

Republic of Moldova

MOLDOVA CLIMATE ADAPTATION PROJECT



Environmental and Social Management Framework

Developed by
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Contents

Abbreviations.....	5
Executive Summary	6
1. Project Description.....	12
1.1 Project objective	12
1.2 Project components and activities.....	12
1.2.1 Component 1: Climate-resilient Practices in the Agriculture Sector	12
1.2.2 Component 2: Climate-resilient Forest and Pasture Management.....	13
1.2.3 Component 3: Climate and Disaster Risk Management	13
1.2.4 Component 4: Project Management and Monitoring.....	14
1.3 Project location	14
2. Environmental Policy and Regulatory Framework.....	16
2.1 National environmental management regulatory framework	16
2.1.1 Environmental legal framework.....	16
2.1.2 International conventions, ratified by Republic of Moldova	20
2.1.3 Regional water agreements and applicability of OP 7.50 to the project activities..	21
2.1.4 Environmental Impact Assessment procedure	23
2.2 National environmental management institutional system.....	28
2.2.1 Central public authorities	28
2.2.2 Local public authorities	29
2.3 World Bank Environmental Assessment Policies and Procedures	30
2.3.1 Safeguard Policies and their relevance to the MCAP	30
2.3.2 Screening categories and Environmental Assessment procedures.....	32
2.3.3 Public consultation and disclosure	35
2.4 The comparison of national and WB EA procedures	36
3. Baseline and Impact Analysis	38
3.1 Overview of the status of the country’s environment.....	38
3.2 Major environmental concerns of the country and of Central ecosystems related to project activities	40
3.3 Environmental impacts from agriculture	40
3.4 Project potential impacts.....	41
4. Project Environmental Guidelines	46
4.1 Purpose and content of Environmental Guidelines.....	46
4.2 Rules and procedures for the environmental screening	46
4.2.1 Screening and criteria for selecting lands for afforestation, planting new forest belts and for pasture improvement activities.....	47
4.2.2 EIA procedure for Category B sub-projects.....	50
4.2.3 Types of sub-projects that will be not supported by the MCAP	51
4.3 Steps to be followed while performing sub-projects EIA.....	51
4.4 EMP disclosure and consultation.....	56
4.5 Integration of the EMP into project documentation	56
4.6 Sub-projects’ EA review and approval	57
4.7 Environmental monitoring.....	57
4.8 Environmental due diligence of associated activities	58

5. Safe Pesticide Handling and Integrated Pest Management	60
5.1. Proposed training and awareness activities.....	60
5.2 Curricular for proposed training	61
6. ESMF Implementation.....	62
6.1 Overall MCAP implementing arrangements	62
6.2 Major responsibilities of the Project Management Team.....	62
6.2.1 PMT capacity to implement project safeguards issues	63
6.2.2 PMT Safeguards Specialist	63
6.3 Implementing responsibilities for project components	64
6.3.1 Implementation of the Component 1: <i>Climate-resilient Practices in the Agriculture Sector</i>	64
6.3.2 Implementation of the Component 2: <i>Climate-resilient Forest and Pasture Management</i>	67
6.3.3 Implementation of the Component 3: <i>Climate and Disaster Risk Management</i>	67
6.4 Monitoring and reporting activities	68
6.5 ESMF's disclosure and consultation	68
References	70
Annexes.....	71
Annex A. Environmental screening checklist	72
Annex B. EMP Checklist for small scale construction and rehabilitation activities.....	78
Annex C. Content of the Environmental Management Plan	82
Annex D. Reference documents on World Bank Operational Policies (OP) and Bank Procedures (BP).....	86
Annex E. Report on consultation on the draft ESMF with interested parties	88

Abbreviations

ACSA	National Agency for Rural Development
BP	Bank Procedures
CPESS	Civil Protection and Emergency Situations Service
CSA	Climate Smart Agriculture
DCRMP	Disaster and Climate Risk Management Project
EA	Environmental Assessment
ECAPDEV TF	Multi-donor Europe and Central Asia Capacity Development Trust Fund
ECC	Emergency Command Center
EIA	Environmental Impact Assessment
ELV	Emission Limit Values
ESMF	Environmental and Social Management Framework
EMP	Environmental Management Plan
EU	European Union
FI	Financial Intermediary
GEF	Global Environmental Facility
GMO	Genetically Modified Organisms
GoM	Government of Moldova
IDA	International Development Association
ICAS	Forestry Research and Management Institute
IEG	Institute of Ecology and Geography of the Academy of Sciences of Moldova
IFC	International Finance Corporation
IPM	Integrated Pest Management
ISFM	Integrated Soil Fertility Management
LPA	Local Public Authority
LSSP	Local Specialized Service Provider
MAC	Maximum Allowable Concentrations
MCAP	Moldova Climate Adaptation Project
MDL	Moldovan Lei
ME	Ministry of Environment
MGF	Matching Grant Facility
MSU	Monitoring and Surveillance Unit
NCFGs	National Centre for Forest Genetics and Seeds
NGO	Non-governmental Organization
OP	Operational Policy
PMT	Project Management Team
RM	Republic of Moldova
SDA	Sustainable Development Account Moldova
SEE	State Ecological Expertise
SEI	State Ecological Inspectorate
SHS	State Hydrometeorological Service
SS	Safeguards Specialist
TA	Technical Assistance
ToR	Terms of Reference
USD	United States Dollar
WB	World Bank

Executive Summary

Project objective. The project development objective is to enhance productivity and resilience through climate-smart forestry and agriculture in targeted landscapes and through strengthening national climate forecasting and disaster management systems.

Project components and activities. The Project is composed of the following components:

Component 1: Climate-resilient Practices in the Agriculture Sector. This component aims to enhance adoption of climate-resilient agriculture practices in selected rural landscapes by supporting: (i) scale-up of farmers' climate-smart agricultural (CSA) practices and provision of related-advisory services; and (ii) community-based irrigation and strengthening of Water User Associations (WUA).

Sub-component 1.1: Scale-up of Farmers' Climate Smart Agricultural Practices. Demand-driven investments aimed at scaