide technical and financial support for project management. The implementation agency for the proposed Project will be the Ministry of Agriculture, Regional Development and Environment (MARDE). The Consolidated Agricultural Project Management Unit (CAPMU), which has nearly 15 years of experience in implementing World Bank and GEF funded projects will serve as a fiduciary agent for implementation agency. 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 firstly 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.

1.4 Description of project activities under third Additional Financing

The third *Additional Financing* (AF) and restructuring respond to a request from the GoM, dated February 19, 2020, for TA and IPF for tackling the ABP management agenda. The task team has discussed

alternatives to the proposed AF with the GoM, and an agreement was reached that it represents the most adequate response to the strategic intent to establish a comprehensive, EU-compliant system for the management of ABPs unintended for human consumption.

In the current Moldovan food production context, probably, the biggest such challenge – both for the public and the private actors – is the safe management and/or disposal of animal waste, particularly ABPs. The current methods and patterns of disposal of animal waste are not compliant with international best practice, resulting in high public health and environmental risks. To this end, safe management of ABPs is one of the key priorities identified in the framework of the Moldova-EU Association Agreement and the Deep and Comprehensive Free Trade Agreement (concluded in 2014) in relation to required institutional and technical enhancements of the country's food safety management system.

Description of proposed activities: *ABP Management System*

The design of the proposed AF is based on the technical and economic findings of a pre-feasibility study commissioned by the EU in 2018. The pre-feasibility study has proposed complete, albeit preliminary, solutions for the processing and/or disposal of ABPs, separated by categories of ABPs, and prioritized by degrees of urgency and relevance for economic, public health and environmental factors.

Safe disposal of Category 1 ABPs through systemic collection and incineration was determined as the most pressing need, and the recently adopted amendment to the Law #116 on Waste (August 15, 2019) that legalized the incineration of waste (including ABPs) created the legal space for relatively quick and inexpensive incineration-based solutions to be put in place. However, such solutions would be partial and less desirable in the long-run. A system that either combines management of all three categories (rendering) or tackles it in a split by Category 1 (incineration) and Categories 2+3 (rendering) would present a more comprehensive and sustainable solution. To be successful, both approaches would require substantial complementary infrastructure for collection, transportation and storing, organizational upgrades and behavioral changes, and very possibly the participation of the private sector in operating management facilities.

The proposed AF will, in a ***first phase***, include a set of activities aimed at finalizing the selection of the best technical solution and operational/business scenario for an ABP management system, including identification and designation by the GoM of locations/sites of main ABP management facilities, and a flow and traffic study.

The main elements to be addressed in the *first phase* are:

a) *Feasibility study*. While the pre-feasibility analyzed several "best" options in the absence of a clear ultimate financing outlook, the feasibility study will benefit from firm operative assumptions regarding the investment budget for each technical solution under consideration. This will allow for the consideration by the GoM of compromise-free options, as even the most complete technical solutions, at current and future estimated volumes of ABPs, could be financed by the financial envelope of the third AF. The main aspects of the feasibility study would include:

    i. Updating, and where necessary, enhancing current and future sector ABP volume data and modeling;
    ii. Developing detailed technical proposals, including technical specifications and plant design requirements, that would include solutions (possibly modular and accounting for future volume growth) for managing all types of ABPs;
    iii. Developing detailed investment cost estimates and operation and maintenance budgets for each proposed management solution;
    iv. Developing economic and financial projections for each technical solution;
    v. Developing operational and business scenarios, and options for best practice operational models involving private sector participants;
    vi. Analyzing existing ancillary systems such as the country's animal registry and agriculture support fund, and providing recommendations for pertinent improvements with potential to enable the establishment of a more effective and efficient ABP management system;

vii. Reviewing and providing recommendations on environmental and social aspects, in conformity with applicable national legislation and WB environmental and social safeguards, to be included as precursors for the implementation of the investment phase of the third AF.

b) *Flow and traffic study.* Following the selection of the final technical solution, and having identified and designated the locations/sites for the ABP management infrastructure, a traffic/transportation patterns study would be carried out to determine and optimize potential collection rounds, intensity and loads, factoring in the number of ABP generators, special requirements of ABP producers, needs for collection sites/points, potential quantities and types of ABP per collection point, collection frequency, collection rounds per vehicle, vehicle dispatching, maintenance and related services. The analysis should also produce optimize transport routes specifically for Category 1 ABPs; determine and quantify needs for central, intermediary and de-centralized collection points; determine the needs for temporary, temperature-controlled storage facilities for Category 1 ABPs, determine the size of the vehicle fleet required; and identify the handling equipment needs.

In a ***second phase***, the third AF will focus on putting in place the essential elements for an ABP management enabling system and critical infrastructure:

a. *Regulatory and operating framework.* The proposed AF would support the completion of all regulatory by-laws and operational directives required by the Law #129 on the Management of ABP's and derivative products unintended for Human Consumption. Specific regulations and operational directives (including ex-post financing of the ABM infrastructure) will be tailor-made for the technical solution and operational model chosen by the GoM.

b. *Outreach and awareness.* The third AF would support the implementation of a comprehensive outreach and awareness campaign aimed at inducing change in the behavior of generators of ABPs. A particular focus will be placed on smallholder and backyard household animal husbandry systems to ensure that these stakeholders have ample information on opportunities to safely dispose of animal carcasses and other types of ABPs. To ensure success, the outreach and awareness campaign will be implemented in close collaboration with local public authorities which have the best knowledge of the number of animals in backyard household systems and have the most salient interest in ensuring that livestock owners manage ABPs in a safe and responsible manner.

c. *Ancillary systems.* The third AF would support reasonable expenditures related to the upgrading of the country's animal registry system. In recent years, Moldova has made solid progress in updating its farm and animal registry systems, but they continue to suffer from technical, coverage and interoperability issues, thus diminishing their analytical and operational utility. The availability of sound data from animal registry will be an essential tool in operating the ABP management infrastructure in an optimized and efficient manner. The third AF would also support the costs related to the establishment of a call center, with a dedicated service number, intended for placing pick-up orders from ABP originators (with an emphasis on Category 1 and 2 ABPs) and facilitating a timely coordination of pick-ups and dispatching of the ABP collection fleet.

d. *Design and construction.* Finally, the proposed AF would support the design, construction and equipment for the establishment of the ABP management infrastructure, including incineration and/or rendering facilities (with separate work flows for each ABP category), and collection and storage points (including specialized collection vehicles).

II. National Circumstances

2.1 Physical context

Geographical location. Covering an area of 33,846 square km, Republic of Moldova is located in Central Europe, in the north-western Balkans. The country borders on Ukraine in the North, East and South and on Romania in the West, with the Western border line going along the river Prut (see the map). The Republic of Moldova is a Black Sea region country. Its southern border extends almost as far as the Black Sea coast, and the access to the Black Sea is open for the Republic of Moldova through the Dniester estuary and the Danube.

Relief. The relief of the Republic of Moldova is represented by hills and flatland areas, with uplands mostly in the central part of the country. The absolute altitudes are within the range of 429 m (Balanesti Hill) and 4 m above the sea level in the Dniester flood land (Palanca Village).

Climate. The climate of the Republic of Moldova is moderately continental, characterized by relatively mild winters with little snow, long warm summers and low humidity. The average annual air temperatures vary between 6.3-12.3°C, and amount of precipitations, respectively between 307-960 mm per year[1].

2.2 Natural resources

Land Resources. Republic of Moldova has unique land resources characterized by: predominant black soils (Chernozems) with high productivity potential; very high utilization rate (>75%); and rugged topography (above 80 per cent of the total arable land are located on hill slopes).

As of January 1, 2016, RM's total available land amounted to 3384.6 thousand hectares (NBS, 2016), including 2499.6 thousand ha (73.9%) – of agricultural land; of which 1822.9 thousand ha (53.9%) – arable land, 288.9 thousand ha (8.5 per cent) – perennial plantations; 347.1 thousand ha (10.3%) – hayfields and pastures; 40.6 thousand ha (1.2%) – fallow land; 465.2 thousand ha (13.7%) – fallow land; 96.7 thousand ha (2.9%) – rivers, lakes, water basins and ponds and 323.1 thousand ha (9.5%) – other lands (*Table 1*).

According to the General Land Cadaster of the Republic of Moldova, in 2016, the use of agricultural land by various landowners was as it follows: 74 state agribusiness enterprises with a total area of 179.1 thousand

[1] *Source:* Fourth National Communication of the Republic of Moldova under the United Nations Framework Convention on Climate Change, 2018.

ha (8.8%); 75 scientific research and education institutions with a total area of 20.9 thousand ha (1.0%); 132 of other enterprises and auxiliary households in state ownership - 72.4 thousand ha (3.6%); 34.8 thousand lands in the public property of the administrative-territorial units with a total area of 55.2 thousand ha (2.7%); 2,058 production cooperatives with a total area of 90.5 thousand ha (4.5%); 152 joint stock companies with a total area of 32.1 thousand ha (1.6%); 33.7 thousand limited liability companies - 745.5 thousand ha (36.8%); 366.4 thousand peasant farms - 526.8 thousand ha (26.0%); 788.3 thousand lands used individually by private owners with a total area of 230.3 thousand ha (11.4%); 35.5 thousand of orchard farms - 2.6 thousand ha (0.1%) and 96.9 thousand of other lands with a total area of 72.0 thousand ha (3.5%).

Table 1: Available land by category in the Republic of Moldova within 1992-2016, thousand ha

Land category	1992	2000	2005	2010	2012	2015	2016
Total land, including:	***3376.0***	***3384.4***	***3384.6***	***3384.4***	***3384.6***	***3384.6***	***3384.6***
Agricultural land, of which:	2565.9	2550.3	2521.6	2501.1	2498.0	2499.7	2499.6
Arable land	1736.3	1813.8	1840.2	1816.7	1810.5	1817.4	1822.9
Perennial plantations, of which:	474.8	352.3	297.8	301.0	298.7	291.7	288.9
Orchards	224.5	170.8	131.9	132.5	134.5	134.5	132.5
Vineyards	215.8	168.9	155.5	153.5	147.3	137.5	132.5
Pastures	350.5	373.9	370.8	352.1	350.3	346.4	345.0
Hayfields	4.3	2.5	2.7	2.2	2.0	2.2	2.1
Fallow land	0.0	7.8	10.1	29.1	36.5	42.0	40.6
Forest land and areas covered with woody vegetation	421.7	422.7	439.5	462.8	462.7	464.5	465.2
Rivers, lakes, water basins and ponds	88.7	95.5	96.8	96.4	99.5	96.8	96.7
Other lands	299.7	315.9	326.7	324.3	324.4	323.6	323.1

Source: Statistical Yearbooks of the RM for 1994-2016.

RM's *soil cover* is very diverse and comprised of above 745 soil varieties. The main soil types are: Chernozems (black soils) accounts for approximately 73.7% of the country's total territory; Grey forest soil (found mainly on elevations with altitudes above 200 m on the Northern Plateau, on hills along the Dniester and in the Codrii Zone) accounts for about 9.4%, and Brown forest soil (found on hilltops at altitudes exceeding 300 m, covered currently or previously with beech, hornbeam and oak tree forests) - respectively for about 0.6%; Alluvial soils (found in river floodplains and water meadows on recent alluvial deposits) account for approximately 10.2%; and Deluvial soils (formed on hill slopes and in valleys from soil particles brought by the land erosion processes) – respectively about 3.7% of the Republic of Moldova's total territory.

The extremely high land utilization rate in agriculture dictates the necessity of rational use, resource conservation, amelioration and protection of soils from erosion, landslides and other types of ill-considered human intervention.

Water Resources. The hydrographical network accounts for circa 2.7% of the country's territory and has a total length of circa 16,000 km. The main rivers are Dniester and Prut, with a small opening to the Danube in the South. Moldova's hydrographical network density is 0.48 km per square kilometer on the average, varying between 0.84 km/km^2 in the northern regions and 0.12 km/km^2 in the regions on the left bank of the Dniester. There are approximately 60 natural lakes and more than 3.5 thousand water storage reservoirs. There are also about 6,200 boreholes and 250 thousand water-wells and springs, estimated at 1,811 thousand m^3/day.

Biological Resources. Currently the flora of the Republic of Moldova comprises about 5638 plant species (superior plants – 2014 species while inferior plants – 3624 species). The ecosystems which have the richest flora composition include: the forest (above 850 species), steppe (above 600 species), high-water basin (approximately 650 species), pterophyte (about 250 species), water and swamp (about 160 species) systems.

The Republic of Moldova's fauna is relatively rich and manifold. There are above 15.0 thousand species of animals in the Republic of Moldova, including 461 species of vertebrates and above 14 thousand species of non-vertebrates. The vertebrates include 70 species of mammals, 281 bird species, 14 reptile species, 14 amphibian species and 82 fish species. Birds are highest in number among the vertebrates (281 species and subspecies), and insects - among non-vertebrates (above 12 thousand species).

There are five *natural reservations* established for scientific research purposes (Codrii, Iagorlic, Padurea Domneasca, Plaiul Fagului, Prutul de Jos) with the total area of 19.2 thousand ha in the RM.

Mineral Resources. In the RM mineral resources are extracted from 415 deposits, the most important being limestone, granite, bentonite clay and sandy clay, diatomite, gypsum and chalk stone. Most of the minerals are extracted from open mines, and only certain limestone varieties are mined from stone quarries (underground galleries).

2.3 Administrative-territorial organization, population and human development

Administrative-Territorial Organization. The Republic of Moldova is administratively divided into 32 districts (raions), 5 municipalities (Chisinau, Balti, Comrat, Tiraspol and Bender) and 2 administrative-territorial units: Administrative-Territorial Unit Gagauzia (ATU Gagauzia) and the administrative-territorial units on the left bank of the Dniester (ATULBD).

Population. As of 01.01.2016, the Republic of Moldova's population represented 4,030.3 thousand people, with the density of approximately 119.1 persons per square kilometer. Females prevail with 52.2% in the nation's population - as opposed to 47.8% of males in the total population. The majority of the population is concentrated in the rural areas.

The existing 1,614 rural settlements have 2,190.4 thousand residents or 54.3% of the total population, on average circa 1,400 residents per settlement. The urban population is 1,839.9 thousand residents or 45.7%, on average circa 27 thousand residents per settlement.

According to the data of the latest 2014 population census (held separately in the areas on the right bank of the Dniester and in the ATULBD), Moldovans/Romanians accounted for about – 73.1%, Ukrainians – 8.8%, Russians – 7.6%, Gagauz – 4.0%, Bulgarians – 1.9%, Gypsies – 0.3%, Jews – 0.7% and other nationalities – 3.5%.

Demographic situation. During 1990-2016 the demographic processes featured a negative development pattern, which showed itself in the general instability of demographic indicators and phenomena such as: falling birth rate, growing mortality, demographic ageing, depopulation and others. In 2016, the birth rate was 10.5‰ (17.7‰ in 1990), slightly lower the mortality rate (10.8‰ in 2016, respectively 9.7‰ in 1990); the infant mortality rate was 9.4‰ (19.0‰ in 1990); the share of population aged under 15 decreased down to 17.0% (27.9% in 1990), and the age group of persons above 57/62 years increased to 18.5% (12.6% in 1990); the 'average life expectancy at birth' indicator represented circa 72.2 years (68.0 years in 1990), of which 68.1 years for males (63.9 years in 1990) and 76.2 years for females (71.9 years in 1990).

Public Health. By the end of 2015 the health facilities network in the Republic of Moldova included: 85 hospitals, 1,029 medical facilities of ambulatory or polyclinic type, 42 sanitary-epidemiological facilities, 139 emergency stations and posts, three children homes and two tuberculosis sanatoriums.

The number of beds in hospitals represented circa 28.803 thousand or 52.9 beds per 10,000 populations; respectively, the total number of doctors was – 13.012 thousand or 36.6 doctors per 10,000 populations. Over the period from 1990 to 2015 the overall mortality rate tended to increase. The mortality breakdown analysis for 2015 has demonstrated that cardiovascular pathologies are still the main cause of death (57.7%), followed by tumors (15.1%), intestinal diseases (9.4%), injuries, poisoning and other consequences of external causes (6.9%) and respiratory diseases (4.6%). The mortality rates by region are not uniform, registering dramatic differences between the regions: the lowest mortality rates were reported in urban areas

(the municipality of Chisinau and in Balti), whereas the highest rates in northern and central districts (Donduseni, Briceni, Edinet, Drochia, Riscani, Floresti, Glodeni, Ocnita, Soldanesti and Rezina).

Between 2010 and 2016, the health care expenditures from public sources represented 5.6% (2010) – 5.1% (2016) from the GDP. Even if in nominal terms the amounts allocated for this sector increased (3.997 billion MDL in 2010, respectively 6.756 billion MDL in 2016), in real terms these have an oscillatory trend, for 2015 and 2016 being even a negative one. Consequently, in 2015, Republic of Moldova was one of the last countries in Europe regarding the share of public spending in total health spending. Respectively, the country's population has to compensate this deficit using its own resources in order to access healthcare services. At the same time, the pocket payments indicator is around 48% of the total health spending, with no prospects for improvement over the next period[2].

2.4 Agriculture[3]

In 2016, the agriculture production accounted circa 30.5 billion MDL (in current prices), an increase by 8.2% compared to the previous year (in similar conditions) by 18.6%.

The respective trend was driven by a 26.0% increase in vegetable production and a 3.1% increase in animal production.

Between 1991 and 2017, the agricultural production was characterized by fluctuations, with the best performance reported in 1993, 1997, 2004, 2008, 2013 and 2016, and with poor results – respectively in 1992, 1994, 1996, 1998, 2003, 2007, 2012 and 2015.

As the analysis on the influence of production types on the rhythm of crop yields indicated, in 2016, compared to the previous year, a more significant positive influence was determined by the increasing productivity of: cereals and leguminous crops (by 34.6%), sun flower (by 38.9%), fruits, berries and walnuts (by 19.2%), potatoes (by 35.0%), livestock (by 4.8%), vegetables (by 12.1%), grain rapeseed (by 2.7 times), which determined an increasing global agricultural production respectively by 8.1%, 4.5%, 1.5%, 1.0%, 0.9%, 0.8%, and by 0.7%.

In 2016, the share of crop yields within the total agricultural production represented 72% (in 2015 – 68%), of which: cereals and leguminous crops – 26.4% (23.3%), industrial crops – 17.4% (15.1%), potatoes – 3.3% (2.9%), vegetables – 6.3% (6.7%), fruits, berries and walnuts – 8.0% (8.0%), grapes – 7.0% (8.1%).

The animal production accounted for 28% (in2015 – 32%), of which livestock and poultry – 16.0% (18.2%), milk – 7.9% (9.4%), eggs – 2.9% (3.2%).

To be noted that between 1990 and 2015, the gross harvest of some agricultural crops significantly decreased in the Republic of Moldova, including: perennial grass for silo and green fodder – by 89.4%, annual grass for green fodder – by 78.2%, forage roots – by 74.7%, winter and spring barley – by 45.3%, leguminous crops – by 45.1%, oats – by 44.7%, winter wheat– by 43.5%, la grain maize – by 35.9%, tobacco – by 27.3%, leguminous maize – cu 24.6%, sun flower – by 21.4%, sugar beet – by 15.8% etc.

At the same time, in several sectors the production increased, including melons & gourds (by 127.7%), grain sorghum (by 75.0 per cent), buckwheat (by 63.1%), millet (by 11.1%), winter rye (by 6.7%) and potatoes (by 2.1%). However, these positive results are due, in particular, to the expansion of sown areas and less to the crop yields increase.

Plant Production. In 2016, agricultural production data show a significant increase driven by the growth of average crop harvest due to the year good weather conditions.

[2] *Ref.:* Dumitru Pântea, Ion Gumene (2016), Analiza cheltuielilor destinate ocrotirii sănătății în Republica Moldova. Expert-Grup, Centru Analitic Independent. Chișinău, Octombrie 2016. p. 26.

[3] *Source:* Fourth National Communication of the Republic of Moldova under the United Nations Framework Convention on Climate Change, 2018.

Compared to the previous year, the global crop yield increased by 772 kt or by 35% more (including wheat – by 368 kt or 40%, grain maize – by 302 kt or 28%), sugar beet - by 53 kt (by 10%), sun flower – by 188 kt (39 %), grain rapeseed – by 27 kt (2,7 times), potatoes – by 56 kt (35%), vegetables – by 47 kt (19%), fruits, berries and walnuts - by 105 kt (22%) and grapes – by 16 kt (3%).

In 2016, the agricultural enterprises have the main share in the production of: sugar beet – 93%, grain rapeseed – 92%, soybeans – 78%, tobacco – 77%, cereals and leguminous crops (exclusive corn) and sun flower – 73%. At the same time, farm households and family farms have the main share in the production of: melon & gourds - 98% of the total, potatoes – 89%, vegetables - 86%, grapes -75%, grain maize - 72% and fruits, berries and walnuts - 65%.

Over the 1990-2015 periods, the amount of synthetic and organic fertilizers applied to soils in the RM decreased by circa 77.5% and, respectively, 99.4%.

On average, about 31 kg of synthetic fertilizer were applied per one hectare of sown fields, recalculated to 100% nutrients (active substance – a.s.), compared to 134 kg applied in 1990 (by 77.6% less). As for the organic fertilizers, about 36 kg were applied per one hectare, compared to 5.6 tons in 1990.

In 2016, in agricultural enterprises and farm households there were introduced about 50 kg of synthetic fertilizers (recalculated to 100% a.s.), respectively 80 kg of organic fertilizers per one hectare of sown fields.

Livestock. Between 1990 and 2016, the livestock production significantly decreased in the RM, including cattle and poultry sold for slaughter (in live weight) – by 65.2%, milk yield – by 69.3%, egg production – by 41.4% and wool production – by 43.8%.

In 2016, compared to the previous year, the production of cattle and poultry in live weight increased for all categories of producers by 5% (in agricultural enterprises – by 12.1%, in farm households – by 0.8%). Egg production increased by 6.6% (in agricultural enterprises – by 14.4%, in farm households – by 1.5%). At the same time, milk production (for all categories) decreased by 1.2 per cent. In farm households milk production decreased by 1.6%, while in agricultural enterprises – an increase by 6.8% was recorded.

Over the 1990-2015 periods, the livestock population related to particular species decreased sharply: cattle – by 80.7% (dairy cows – by 65.0%, other cattle – by 90.0%), swine – by 73.8%, poultry of all categories – by 49.5%, sheep – by 41.5%, horses – by 15.0%. At the same time, during the period under review it was reported an increase regarding other species such as: goats – by 310.2%, rabbits – by 23.7%, asses and mules – by 16.0%.

As of December 31, 2016, in comparison to the respective period in the previous year, a decrease was recorded regarding the livestock – cows, sheep and goats both within the agricultural enterprises, as well as within farm households. At the same time, within the reference period, the number of cattle and swine within the agricultural enterprises increased. In 2016, the agricultural enterprises recorded an increase by 7% in milk yield compared to 2015, while the total egg production registered an increase by 15%.

Impact of the agriculture on the environment

The present agriculture system practiced in Moldova can be characterized as extensive and poorly organized. This is detrimental both to agriculture production and the status of soils and other natural resources. Big share of lands used in agriculture does not allow maintaining sustainable balance between natural and anthropic ecosystems, what results in degradation of soil, adversely affects the biodiversity and an environment, as a whole.

According to Land Cadaster (2019)[4] at the beginning of 2019, approximately one fourth of the agricultural land was under small family farms of average 1,5 ha. The rest of agriculture land was consolidated to various extents and in various forms (e.g. leasing, cooperatives, farmers associations, etc.).

[4] Approved by Governmental Decision on Land Cadaster #243 of April 24, 2019.

A land market is developing and agricultural land is being further consolidated. Since the consolidation of agriculture land is an ongoing process, now it is crucial to promote the approach of adapting agriculture activities to the concrete features of the landscape. Concerning potential impacts from crops production, during the last decade, the area of cereals (particularly wheat and corn) has increased considerably, while the areas cultivated with forage crops dropped.

The increase of areas under corn resulted in considerable loss of the soil organic matter, especially on slopes (in Moldova 80% of agriculture land is on slopes). The share of tilled crops steadily increased although to conserve the soil the proportion of tilled crops should be kept within 50% of the sown area.

The pesticides usage in agriculture are often out of control of environmental authorities because they are applied on private lands and their owners are not obliged by law to report on pesticides application. Over last years, the use of mineral fertilizer decreased 10-fold while amount of applied manure also dropped substantially.

Cattle breeding also raised environmental problem because of overgrazing of pastures; besides since the majority of cattle is kept in private household, solid wastes generated by cattle are not managed properly what contributes to soil, underground and water pollution by organic substances and pathogens. Fertilizers application and pasturing also strongly contribute to pollution of surface waters by nutrients which enter the water bodies with surface run-off.

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.

III. Environmental and Social Assessment Policies, and Procedures

3.1 Overview of key national environmental legal provisions

The Republic of Moldova is characterized by a new legislative base, that most of it was harmonized with EU *Acquis Communautaire* according to Association Agreement. Some of the main laws related to the project activities that will be implemented are indicated below in *Box 1*.

Box 1. Key national legal acts relevant to the Project

- Land Code #828-XII of Dec 25, 1991
- Law on the Environmental Protection #1515-XII of June 16, 1993
- Law on Ecological Expertise #851-XIII of May 29, 1996
- Law on Environmental Impact Assessment #86 of May 29, 2014
- Law on Air Protection #1422-XIII of Dec 17, 1997
- Law on State Supervision of Public Health #10-XVI of February 03, 2009
- Law on the Fund of Natural Areas Protected by the State #1538-XIII of February 25, 1998
- Law on chemicals #277 of Nov 29, 2018
- Law on access to information #982-XIV of May 11, 2000
- Law on Wastes #209 of July 29, 2016
- Law on Quality in Construction #721 of February 02, 1996
- Law on Town-planning and Territorial Development #835 of 1996
- Law on accreditation and conformity assessment activities #235 of Dec 01, 2011
- Law on Construction Works authorizations #163 of July 09, 2010
- Law on Green Spaces of the Urban and Rural Localities #591 of 1999
- Law on occupational safety and health #186-XVI of July 10, 2008
- Governmental Decision on Standard provisions on use of water supply and communal sewerage systems (2002)
- Governmental Decision on increasing of exploitation safety of buildings and constructions, installations and pipelines which are sources of a heightened risks (1996)
- Governmental Decision #80 of Feb 09, 2012 on the minimum safety and health requirements for temporary or mobile construction sites
- Governmental Decision #1000 of Oct 02, 2000 on the establishment of state-owned enterprises in the electricity sector
- Sanitary Rules on atmospheric air pollution prevention in localities (1998)
- Construction Norms and Regulations SNiP 2.04.01-04-85

The general evaluation of the main legal environmental acts and their relevancy to the Project are provided in *Table 2* below.

Table 2: Main national legal environmental acts relevant to the Project

Legal act	General overview	Relevancy with the Project
Law on the Environmental Protection #1515-XII of June 16, 1993	Establishes the basic legal framework for drafting special normative acts and instructions issues of environmental protection	Provides basic rules regarding environmental quality conditions, rights and duties of each actor with activities with potential impact to environment, - to be applied while conducting ESA for project activities
Law on State Ecological Expertise #851-XIII of May 29, 1996	Determines goals, objectives and principles of State Ecological Expertise (SEE), as well as basics of procedure	Provides the list and ESA procedure for the small economical activities that are subject of Ecological Expertise

Legal act	General overview	Relevancy with the Project
		– necessary for ESIA and implementation of project components
Law on Environmental Impact Assessment #86 of May 29, 2014	Establishes the goal of preparing documentation on the Environmental Impact Assessment (EIA), its procedure, coordination and approval, and includes the List of objects and types of activities for which an EIA is compulsory prior to their design	This law could be relevant for Project as the proposed activities are listed in the annexes 1 or 2 of this law
Law on Green Spaces of the Urban and Rural Localities #591 of 1999	Regulates relations in the field of development and protection of green spaces in urban and rural localities in order to ensure the right of everyone to a healthy and aesthetic environment	Regulates the identification and delineation of the green areas within the settlements' areas
The Water Law #272 of Dec 23, 2012	Establishes the legal framework necessary for the water management, protection and use	It is relevant as it specifies the procedures for obtaining water use authorizations
Land Code #828-XII of Dec 25, 1991	Establishes the relations and rights of land ownership and the basic requirements of land use and protection	It is relevant for establishing the procedures, duties and obligations under the land management
Law on State Supervision of Public Health #10-XVI of February 03, 2009	This law regulates the organization of the state supervision of public health, establishing general requirements to public health, the rights and obligations of physical persons and legal entities, procedure for the organization of system of the state supervision of public health. The Purpose of this law is providing optimum conditions for the maximum realization of potential of health of everyone throughout all life by means of organized efforts of society on the prevention of diseases, protection and promotion of health of the population, improvement of quality of life	It is relevant for the project and its provisions need to be reflected in the ESA documents
Law on Quality in Construction #721 of February 02, 1996	The provisions of this law are applied to construction and related facilities, hereinafter referred to as the building industry, in the design, construction and building, as well as in the stages of exploitation and interventions to existing buildings and post-utilization them, regardless of their form of ownership, destination, category and class or source of funding, in order to protect people's lives their goods, society and the environment	The law provisions are relevant to project activities and should be reflected in the ESA documents for all proposed civil work
Law on authorization of the executing the construction works #163 of July 09, 2010	The purpose of this law is to legalize the way of authorizing, approving and verifying the design work, execution or demolition of the buildings and approximate area according to urbanism planning and spatial planning documentation, by applying the system of normative documents in construction and in order to ensure transparency and visibility when issuing administrative acts and creating favourable conditions for the business environment. The provisions of the law are mandatory for authorizing the execution of constructions of any kind, category, destination and type of property, except for objects of a military or secret character, which are specifically authorized	Similarly – this law is relevant, and its requirements are applied for all civil works
Law on access to information #982-XIV of May 11, 2000	This law shall govern the rights of access to information of public importance held by public authorities, with a view to exercising and protecting the public interest to know and attaining a free democratic order and an open society	This is relevant for ensuring disseminating information about implementation of the project and about potential environmental and social impacts

Legal act	General overview	Relevancy with the Project
Law on Wastes #209 of July 29, 2016	The law sees that waste management methods will not endanger the environment, peoples' health and other living organisms. Authorities in charge are authorizing waste collecting, transportation, exploitation and disposal activities, avoiding water, soil, flora, fauna, phonic and air pollution. New methods must not endanger landscapes or protected areas	This is relevant for ensuring the waste management at the level of each institution for the solid waste management, including hazardous ones (ABP, asbestos etc.)
Law on Air Protection #1422-XIII of Dec 17, 1997	The law has the objective to maintaining the air quality and improving the air quality - component of the environment, preventing and reducing the adverse effects of physical, chemical, biological, radioactive and other factors on the atmosphere, with adverse consequences for the population and/or the environment, and regulates the activity of individuals and legal entities, irrespective of type of ownership and legal form of organization, when he/she directly or indirectly affects or may affect the air quality.	The law is relevant and requires measures for ensuring the air quality for the activities related to civil works and operations, and also for ensuring the legal requirements for noise during civil works and facility operations
Law on occupational safety and health #186-XVI of July 10, 2008	The present Law (1) regulates the legal reports regarding the establishment of measures regarding the safety and health of the workers in the workplace; (2) establishes the general principles regarding the prevention of occupational risks, the protection of workers at workplace, the elimination of risk and accident factors, the information, the consultation, the balanced participation, the training of the workers and their representatives.	The law is relevant and is mandatory to be followed in the case of construction and operation activities, ensuring OHS issues.

3.2 Overview of key national legal Acts and Regulations related to social aspects

In respect of the provisions of Constitution and for stronger implementation, it is was adopted few laws relevant for the social component, as described in *Table 3* below.

Table 3: Main national legal social acts relevant to the Project

Legal act	General overview	Relevancy with the Project
Law on Social Inclusion of Persons with Disabilities #60 of Mar 30, 2012	The law regulates the rights of persons with disabilities for their social inclusion, guaranteeing the possibility of their participation in all areas of life without discrimination, at a level identical to the other members of the society, having as a basis the respect of fundamental human rights and freedoms	The law is relevant and requires measures for ensuring the participation of person from socially vulnerable groups in the project activities, to promote and defend their interests
Law regarding the promotion of employment and unemployment insurance #105 of Jun 14, 2018	The purpose of the law is to prevent and reduce unemployment and its social effects, reduce the risk of unemployment and ensure a high level of employment and adapting to the demands of the labor market	The law is important to ensure the rights of employees
Law on Social Services #123 of Jun 18, 2010	The law establishes the general framework for the creation and functioning of the integrated system of social services, with the determination of the tasks and responsibilities of the central and local public administration authorities, of other legal and natural persons empowered to provide and provide social services, as well as the protection of the rights of the beneficiaries of social services;	The provisions of the law are important for ensuring the quality of public services and respecting the interests of consumers
Law on ensuring equal opportunities between women and men #5-XVI of Feb 09, 2006	The purpose of the Law is to ensure the exercise of their equal rights by women and men in the political, economic, social, cultural, other spheres of life, rights guaranteed by the Constitution of the Republic of Moldova, in order to	The provisions of the law are important for promoting women's interests in

Legal act	General overview	Relevancy with the Project
	prevent and eliminate all forms of discrimination according to the criteria of sex. The Law also introduces the notion of affirmative actions	exercising their rights in labor relations
Law on Access to Information #982/2000, as amended in 2003-2011-2015	The law regulates the interaction between the providers of information and individuals and/or legal entities during the exercise of their constitutional right to access information, the rights of applicants for obtaining the information, the obligations of information providers to ensure access to official information, methods of safeguarding the right to information	This is relevant for ensuring disseminating information about implementation of the project and about potential environmental and social impacts
Law on Freedom of Expression #64/2010, as amended in 2012-2013-2015	This Law guarantees right to freedom of expression and regulates the balance between right to freedom of expression and defense of private and family life	This is relevant for ensuring disseminating information about implementation of the project and about potential environmental and social impacts
Law on Transparency in Decision Making #239/2008	The law refers to the transparency of information linked with the decision-making process and to the consultation of stakeholders when drafting decisions	This is relevant for ensuring disseminating information about implementation of the project and about potential environmental and social impacts
Administrative Code of Republic of Moldova #116/2018	The Code establishes procedure for consideration of petitions of the RM citizens addressed to the relevant authorities/bodies (further - "bodies") for the purpose of ensuring protection of petitioners' rights and legitimate interests	This is relevant for ensuring for the early collection of information regarding the risks of non-compliance with environmental and social standards

Labour Management Procedures. In the Republic of Moldova the labor relations are regulated by the *Labor Code* (LC) and *Law on Occupational Health and Safety* (L-OHS), all the relevant provisions of these laws (*Table 4*) will be applied in relation to all project workers.

Table 4: The most important provisions relevant to the labor relations

The regulated subject	Reference	Brief description
Wages and deductions	LC, Art. 128-165	Regulates the minimum size of the income, the types and size of tax deductions exemptions, tax exemptions
Working Hours	LC, Art. 96	Regulates the duration of work and the categories of individuals who can benefit from a special work program
Rest breaks	LC, Art. 107, 109, 110	Regulates the duration and frequency of rest breaks
Leaves	LC, Art. 112-122	Regulates the rights of employees to annual leave, the rights and conditions to benefit from an unpaid leave
Over time works	LC, Art. 104	Regulates the conditions under which the employer can apply for overtime work, the additional payments for over time works
Labor disputes	LC, Art. 288, 357-361	Regulates the areas of disputes and the mechanism of dispute resolution between employers and employees
Employer's obligations	LC, Art. 198, L-OHS, Art. 9-12	Regulates the employer's obligations
Employees' Rights and Obligations	LC, L-OHS and the internal regulations of the employers	Regulates Employees' Rights and Obligations

3.3 Environmental assessment institutional framework

In the last years, environmental policies and management practices in Moldova have been under continuous changes. Even though these changes were more on institutional level their impact on the state of environment have been essential. One of the important instruments that influenced on the development of the environmental management in country constitutes the Association Agreement signed with European Union (EU). By this, Moldova must implement a reform agenda based around a comprehensive program of Moldova's approximation of its environmental (and not only) legislation to EU norms. Thus, in order to carry out the institutional reform and the capacity building in the environmental sector, have been created the *Environmental Agency* and *Inspectorate for Environmental Protection*, both institutions being functional. According to recent Governmental Reform, undertaken in July-September 2017, at central level the *Ministry of Agriculture, Regional Development and Environment* (MARDE) has been formed[5], it elaborates efficient public policies in the areas of competence (agriculture, food production; food safety; regional and rural development; spatial planning; environmental protection and climate change; natural resources), to monitor the quality of policies and normative acts and to propose justified interventions of the state that will offer effective solutions in the areas of competence, ensuring the best ratio between the expected results and the costs.

***Environmental Agency* (EA)** is an administrative authority[6] subordinated to MARDE responsible for the implementation of state policy in the following areas of activity: (a) prevention of environmental pollution; (b) protection of atmospheric air and climate change; (c) protection and regulation of the use of water resources; (d) the protection and regulation of the use of the animal and plant kingdom, of the aquatic biological resources; (e) conservation of biodiversity and management of natural areas protected by the state; (f) waste management; and (g) biosecurity. Among the *key functions* of the EA are:

- ensuring the implementation of public policy documents and environmental protection legislation both at national and local level;
- granting the technical support to the Ministry to substantiate the projects of public policy documents and normative acts in the field of environmental protection;
- regulating and authorizing activities with an impact on the quality of the environment, issuing permissive acts to the natural and legal persons for the activities of entrepreneur with environmental impact (authorizations, environmental agreements, permits, certificates, notifications, opinions and coordination), provided in the Nomenclature of permissive documents, approved by Law #160 of July 22, 2011 regarding the regulation by authorization of the entrepreneur activity;
- carrying out the monitoring of the quality of the environmental factors (monitoring of the quality of water, air, soil, forestry monitoring and of the natural areas protected by the state, monitoring of the status and use of water and soil resources, monitoring of the plant and animal kingdom, monitoring of fishing, monitoring of the state basement, air pollution monitoring, geological monitoring, environmental pollution monitoring) in order to provide natural and legal persons with information on environmental quality, developing the system of statistical indicators in the field of environmental protection, as well as for the elaboration and publication of the national report on the environmental status in the Republic of Moldova;
- creation and administration of cadastre and special registers, administration of the information and data system for its fields of activity and ensuring public access to environmental information.

Inspectorate for Environmental Protection – is organized and functions as an administrative authority under MARDE, empowered to carry out *the state supervision and control* in the field of environmental protection and use of natural resources[7].

[5] GD #695/2017 on MARDE regulation (Ref.: http://lex.justice.md/md/371190/)
[6] GD #549 of June 13, 2018 on Environmental Agency Regulation (Ref.: http://lex.justice.md/md/375961/)
[7] GD #548 of June 13, 2018 on Environmental Protection Inspectorate Regulation (Ref.: http://lex.justice.md/md/375960/)

3.4 Social and administrative/institutional framework

This framework is composed by the following state bodies:

Ministry of Health, Labor and Social Protection has the mission to analyze the situation and the problems in the areas of health, work, social protection and demographics, to elaborate efficient public policies in the fields, to monitor the quality of the policies and normative acts and to propose justified interventions of the state that will offer effective solutions in the areas of competence, ensuring the best ratio between the expected results and the expected costs.

The Ministry has under its subordination a range of agencies and institutions, that has as aim to implement the policy promoted by the Ministry. The institutions related to the social field, can be mentioned:

National Agency for Public Health is the administrative authority subordinated to the Ministry of Health, Labor and Social Protection, empowered to ensure the implementation of the policy in the field of national public health.

National Agency for Employment is the administrative authority subordinated to the Ministry of Health, Labor and Social Protection, empowered to ensure the implementation of the policy in the field of promoting employment, labor migration and unemployment insurance. Agency's mission is to increase the employment opportunities of people looking for a job and supports employers in identifying the skilled workforce and creating new jobs. The Agency carries out its tasks in the following fields: (i) the implementation of the employment promotion policy; (ii) labor force migration; and (iii) unemployment insurance.

State Labor Inspectorate is an administrative authority, which is empowered with the right to exercise state control over compliance with legislative acts and other normative acts in the field of work, safety and health at work. Social Inspection has the mission of inspecting the correct and unitary application of the laws and other normative acts that regulate the granting of the social aid, the aid for the cold period of the year and the social services. Thus, some of the actions of the inspection are: (a) ensuring the exercise of the inspection on the implementation of the provisions of the normative acts regarding the granting of the social aid, the aid for the cold period of the year and of the social services provided by the social service providers, regardless of the type of property and the legal form of organization; and (b) detecting and detecting violations of legal provisions in the field subject to inspection and informs the competent bodies.

The National Social Assistance Agency is an administrative authority subordinated to the Ministry of Health, Labor and Social Protection. The Agency's mission is to increase the quality of the social assistance granted to the population by implementing the state policy in the field of social assistance.

In its activity, the Agency exercises the following basic functions: (a) elaboration of the methodological framework for the unitary implementation of the legislation in the field of social assistance; (b) management of the activity of public institutions in which the Ministry of Health, Labor and Social Protection exercises the status of founder; (c) facilitating the process of consolidating the professional capacities of the personnel from the social assistance system; and (d) management of the financial means for financing the programs with special purpose in the field of social assistance and the minimum social services package.

The National Council for Accreditation of Social Service Providers is an administrative authority with the Ministry of Health, Labor and Social Protection, which has the mission to certify the capacity of social service providers, regardless of the type of property, the legal form of organization and administrative subordination and to provide qualitative social services.

The National Council for the Determination of Disability and Capacity of Work has the mission to ensure the fulfilment of the provisions of the normative acts in force regarding the determination of the disability and the capacity of work, having as final objectives the social inclusion of the persons with disabilities.

Temporary Placement Centers for elderly, children and people with disabilities (from few localities), as well Center for Assistance and Protection of victims and potential victims of trafficking in human beings,

that represents institution of social assistance and rehabilitation/recovery from the management of the *National Agency for Social Assistance*.

3.5 Environmental Impact Assessment procedures

In Moldova, the *Environmental Impact Assessment* (EIA) procedure was established by the Law on Environmental Impact Assessment #86/2014 and Law on State Ecological Expertise #851/1996. 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 EIA and require a full Environmental Impact Assessment before designing and can be further developed (detailed engineering design) with a positive approval of the EIA findings by the Agency of Environment (AE) – 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 m^3/day and more for underground water intake and 10 thousand m^3 per day for surface water intake), etc. As mentioned above such projects are not expected under the Project.

Second category (B) – projects which not listed in the Annex 1 to the Law on 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.

Projects that require SEE of design documentation

All projects, which may have negative impact to environment, but not listed in annexes to Law 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.

3.6 ESIA requirements under national legal framework applicable for potential AF activities

According to provisions of Art. 22 of the Law on Environmental Impact Assessment #86/2014, all activities that plan the construction of new objectives and/or installations, the extension or modification/modernization of the existing ones with potential impact on the environment, including the decommissioning projects, are classified according to the degree of impact on the environment, as follows:

1. *activities with low impact*, which no need Certificate of Urbanism for *Detail Design* (DD) and *Construction Authorization* (CA) in conformity with Law #163/2010 for authorization of construction works;
2. *activities with moderate impact* – are considered activities described in the Annex #1 of Law #851/1996 on ecological expertise which involves the use of natural resources, modification of landscape, generation of wastes, emission and discharge of pollutants and which can cause the change of the environment and the components of the nature and according to applicable laws it is necessary Ecological Expertise of the DD and CA;
3. *activities with significant impact at national level* – the activities indicated in the Annex 2 to the Law #86/2014 for which the Environmental Impact Assessment is necessary to determine, as well as those mentioned in sbp. (2) that, after carrying out the preliminary assessment stage, the necessity of carrying out the EIA procedure is established, and the *Environmental Agreement* is issued or refused.
4. *activities with significant impact* at national level and on cross border context– the activities indicated in the Annex 1 to the Law #86/2014 for which the Environmental Impact Assessment is mandatory, as well as those mentioned in sbp. (2) that, after carrying out the preliminary assessment stage, the necessity of carrying out the EIA procedure is established, and the *Environmental Agreement* is issued or refused. The documentation submitted for obtaining the *Environmental Agreement* will be the basis for issuing the permissive act for the realization and development of the project, before beginning the construction works and putting into operation the objective.

Considering specified provisions, the proposed project investments ***are the subject*** of the State Ecological Expertise and of Construction Authorization.

3.7 World Bank policies 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 & Social Impact Assessment (ESIA), regional or sectorial EA, environmental audit, hazard or risk assessment and/or Environmental & Social Management Plan (ESMP).

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 5* below).

Table 5: 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 the decision-making process	**Yes** (refer to the description below)
Natural Habitats (OP/BP 4.04) 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.
Forestry (OP/BP 4.36)	No – as all project activities will be implemented on existing agricultural lands.

Safeguard Policies	*Relevance*
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	
Pest Management (OP 4.09). 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.
Physical Cultural Resources (OP/BP 4.11) 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
Indigenous Peoples (OP/BP 4.10) 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
Involuntary Resettlement (OP/BP 4.12) 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 or land acquisition. 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 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.
Safety of Dams (OP/BP 4.37) 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.
Projects on International Waterways (OP/BP 7.50) 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 result in adversely change the quality or quantity of water flows to the other riparians.
Disputed Areas (OP/BP 7.60) 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.
Disclosure Policy (BP 17.50) 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.

3.8 The comparison of national and WB EA procedures

While the basic provisions of the national EA rules and procedures are to some extent similar to the WB requirements, there are several important differences. These differences are related primarily to the following: (a) project environmental screening categories; (b) Environmental Management Plan; and (c) EIA disclosure and public consultation.

Differences in screening categories. In the existing EIA legal framework there is formal EIA categorization system and the State Ecological Expertise (SEE) requires that all projects with a potential environmental impact should have in the project design an assessment of the potential impact as well as a set of mitigation measures. Thus, all projects with some environmental impact would require an environmental assessment and, respectively, SEE. These would include in most cases rehabilitation, maintenance and upgrading projects, afforestation and biodiversity conservation activities. The projects which do not require an EA mainly correspond to activities which are expected to have minor impacts on the environment and therefore do not need to be passed through the formal procedures of EIA and SEE (institutional development, technical assistance and procurement of farm equipment activities).

The scale of the project EA is decided in each case by the SEE/Ecological Inspectors during the preliminary approval of the project location and of its technical specifications. In the case where World Bank and national categorization/EA requirements differ, the more stringent requirement will apply. This refers mostly in the case of deciding about Category C sub-projects - the national EIA legislation does not refer to small scale activities, including agriculture adaptation and construction and rehabilitation of various buildings while per WB requirements these sub-projects should be qualified as Category B[8]. In these cases the client will apply the WB criteria and requirements, preparing EMP Checklist.

Differences concerning EMP. While the national legislation requires for all projects with potential environmental impacts to have relevant mitigation measures in place, it does not require a special EMP which should specify, along with the proposed mitigation activities, a monitoring plan and reporting requirements, institutional arrangements for EMPs implementation. Neither does the national legislation require needed capacity building activities and necessary expenses in this regard. Similarly, in the case of Category B sub-projects, the beneficiaries will be required to apply WB rules and prepare EMPs.

Differences with regard to disclosure and public consultation. There is no full harmonization between World Bank and national requirements in this regard. According to national legislation, the EIA disclosure and public consultation is mandatory only for large projects (WB Category A projects). At the same time, per the Law on SEE the public might organize at its own initiative a public ecological expertise. The public expertise would be conducted on the basis of a NGOs' written request toward local public authority[9]. While organizing such expertise, within 7 days, the local public authorities should inform the NGO about decisions taken concerning permission to do so. Public associations/NGOs conducting ecological expertise are obliged to inform the broad local public about the beginning of expertise and its results. These NGOs have the right to obtain planned and project documentation as well as documentation on the EIA and get acquainted with normative-technical documentation on conducting of the SEE. The results of the public ecological expertise are delivered to the bodies conducting the SEE and to the bodies which make decisions on the implementation of activity – the subject of Ecological Expertise. The results and conclusion of the public ecological expertise have a recommendation character and can have the legal power only after their approval by the responsible state body in the field of ecological expertise. The results of the public ecological expertise can be published in mass-media, delivered to the local public authority, and other interested stakeholders.

[8] It should be noted that projects/activities considered Category "B" by the World Bank can cover a wide spectrum of potential risks, requiring different EA documentation – from simple environmental assessments to only an EMP Checklist.

[9] No private citizen has the right to conduct public Ecological Expertise.

In the case of World Bank EA policy, the beneficiary is responsible for conducting at least one public consultation for all Category B projects to discuss the issues to be addressed in the EMF or to discuss the draft EMP itself. Therefore, for the project, the implementing agency will review any documentation of the public consultation conducted in the preparation of any national EA documentation to determine if it is consistent with World Bank requirements. If the national public consultation is satisfactory, there would be no further consultation requirement. However, if no public consultation was conducted or the implementing agency determines that the public consultation documentation is not adequate, the beneficiary will be required to perform at least one public consultation to discuss the environmental issues of concern to the locally affected communities and address these issues in the EMP.

Documentation for the consultation should be submitted to the implementing agency as part of the project file. The Romanian language version of the EMP and the record of the public consultation should be located at in public location near the project site and, if available - on the Beneficiary website. The EIA of all Category B projects would be made available to project-affected groups and local NGOs in an easily accessible project management website.

IV. Potential Environmental and Social 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.;
(iv) *small-scale incineration technology for ABPs* (if determined during Feasibility Study): air emissions of both conventional (e.g., particulate matter) and toxic pollutants may pose risks that potentially affect workers, operators and local communities; contribution to water pollution, etc.

These potential impacts are summarized in the *Table 6* below.

Table 6: Potential negative impacts generated by sectorial and construction activities

Enterprise Category	Potential Impacts	Level of Significance
Agro-processing	• water and energy consumption • water pollution • waste disposal • air quality • human health and safety	High High High Moderate Moderate
Agriculture	• 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 (civil works)	• soil erosion • soil pollution • land degradation/ aesthetics • air pollution • acoustic • water pollution	Moderate High High Moderate High Moderate
ABP incineration*	• air emissions • water pollution • human health and safety	High High Moderate

* *Note:* The best option and technical solution on ABP incineration technology, including the impacts associated, will be determined by the planned Feasibility Study.

All these impacts are expected to be easily mitigated through good projects design and implementation practices (see *Annexes 8-9*).

4.2 Potential social impacts

Social risk category related to interventions to be conducted in line with the third AF is rated "Low". The project does not involve any land acquisition or resettlement related impacts. The activities to be implemented under the Project will generate a number of both *direct* and *indirect positive impacts*.

In general, non-land related social impacts can be discussed at 'contextual' and 'project specific'. At contextual or country level, the project impacts may be felt largely by rural population. In terms of the territorial aspects, the social impacts will be primarily analyzed from the ***rural population*** lenses (which represents 56,9% out of the total[10]). The female population remains predominant with a ratio of 93 men per 100 women. In rural areas, especially in farming and livestock, women are the active labor force. However, gender discrepancies in labor force participation exist where women are less well-paid than men. Gender earnings gap is especially high in higher-skilled and higher-paying jobs (9% in agriculture, but 29% in financial services)[11]. By implementing projects of this nature, women may have more benefits if the project implies a gender sensitive approach. Also, the country has significant unemployment issue, mainly in rural areas. The unemployment rate (the share of ILO unemployed in the labor force) at the country level registered the value of 5.1% (SDG indicator 8.5.2). *Youth unemployment* is also extremely high – about 30% of young people are either unemployed or not enrolled in any formal training. Moreover, the impact of economic crisis as an effect of the pandemic situation is expected to have a direct and high impact in the evolution of the situation. Another contextual social aspect specific to Moldova is the significant outmigration of people. Moldova has one of the highest migration rates in Europe and last year was listed among those countries where women constitute more than half of all migrants. The rural communities are particularly affected by migration, with a total of 68.8% of all migrants or 13% of rural human capital (33.3% of the economically active population in rural areas). Once returned, the conditions for reintegration and success on the job market are still not favorable, putting the skills, education and resources at waste, with lack of long-term perspective for career.

The vulnerable disadvantaged households also concentrated largely in rural areas. Elderly families left by young generation live in subsistence level with minimum income and lack of sustainable livelihood. Single parent or ***monoparental families***[12], which according to most recent statistics represent around 16% out of the total families, and the current social protection system and labor marked has a very poor capacity to support them. People with ***disabilities*** another vulnerable group which represent 5.1% of total population of the country, and children with disabilities constitute approximately 1.7% of all children from Moldova. Local labor market remains excluded to integration of people with disabilities as the employment rate in 2019 was 16.5%. In the distribution by sex, this indicator registered the values: 15.9% for men and 17.2% for women. The employment rate of people with disabilities in rural areas was higher (17.0%) compared to the rate for those in urban areas (15.6%). Overall, 18% of the population can be considered as poor and disadvantaged who live with minimum state sponsored social assistance; nevertheless, the lack of institutional attention and dedicated budget provisions, aggravated by slow job growth, remain major obstacles to eradicate poverty and vulnerability on the country.

In this context, implementation of the third AF would likely serve as a stimulant for increased economic activity in the agriculture and food sectors (all activities related to animal husbandry and production of composite foodstuffs with elements of animal origin), as improvements in food safety will broaden prospects for increased and more diversified production both for domestic and export markets of diary, meat and derivative products. In addition to economic and trade benefits, addressing the lagging topic of

[10] Total population reported by the National Bureau of Statistics for 2019 was 3542,7 thousands inhabitants.
[11] World Bank. 2017. Republic of Moldova. Country Gender Action Plan.

safe disposal of ABPs will have multiple beneficial externalities for the environment and public health considerations.

At project level, some direct *positive social impacts* can be expected through the creation of new jobs and respectively, more employment and increased income. *Indirect positive impacts* will relate to overall improving of business environment in the livestock sector, 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.

The negative or adverse social impacts are mostly due to lack of understanding on improved animal by production systems and modern incinerators by the local people. There might be some social reactions from some sections of the society who hold views on animal food products, nature conservation and traditional norms of agriculture and livestock management. The site-specific ESMPs will include a screening checklist to ensure that adverse social impacts including land related issues (*Annex 2*) Research studies suggest that the social, economic, and psychological effects for a particular animal waste-incineration facilities might be favorable, neutral, or adverse depending on many site-specific conditions and characteristics. For example, human habitat and the demographic composition of the area around the location proposed to establish ABP facilities can be expected to change as time passes because people's sensitivity to socioeconomic impacts, such as a decline in property values etc. Other countries, citizen concerns have been critical animal waste incinerators and have routinely reported opposition due to incineration tend to focus on the adverse health and environmental effects of the facilities. Even though opposition may arise from small number of people and such groups do not necessarily represent the sentiments of all others living in their proximity; in fact, it can be expected that a number of community members will be indifferent and that, among those who do care, some will advocate or be willing to consider the startup of the facility while others will be adamantly opposed. From social risk mitigation perspective, the views of citizens who are inclined to oppose animal waste incineration need to be heard and understood. If not, conflicts can intensify, and they can increase the time and delay in project implementation.

Therefore, public consultations supported by communication and awareness campaign should be geared on how local concerns best can be addressed in interactions with members of the communities in the area proposed ABP and incinerators. The key social impact mitigation measures, therefore, having robust and inclusive stakeholder/public consultations at locational level and enhanced grievance redress mechanism which people may able to lodge their concerns, suggestions and complaints to make project interventions beneficial and people friendly.

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 and Social Guidelines and Procedures

5.1 Procedures to address environmental and social issues

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

(a) 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 ESIA and prepare a simple EMP;
(b) Generic mitigation measures for potential environmental impacts of the project activities and subprojects;
(c) Description of the EMP Checklist to be applied for subprojects and activities related to small scale (re)construction activities;
(d) Description of the EMP format for Category B subprojects; and
(e) Requirements for conducting supervision, monitoring and reporting activities.

5.2 Subprojects environmental and social 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 and social impacts, the CAPMU will decide which project category should be attributed. For that purpose it should be used a special Environmental and Social Screening Checklists (see *Annexes 1-8*). These documents will be attached to all submitted subprojects (*Table 7*).

Table 7: Environmental and Social Assessment Procedure Documents by project categories

Pre-parer	ESA Document	Subproject activities and categories					
		New facilities		Upgrading existing facilities		Construction/ re-construction	
		C	B	C	B	C	B
B	Environmental and Social Screening Checklist Part 1 (Annex 1)	X	X			X	X
FI	Environmental and Social Screening Checklist Part 2 (Annex 1)	X	X			X	X
PIU	Environmental and Social Screening Checklist Part 3 (Annex 1)	X	X			X	X
FI	Field Inspection Checklist (Annex 3)		X				X
B	Environmental and Social Impact Assessment Study (Annex 4)		X				X
B	Environmental and Social Screening Checklist Part 1 (Annex 5)			X	X		
FI	Environmental and Social Screening Checklist Part 2 (Annex 5)			X	X		
PIU	Environmental and Social Screening Checklist Part 3 (Annex 5)			X	X		
B	Environmental and Social Audit Protocol (Annex 6)				X		
B	Environmental and Social Management Plan (Annex 7)		X		X		X
B	ESMP Checklist for small constructions (Annex 8)					X	X

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

5.3 Subprojects social screening

The social screening should be done at the initial stage, as soon as the *Feasibility Study* will be conducted the GoM will select the "best" option for the sector. For that purpose, it should be used a special Social Screening Checklist (see *Annex 2*).

5.4 Generic mitigation measures for proposed activities and subprojects

The full set of preventive and mitigatory measures for potential activities in project specific components developed by the World Bank Group in 2007[13] in its Environmental, Health, and Safety Guidelines, as well as outlined in the Best Available Techniques to the EU Integrated Pollution Prevention Control Directive[14], documents which could be consulted while conducting the ESIA studies and preparing the Environmental and Social Management Plans (see *Annexes 7-8*).

5.5 Occupational health and safety

Occupational Health and Safety (OHS) hazards may occur during construction, maintenance, and operation of new facilities and equipment, and must be carefully managed.

The Contractor will develop a Method Statement before starting construction works on site, and this document will be approved by the Employer.

Many workers will be exposed to occupational health and safety hazards, primarily including, but not limited to:

- Lack of awareness on occupational health and safety requirements such as the use of *Personal Protective Equipment* (PPE) and safe workplace practices;
- Electrical works;
- Exposure to chemicals (as paints, solvents, lubricants, and fuels);
- Traffic accidents;
- Excavations hazards;
- Lifting of heavy structures;
- Exposure to construction airborne agents (dust, silica and asbestos);
- Welding hazards (fumes, burns and radiation).

In particular, prevention and control measures must ensure that only trained and certified workers access the facilities or any area that could present occupational health and safety hazards, with the necessary safety devices and respect for minimum setback distances.

Considering the current situation with COVID-19 in the country, in addition to the measures for safety and protection at work, the OH&S plan also should include measures for prevention of COVID-19. Detailed description of the measures and recommendations from the World Bank/WHO, Government of Republic of Moldova and National Commission on Public Health are presented in *Annex 10*. The COVID-19 prevention measures contains recommendations from the World Bank/WHO, as well as recommendations from the Moldova's in the form of a Guide, that the Contractor of the construction works needs to implement. The Contractor is required to follow/update and implement the measures that are currently in force and adopted by the Government as binding at national level. Official site for information related to COVID-19 on national level is *www.msmps.gov.md* and *www.ansp.md.*

[13] See: http://www.ifc.org/ifcext/sustainability.nsf/Content/EnvironmentalGuidelines
[14] See: http://europa.eu/legislation_summaries/environment/waste_management/l28045_en.htm

5.6 Environmental and Social Management Plan (ESMP)

A project's environmental and social 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 7*). An ESMP is a key element of an EA report for all Category B subprojects.

ESMP Checklists

In the case when the project would involve typical small scale (re)construction activities it is proposed to be used a generic ESMP checklist-type format ("ESMP 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 8*). 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 and Social Management Plan to meet Environmental and Social Assessment requirements of the World Bank (under OP/BP/GP 4.01). Such ESMPs will be applied for rehabilitation of analytical laboratory facilities, border inspection points as well as the ABP neutralization facility.

The ESMP Checklist (see *Annex 8*) 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.

ESMP 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 ESMP. *Annex 7* describes information requirements to be included in the documentation of the public consultation.

5.7 Grievance Redress Mechanism

Addressing grievances raised by individuals affected by World Bank-funded projects is an important component of managing project risks. A GRM can serve as an effective tool for early identification, assessment and resolution of grievances and therefore for strengthening accountability to beneficiaries. The GRM serves as an important feedback mechanism that can improve project impact and mitigate the undesirable ones. The GRM mechanism will be available to project stakeholders and other affected parties to submit questions, comments, suggestions and/or complaints and provide any form of feedback on all project-funded activities. The Grievance Redress Mechanism will be housed and operated by the National Rural Development Agency (ACSA).

Awareness Building

The information about the GRM will be also available on the websites of the Ministry of Agriculture, Rural Development and Environment, the National Food Safety Agency and the Consolidated Agricultural Project Management Unit (CAPMU). The GRM will be included in the communications conducted with the project stakeholders, beneficiaries, project affected persons through the communications methods and tools that are part of the stakeholder engagement plan and communications plan under the project, including emails, website, workshops, face-to-face meetings. Specifically, the information will contain the objective of the GRM, the procedure to make a complaint (where, when and how), the investigation process, the timeframe(s) for responding to the complainant, as well as the principle of confidentiality and the right to make anonymous complaints.

Roles and Responsibilities for GRM

The responsibilities for the management of the GRM system include the following and may be updated from time to time in consultation with the MARDE, NFSA, CAPMU and the World Bank task teams. These functions will be performed by assigned staff of the National Rural Development Agency (ACSA):

- Overall management of the GRM system
- Developing and maintaining awareness-building
- Collection of complaints
- Recording of complaints
- Notification to the complainant on the receipt and timeline to review a complaint
- Sorting/categorization of complaints
- Thorough review of the issues, including the causal link between project activities and alleged damage/harm/nuisance
- Decision-making based on such examination
- Processing appeals or continuous communication with complainants with the purpose to resolve issues amicably
- Publishing responses to complaints, unless otherwise is requested by complainants due to privacy or other concerns
- Organization and implementation of information materials and awareness campaigns
- Reporting and feedback on GRM results.

Monitoring and Reporting on GRM Implementation

Policies, procedures and regular updates on the GRM system will be made available. ACSA team will regularly track and monitor the status of complaints to ensure that all grievances are resolved within the established time-frame. Reporting on GRM implementation will be made on semi-annual basis. CAPMU will make sure all Progress Reports will contain a separate chapter on GRM implementation. All progress reports will be made publicly available to all stakeholders and will contain the following information:

- Status of establishment of the GRM (procedures, staffing, awareness building, etc.)
- Quantitative data on the number of complaints received, the number that were relevant, and the number resolved
- Qualitative data on the type of complaints and answers provided, issues that are unresolved
- Time taken to resolve complaints
- Any issues faced with the procedures/staffing or use
- Factors that may be affecting the use of the GRM/beneficiary feedback system
- Any corrective measures suggested/adopted.

5.8 Reporting on incidents

Reporting on incidents will be carried out by representatives involved in the construction and operation of the ABP management system in Moldova to document any workplace illnesses, injuries, near and accidents.

An incident report shall be completed at the time an incident occurs no matter how minor an injury is. The report will be developed in line with the Moldovan legislation in place, but also following the WB guidelines on work place safety and health, ESIRT procedures.

5.9 Subprojects monitoring

Environmental and social safeguards monitoring during project implementation provides information about key environmental and social aspects of the project activities, particularly on the 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 ESMF 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 ESMF.

Specifically, the monitoring section of the subprojects *Environmental and Social Management Plan* (ESMP) provides (see *Annex 7*): (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.

Environment and Social Management Plan

Following the national legislation and WB guidelines on the ESMF, CAPMU will make sure that an ESMP will be developed as part of the 3AF implementation, considering the specificity of the investment.

The first phase of the Project will require the development of a *Feasibility Study* that will analyze the best options, technical solutions and the investment budget to be required, considering current and future volumes of ABPs in the Republic of Moldova. Therefore, the feasibility will contain a separate chapter on ESMP describing the mitigation measures to be taken on both environmental and social aspects.

At the second phase of project implementation the ESMP will be enhanced and implemented following the bidding and construction processes, outreach and awareness campaigns, as well as during the operational stage of the ABP management system.

Integration of the ESMP into project documents

The ESMP provisions would be used for the following: (a) inclusion of the ESMF requirements in the Project Operational Manual; (b) inclusion of Environmental and Social 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 ESMP 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 ESMP. The necessary mitigating measures would constitute an 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.

Subprojects environmental and social 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 environmental, labor and construction inspectors. Semiannually the PMU will present short information about the ESMF implementation and subprojects environmental and social performances as part of the Progress Reports to be presented to the WB by the client.

5.10 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 ESMP are adequately implemented. In this regard this body will be responsible for:

(a) coordination of environmental and social related issues;
(b) monitoring of the environmental and social impacts within the overall monitoring of the subprojects implementation;
(c) communication with a competent authorities (MARDE, EA, IEP others.); and
(d) ensuring the links between an ESIA and the subprojects i.e. to support the proper implementation of the conditions given by an ESIA within the subproject realization.

In particular the PMU will conduct the following:

(a) subprojects environmental and social screening;
(b) carry out the evaluation of the subproject's eligibility from the environmental and social point of views;
(c) provide necessary information on the environmental and social issues to the subprojects applicants (especially inform them about the environmental and social criteria to be used, explain all obligations regarding the ESIA procedure etc.).

Additionally, the CAPMU will be also responsible for supervising independently or jointly with the Inspectorate of Environmental Protection the mitigation and environmental protection measures stipulated in ESMP.

National ESIA requirements applicable for proposed project activities

According to national ESIA requirements, CAPMU will submit the subproject environmental documentation to the Environmental Agency for State Ecological Expertise (SEE). No subproject 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.

The proposed activities under third AF will be in detail analyzed considering specified in Annex 1 and Annex 2 of Law on the Environmental Impact Assessment #86/2014. Based on that, the Environmental Agency will decide whether the planned activity is subject to the full EIA, or the EIA is not necessary. It is to mention, that the final option of ABP management technology/facility that should be environmentally assessed, will be decided after the planned *Feasibility Study*.

In the same time, according to Law #851/1996, the State Ecological Expertise is carried out for the facilities and planned economic activities that have not been subjected to the EIA, and can influence the environment and/or envisage the use of natural resources, regardless of the purpose, location, type of ownership and subordination of these facilities, the amount of capital investments, the source of funding and the manner of execution of construction works. The project documentation for the "*Waste disposal plants with a*

capacity of less than 50 tonnes per day", set out in Annex 1 of the Law #851/1996, are the subject of the State Ecological Expertise.

Also, the proposed project activities should be complying and be carried out in accordance with the provisionss of Law #163/2010 on authorization of construction works, Art. 12 on the conditions for issuing the Construction Authorization.

It is to note, that according to provisions of Art. 22 of the Law on Environmental Impact Assessment #86/2014, all activities that plan the construction of new objectives and/or installations, the extension or modification/modernization of the existing ones with potential impact on the environment, including the decommissioning projects, are classified according to the degree of impact on the environment, as follows:

1. *activities with low impact*, which no need Certificate of Urbanism (CU) for Detail Design (DD) and Construction Authorization (CA) in conformity with Law #163/2010 on authorization of construction works;
2. *activities with moderate impact* – are considered activities described in the Annex 1 of Law #851/1996 on ecological expertise which involves the use of natural resources, modification of landscape, generation of wastes, emission and discharge of pollutants and which can cause the change of the environment and the components of the nature and according to applicable laws it is necessary Ecological Expertise of the DD and CA;
3. *activities with significant impact at national level* – the activities indicated in the Annex 2 to the Law #86/2014 for which the Environmental Impact Assessment is necessary to determine, as well as those mentioned in sbp. (2) that, after carrying out the preliminary assessment stage, the necessity of carrying out the EIA procedure is established, and the *Environmental Agreement* is issued or refused.
4. *activities with significant impact* at national level and on cross border context– the activities indicated in the Annex 1 to the Law #86/2014 for which the Environmental Impact Assessment is mandatory, as well as those mentioned in sbp. (2) that, after carrying out the preliminary assessment stage, the necessity of carrying out the EIA procedure is established, and the *Environmental Agreement* is issued or refused. The documentation submitted for obtaining the *Environmental Agreement* will be the basis for issuing the permissive act for the realization and development of the project, before beginning the construction works and putting into operation the objective.

Considering specified provisions, it is to mention, that the impact degree of proposed project investments under the third AF for ABP facility will be clarified after the planned feasibility study.

Supervision and monitoring activities

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

Reporting

Regular subproject progress reports should include a section entitled "Environmental and Social 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 ESMPs implementation

During the (re)construction/implementation phase, the ESMP 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 ESMP 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 ESMF 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 Management[15]

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 IPM through preparation and implementation of an *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;

[15] 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* (PMP). 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 PMP 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 11*.

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 8* below.

Table 8: Information dissemination and training activities

Nr.	Items of the training and information dissemination activities	Target group	Number of training sessions and participants	Requested financing
Training				
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	
Field demonstrations with improved pesticides usage and IPM technologies				
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	
Preparing and disseminating information materials				
5	Preparing and publishing a special publication on Pest Management in horticultural sector	One comprehensive publication ad 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. ESMF Disclosure and Public Consultation

7.1 Public/stakeholder consultation

The third AF aims for a proactive and regular engagement with potential beneficiaries such as local authorities and citizens (including, but not limited to, smallholder/backyard livestock and poultry owners) and will be responsive to their views to ensure that processes for successful ABP management are properly established and taken on, and that ABPs are managed in a safe and responsible manner.

The proposed AF would set up the following stakeholder engagement strategy:

i) participatory planning through focus group discussions in the vicinity of locations/sites of the planned main ABP management facilities (this will provide communities the opportunity to guide the design of the new ABP management system by collecting and putting forth for consideration views and concerns regarding ABP management processes);
ii) Public consultations at each of the sites of subprojects prior to implementation of the subproject and establish local /community monitoring groups to ensure informed decisions were taken and public are fully aware the positive and adverse impacts, if any
iii) participatory monitoring and beneficiary feedback through local governments (monitoring of the functioning and processes of the new ABP management system and collecting and responding to feedback, concerns and complaints of local citizens); and
iv) annual *Open Door Days* hosted in relevant communities (where livestock owners are informed about the new processes and how previous inputs have been used to inform the ABP management system).
v) Establishment of public information portal at local authority level with brochures and information of project related activities including contact details of project/local authority staff for further information, suggestions, and concerns, if any.

These events will aim to also involve vulnerable local citizens and ensure that dialogues are established to assess needs and gaps of the new ABP processes enabling further improvements. An additional beneficiary feedback indicator is introduced in the results framework to better capture the effectiveness and responsiveness of the citizen engagement processes.

7.2 ESMF disclosure

Prior public consultation and final approval of the EMF, on January 18, 2012, 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.

This updated ESMF final version for the 3rd AF will be disclosed on both, national (CAPMU website) and WB website and is replacing the version of April 11, 2016.

7.3 ESMF consultations

On January 26, 2012, the CAPMU conducted the first 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 was used by the client during the MACP project implementation.

The updated for third AF the ESMF document have been disclosed on May 25, 2020 for *Public Consultation* (PC) on CAPMU official website. In addition to that, on May 28, 2020 the document has been disclosed on Civic.md website, which is specially designed for public consultations of such types of documents. All interested parties have been invited to submit virtually their comments and questions to CAPMU by June 08, 2020. By specified time no comments of suggestions on the ESMF document have been received (see *Annex 12*). Stakeholders consultations on ESMF will continue through project implementation and documents will be updated where needed.

References

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Law on occupational safety and health #186-XVI of July 10, 2008
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Law on quality in construction #721 of February 02, 1996
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Law on the environmental protection #1515-XII of June 16, 1993
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World Bank Documents&Reports Site – http://documents.worldbank.org

Moldova Agriculture Competitiveness Project
Environmental and Social Management Framework

Annexes

Annex 1: Environmental Screening Checklist (for new facilities)

ENVIRONMENTAL SCREENING CHECKLIST

Part 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?	☐	☐	☐
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.)	☐	☐	☐
Land degradation: Will the project applies pesticides?	☐	☐	☐
Land, habitats & ecosystems degradation: In case of cattle production, will the project contribute to land, habitats and ecosystems degradation?	☐	☐	☐
Land & soil degradation: Will the project involve land excavation?	☐	☐	☐
Generation of solid wastes, including toxic wastes?	☐	☐	☐
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?	☐	☐	☐
Land Erosion & Degradation: agricultural crop production & plantation crop production - will the project presume appropriate agricultural practices?	☐	☐	☐
Biodiversity Loss: enlargement of area under the agricultural crop production	☐	☐	☐
Soil & underground water pollution	☐	☐	☐
Land degradation, water pollution & aesthetics: Construction	☐	☐	☐
Other impacts	☐	☐	☐
Air quality			
Will the project provide pollutant emissions?	☐	☐	☐
Will the project generate specific air pollution (dioxins, furans, etc)	☐	☐	☐
Aquatic environment			
Water Quantity: Will the project involve water use?	☐	☐	☐
Water Quality/Pollution: Will the project contribute to surface water pollution	☐	☐	☐
Underground and Surface Water Pollution: Will the project applies pesticides and inorganic fertilizers contributing to surface water pollution?	☐	☐	☐
Loss of Biodiversity: Will the project involve introduction of alien species (e.g., in case of aquaculture projects)?	☐	☐	☐
Loss of Biodiversity: Will the project located in vicinity of protected area or wetlands supporting both local avifauna and birds on passage?	☐	☐	☐
Degradation of natural aquatic ecosystems	☐	☐	☐
Weeds, pests, diseases: will the project contribute to spreading of weeds, pests and animal and plant diseases?	☐	☐	☐
Sedimentation of waterbodies	☐	☐	☐
Other impacts	☐	☐	☐
Socio-economic environment			
Will the project assure non-deterioration of human health, occupational safety and non-disturbance of residents living near project area?	☐	☐	☐
Does the project require public consultation to consider local people environmental concerns and inputs?	☐	☐	☐
Social impacts	☐	☐	☐

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 *ESMF Annexes 7-8*)

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 sawn 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
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?	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	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) Ploghing and tillage: ploughing across the slope & contour tillage

Component	Mitigation Measures
appropriate agricultural practices?	3) On lands which are subject to erosion preferable cultivation of plants with require dense sawing (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	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	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?	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)?	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?	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	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 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	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.

Component	Mitigation Measures
alien species (e.g., in case of aquaculture projects)?	
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:
_____	_____
_____	_____
_____	_____

_____ *Date:*

Environmental Screener

Annex 2: Screening checklist to assess social impacts and risks of subprojects

Probable Social Impacts/Risks	Yes	No	Not Known	Details
1. Will the intervention include new physical construction work?				
2. Does the intervention include upgrading or rehabilitation of existing physical facilities?				
3. Is the intervention likely to cause any permanent damage to or loss of housing, other assets, resource use?				
4. Is the site chosen for this work free from encumbrances and is in possession of the Public/government/community land?				
5. Is this sub project intervention requiring private land acquisitions?				
6. If the site is privately owned, can this land be purchased through negotiated settlement? (Willing Buyer – Willing Seller)				
7. If the land parcel has to be acquired, is the actual plot size and ownership status known?				
8. Are these land owners willing to voluntarily donate the required land for this sub-project?				
9. Whether the affected land owners likely to lose more than 10% of their land/structure area because of donation?				
10. Is land for material mobilization or transport for the civil work available within the existing plot/ Right of Way?				
11. Are there any non-titled people who are living/doing business on the proposed site/project locations that use for civil work?				
12. Is any temporary impact likely?				
13. Is there any possibility to move out, close of business/commercial/livelihood activities of persons during constructions?				
14. Is there any physical displacement of persons due to constructions?				
15. Does this project involve resettlement of any persons? If yes, give details.				
16. Will there be loss of /damage to agricultural lands, standing crops, trees?				
17. Will there be loss of incomes and livelihoods?				
18. Will people permanently or temporarily lose access to facilities, services, or natural resources?				
19. Will project cause loss of employments/jobs				
20. Will project generate excessive labor influx as a result of new constructions				
21. Does construction activities require additional/skilled labor from outside the locality				
22. Will subproject/construction activities cause destruction/disturbance to host community living				
23. Will construction of new buildings, drainage lines create any degradation for the adjacent houses, wells, lands,				
24. Will this intervention create any inter-group or intragroup tensions/conflicts				
25. Are any disadvantaged & vulnerable groups (including indigenous people, socially marginalized communities such as Roma, elderly, homeless, ethnic minorities living in proposed locations or affected by the intervention?				
Overall Assessment of potential impacts and proposed mitigations measures, if any:				

Annex 3. 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 4. Terms of Reference for conducting an Environmental and Social Impact Assessment (ESIA) Study

TERMS OF REFERENCE

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

An Environmental and Social Assessment Report Categories B projects focuses on the significant environmental and social issues raised by a Subproject. Its primary purpose is to identify environmental and social 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 and social 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 and social 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 and Social Management Plan (ESMP).* 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 ESA 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 5. Environmental and Social Screening Checklist (for existing facilities)

ENVIRONMENTAL AND SOCIAL 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** *(row 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 AND SOCIAL 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 AND SOCIAL 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 6. Environmental and Social Audit Protocol Outline (for existing facilities)

ENVIRONMENTAL AND SOCIAL 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 and Social 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 7. Environmental and Social Management Plan (ESMP)

Scope and objectives of an Environmental and Social Management Plan. An Environmental and Social Management Plan (ESMP) should outline the mitigation, monitoring and administrative measures to be taken during project implementation to avoid or eliminate negative environmental and social impacts. The EMP identifies feasible and cost-effective measures that may reduce potentially significant adverse environmental and social 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 and social 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 and social 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 ESMP format provided below (see *Attachment 1*) represents a model for development of an ESMP document. The model divides the project cycle into three phases: construction, operation and decommissioning. For each phase, the preparation team identifies any significant environmental and social impacts that are anticipated based on the analysis done in the context of preparing an environmental and social 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 ESMP 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 and social mitigation identified in the analysis included in an environmental and social assessment a monitoring plan is necessary. Environmental monitoring during project implementation provides information about key environmental and social aspects of the project, particularly the environmental and social 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 ESA report and the mitigation measures described in the ESMP. Specifically, the monitoring section of the ESMP 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 and social 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 and social project components and mitigation measures, the ESMP draws on the ESA's assessment of the existence, role, and capability of environmental units on site or at the agency and ministry level. If necessary, the ESMP recommends the establishment or expansion of such units, and the training of staff, to allow implementation of ESA recommendations. Specifically, the ESMP 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 and social management capability in the agencies responsible for implementation, most ESMPs 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 ESMP 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 ESMP. These figures are also integrated into the total project cost tables.

Integration of ESMP 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 ESMP 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 ESMP 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 and Social *Management* Plan Format

Phase	Environmental/Social Impact	Mitigating Measure(s)	Cost		Institutional Responsibility		Remarks
			Install	***Operate***	***Install***	***Operate***	
Construction							
Operation							
Decommissioning							

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

Attachment 2. Environmental and Social *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	
						Install	**Operate**	**Install**	**Operate**
Baseline									
Construction									
Operation									
Decommissioning									

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

Annex 8. ESMP 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			
Will the site activity include/involve any of the following?	**Activity**	**Status**	**Triggered Actions**
	A. Building rehabilitation	[ ] Yes [ ] No	See Section **A** below
	B. Minor new construction	[ ] Yes [ ] No	See Section **A** below
	C. Individual wastewater treatment system	[ ] Yes [ ] No	See Section **B** below
	D. Historic building(s) and districts	[ ] Yes [ ] No	See Section **C** below
	E. Acquisition of land[16]	[ ] Yes [ ] No	See Section **D** below
	F. Hazardous or toxic materials[17]	[ ] Yes [ ] No	See Section **E** below
	G. Impacts on forests and/or protected areas	[ ] Yes [ ] No	See Section **F** below
	H. Handling / management of medical waste	[ ] Yes [ ] No	See Section **G** below
	I. Traffic and Pedestrian Safety	[ ] Yes [ ] 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

[16] 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.
[17] 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 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

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
F. Affected forests, wetlands and/or protected areas	Protection	(a) All recognized natural habitats, wetlands and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities. (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 (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 (d) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.
G. Disposal of medical waste	Infrastructure for medical waste management	(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: ▪ 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	(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 ▪ 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 s**upervision**							

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

Annex 9. Anticipated Environmental and Social 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	• 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	• 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	• 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	• 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: – 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	• Convert refrigerants from ozone depleting substances (NH3 and chlorofluorocarbons) to a hydrofluorocarbon

Activity	Potential impact	Proposed mitigation measures
Operation	High energy consumption	• 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	• Proper application of cold storage technologies, implement good management practices • Ensure adequate storage of damaged fruits and their safe reutilization or transportation
	Noise	• 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	• 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	• 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: – Recover condensate from heating processes and reuse – Close the cooling water circuit and re-circulate cooling waters
	Water contamination	• 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

Activity	Potential impact	Proposed mitigation measures
		• 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 • 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	• 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	• 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	• 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	• 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.

Activity	Potential impact	Proposed mitigation measures
	Impact on human health	• 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 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	• 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	• 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	• 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)	• 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 an 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	• 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

Activity	Potential impact	Proposed mitigation measures
		• 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	• 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	• Insulate storage room/areas and use of automatically closing doors and airlocks • Optimize processes for energy efficiency
	Generation of construction wastes	• 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: – 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
Operation	High energy consumption	• 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	• 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	• 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)

Activity	Potential impact	Proposed mitigation measures
		• Minimize inventory storage time for raw materials to reduce losses from putrefaction • 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	• 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	• 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 10. COVID-19 considerations in construction/civil works projects

(model)

Taking into account the new situation with the appearance of the virus COVID-19, besides the standard measures for safety and protection at work it is necessary to implement measures for protection from COVID-19.

Undoubtedly, the Contractors will face many challenges in the new situation, such as:

- Inability to purchase protective equipment and disinfectants due to lack on the market,
- Lack of labour due to limited movement and absences from work,
- Inability to provide materials and work equipment due to congestion in all segments of life in the country,
- Employees' concerns about their livelihoods due to reduced workload, etc.

First, it is necessary to implement the measures for protection from COVID -19 adopted by the Government of the Republic of Moldova at the proposal of the National Commission on Public Health and the Ministry of Health, Labour and Social Protection. **These measures should be constantly updated in accordance with the latest provisions introduced by the Government**.

The Contractor is required to nominate a responsible person who will follow the measures adopted by the Government and will apply them in the operation of the construction site at the project location.

Links of the national institutions responsible for COVID-19 where the Contractor could find updated information and recommendations:

- **Government of the Republic of Moldova –** https://gov.md/ro
- **Ministry of Health, Labour and Social Protection –** https://msmps.gov.md/en
- **National Agency of Public Health –** https://ansp.md/

The Contractor also needs to implement the requirements introduced by the World Bank related to the protection of COVID-19.

Regarding the COVID-19 considerations in construction/civil works projects given by the World Bank, they are divided in several segments/issues and in details are shown on *Table* below.

Table: COVID-19 considerations in construction/civil works projects recommended by WB

Covid-19 issues	Type of activities
The Contractor should identify measures to address the COVID-19 situation taking into account the location, existing project resources, availability of supplies, capacity of local emergency/health services, the extent to which the virus already exist in the area. PIU and Contractor should establish specific procedures for addressing COVID 19 issues on the construction site. Procedures should be implemented, documented and updated in accordance with the latest changes introduced by the Government and the conditions on the construction site.	
Assessing workforce characteristics	• The Contractor should prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations; • This should include a breakdown of workers who reside at home (i.e. workers from the community), workers who lodge within the local community and workers in on-site accommodation (i.e. workers camp). Where possible, it should also identify workers that may be more at risk from COVID-19, those with underlying health issues or who may be otherwise at risk; • Consideration should be given to ways in which to minimize movement in and out of site. This could include lengthening the term of existing contracts, to avoid workers returning home to affected areas, or returning to site from affected areas.

Covid-19 issues	Type of activities
Entry/exit to the work site and checks on commencement of work	• Establishing a system for controlling entry/exit to the site, securing the boundaries of the site, and establishing designating entry/exit points (if they do not already exist). Entry/exit to the site should be documented; • Training security staff on the (enhanced) system that has been put in place for securing the site and controlling entry and exit, the behaviors required of them in enforcing such system and any COVID -19 specific considerations; • Training staff who will be monitoring entry to the site, providing them with the resources they need to document entry of workers, conducting temperature checks and recording details of any worker that is denied entry; • Confirming that workers are fit for work before they enter the site or start work. While procedures should already be in place for this, special attention should be paid to workers with underlying health issues or who may be otherwise at risk. Consideration should be given to demobilization of staff with underlying health issues; • Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site; • Providing daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods; • During the daily briefings, reminding workers to self-monitor for possible symptoms (fever, cough, and other respiratory symptoms) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell; • Preventing a worker from an affected area or who has been in contact with an infected person from returning to the site for 14 days or (if that is not possible) isolating such worker for 14 days; • Preventing a sick worker from entering the site, referring them to local health facilities if necessary or requiring them to isolate at home for 14 days.
General hygiene	• Placing posters and signs around the site, with images and text in local languages (MK/ALB); • Ensuring handwashing facilities supplied with soap, disposable paper towels and closed waste bins exist at key places throughout site, including at entrances/exits to work areas; where there is a toilet, canteen or food distribution, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces. Where handwashing facilities do not exist or are not adequate, arrangements should be made to set them up. Alcohol based sanitizer (if available, 60-95% alcohol) can also be used; • Training workers and staff on site on the signs and symptoms of COVID-19, how it is spread, how to protect themselves (including regular handwashing and social distancing) and what to do if they or other people have symptoms; • Setting aside part of worker accommodation for precautionary self-quarantine as well as more formal isolation of staff who may be infected.
Cleaning and waste disposal	• Providing cleaning staff with adequate cleaning equipment, materials and disinfectant; • Training cleaning staff on appropriate cleaning procedures and appropriate frequency in high use or high-risk areas; • Where it is anticipated that cleaners will be required to clean areas that have been or are suspected to have been contaminated with COVID-19, providing them with appropriate PPE: gowns or aprons, gloves, eye protection (masks, goggles or face screens) and boots or closed work shoes. If appropriate PPE is not available, cleaners should be provided with best available alternatives; • Training cleaners in proper hygiene (including handwashing) prior to, during and after conducting cleaning activities; how to safely use PPE (where required); in waste control (including for used PPE and cleaning materials); • Any medical waste produced during the care of ill workers should be collected safely in designated containers or bags and treated and disposed of following relevant requirements. If open burning and incineration of medical wastes is necessary, this should be for as limited a duration as possible. Waste should be reduced and segregated, so that only the smallest amount of waste is incinerated.
Adjusting work practices	• Decreasing the size of work teams; • Limiting the number of workers on site at any one time; • Changing to a 24-hour work rotation; • Adapting or redesigning work processes for specific work activities and tasks to enable social distancing, and training workers on these processes; • Continuing with the usual safety trainings, adding COVID-19 specific considerations. Training should include proper use of normal PPE. While as of the date of this note, general advice is

Covid-19 issues	Type of activities
	that construction workers do not require COVID-19 specific PPE, this should be kept under review; • Arranging (where possible) for work breaks to be taken in outdoor areas within the site; • Consider changing canteen layouts and phasing meal times to allow for social distancing and phasing access to and/or temporarily restricting access to leisure facilities that may exist on site, including gyms; • At some point, it may be necessary to review the overall project schedule, to assess the extent to which it needs to be adjusted (or work stopped completely) to reflect prudent work practices, potential exposure of both workers and the community and availability of supplies, taking into account Government advice and instructions.
Project medical services	• Expanding medical infrastructure and preparing areas where patients can be isolated. Isolation facilities should be located away from worker accommodation and ongoing work activities. Where possible, workers should be provided with a single well-ventilated room (open windows and door). Where this is not possible, isolation facilities should allow at least 1 meter between workers in the same room, separating workers with curtains, if possible. Sick workers should limit their movements, avoiding common areas and facilities and not be allowed visitors until they have been clear of symptoms for 14 days. If they need to use common areas and facilities (e.g. kitchens or canteens), they should only do so when unaffected workers are not present and the area/facilities should be cleaned prior to and after such use. • Training medical staff, which should include current WHO advice on COVID-19 and recommendations on the specifics of COVID-19. Where COVID-19 infection is suspected, medical providers on site should follow WHO interim guidance on infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected; • Assessing the current stock of equipment, supplies and medicines on site, and obtaining additional stock, where required and possible. This could include medical PPE, such as gowns, aprons, medical masks, gloves, eye protection, etc..; • Review existing methods for dealing with medical waste, including systems for storage and disposal.
Local medical and other services	• Conducting preliminary discussions with specific medical facilities, to agree what should be done in the event of ill workers needing to be referred; • Obtaining information as to the resources and capacity of local medical services (e.g. number of beds, availability of trained staff and essential supplies); • Clarifying the way in which an ill worker will be transported to the medical facility, and checking availability of such transportation; • Agreeing with the local medical services/specific medical facilities the scope of services to be provided, the procedure for in-take of patients and (where relevant) any costs or payments that may be involved; • A procedure should also be prepared so that project management knows what to do in the unfortunate event that a worker ill with COVID-19 dies. While normal project procedures will continue to apply, COVID-19 may raise other issues because of the infectious nature of the disease. The project should liaise with the relevant local authorities to coordinate what should be done, including any reporting or other requirements under national law;
Instances or spread of the virus	• If a worker has symptoms of COVID-19 (e.g. fever, dry cough, fatigue) the worker should be removed immediately from work activities and isolated on site; • The worker should be transported to the local health facilities to be tested (if testing is available and permitted under national legislation); • If the test is positive for COVID-19 or no testing is available, the worker should continue to be isolated. This will either be at the work site or at home. If at home, the worker should be transported to their home in transportation provided by the project; • Extensive cleaning procedures with high-alcohol content disinfectant should be undertaken in the area where the worker was present, prior to any further work being undertaken in that area. Tools used by the worker should be cleaned using disinfectant and PPE disposed of; • Co-workers (i.e. workers with whom the sick worker was in close contact) should be required to stop work, and be required to quarantine themselves for 14 days, even if they have no symptoms; • Family and other close contacts of the worker should be required to quarantine themselves for 14 days, even if they have no symptoms; • If a case of COVID-19 is confirmed in a worker on the site, visitors should be restricted from entering the site and worker groups should be isolated from each other as much as possible; • If workers live at home and has a family member who has a confirmed or suspected case of COVID-19, the worker should quarantine themselves and not be allowed on the project site for 14 days, even if they have no symptoms;

Covid-19 issues	Type of activities
	• Workers should continue to be paid throughout periods of illness, isolation or quarantine, or if they are required to stop work, in accordance with national law; • Medical care (whether on site or in a local hospital or clinic) required by a worker should be paid for by the employer.
Continuity of supplies and project activities	• Identify back-up individuals, in case key people within the project management team (PIU, Supervising Engineer, Contractor, sub-contractors) become ill, and communicate who these are so that people are aware of the arrangements that have been put in place; • Document procedures, so that people know what they are, and are not reliant on one person's knowledge; • Understand the supply chain for necessary supplies of energy, water, food, medical supplies and cleaning equipment, consider how it could be impacted, and what alternatives are available. Early pro-active review of international, regional and national supply chains, especially for those supplies that are critical for the project, is important (e.g. fuel, food, medical, cleaning and other essential supplies). Planning for a 1-2 month interruption of critical goods may be appropriate for projects in more remote areas; • Place orders for/procure critical supplies. If not available, consider alternatives (where feasible); • Consider existing security arrangements, and whether these will be adequate in the event of interruption to normal project operations; • Consider at what point it may become necessary for the project to significantly reduce activities or to stop work completely, and what should be done to prepare for this, and to re-start work when it becomes possible or feasible.
Contingency planning for an outbreak	The contingency plan to be developed at each site should set out what procedures will be put in place in the event of COVID-19 reaching the site. The contingency plan should be developed in consultation with national and local healthcare facilities and follow state guidance for COVID-19 response, to ensure that arrangements are in place for the effective containment, care and treatment of workers who have contracted COVID-19. The contingency plan should also consider the response if a significant number of the workforce become ill, when it is likely that access to and from a site will be restricted to avoid spread. Contingencies should be developed and communicated to the workforce for: • Isolation and testing procedures for workers (and those they have been in contact with) that display symptoms; • Care and treatment of workers, including where and how this will be provided; • Getting adequate supplies of water, food, medical supplies and cleaning equipment in the event of an outbreak on site, especially should access to the site become restricted or movements of supplies limited. Specifically, the plan should set out what will be done if someone may become ill with COVID-19 at a worksite. The plan should: • Set out arrangements for putting the person in a room or area where they are isolated from others in the workplace, limiting the number of people who have contact with the person and contacting the local health authorities; • Consider how to identify persons who may be at risk (e.g. due to a pre-existing condition such as diabetes, heart and lung disease, or as a result of older age), and support them, without inviting stigma and discrimination into your workplace; and • Consider contingency and business continuity arrangements if there is an outbreak in a neighboring community. Contingency plans should consider arrangements for the storage and disposal arrangements for medical waste, which may increase in volume and which can remain infectious for several days (depending upon the material). The support that site medical staff may need, as well as arrangements for transporting (without risk of cross infection) sick workers to intensive care facilities or into the care of national healthcare facilities should be discussed and agreed. Contingency plans should also consider how to maintain worker and community safety on site should sites closed to comply with national or corporate policies, should work be suspended or should illness affect significant numbers of the workforce. It is important that worksite safety measures are reviewed by a safety specialist and implemented prior to work areas being stopped.

Covid-19 issues	Type of activities
Training and communication with workers	• Regular information and engagement with workers (e.g. through training, town halls, tool boxes) that emphasizes what management is doing to deal with the risks of COVID-19. Workers should be given an opportunity to ask questions, express their concerns, and make suggestions; • Training should address issues of discrimination or prejudice if a worker becomes ill and provide an understanding of the trajectory of the virus, where workers return to work; • Training should cover all issues that would normally be required on the work site, including use of safety procedures, use of construction PPE, occupational health and safety issues, and code of conduct, taking into account that work practices may have been adjusted; • Communications should be clear, based on fact and designed to be easily understood by workers, for example by displaying posters on handwashing and social distancing, and what to do if a worker displays symptoms.
Communication and contact with the community	• Communications should be clear, regular, based on fact and designed to be easily understood by community members; • Communications should utilize available means. In most cases, face-to-face meetings with the community or community representatives will not be possible. Other forms of communication should be used; online platforms, social media, posters, pamphlets, radio, text messages, virtual meetings. The means used should take into account the ability of different members of the community to access them, to make sure that communication reaches these groups; • The community should be made aware of procedures put in place at site to address issues related to COVID-19. This should include all measures being implemented to limit or prohibit contact between workers and the community. The community should be made aware of the procedure for entry/exit to the site, the training being given to workers and the procedure that will be followed by the project if a worker becomes sick.
Covid-19 reporting	Contractor should report an outbreak for a ‘Serious’ incident. The Contractor should keep the Borrower informed of any concerns or problems associated with providing care to infected workers on project sites, particularly if infection rate is approaching 50% of the workforce.

Annex 11. Recommended Structure of a Pest Management Plan

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 are 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 12. Report on Consultation on the Draft ESMF with interested parties

Date: May-June, 2020
Venue: Chisinau

Location/ venue	Objective	Invitees	Participants	Summary, conclusions and comments
Chisinau	To describe the Project, including AF activities and ESMF and solicit feedback	The invitation to participate in Consultation will be sent electronically to the following institutions: • MARDE • ANSA • Environmental Agency • National environmental NGOs • Interested agencies		The updated ESMF for 3rd AF was disclosed on May 25, 2020 for *Public Consultation* (PC) on CAPMU official website. In addition to that, on May 28, 2020 the document was published on Civic.md website, which is specially designed for public consultations of such types of documents. All interested parties have been invited to submit virtually their comments and questions to CAPMU by June 08, 2020. By specified time, although the document has recorded 340 views on www.capmu.md website only, no comments or suggestions on the ESMF document have been received. Stakeholder consultations on ESMF will continue through project implementation and documents will be updated where needed.

Annex 13. 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/toc2/55FA484A98BC2E68852567CCC005BCBDB?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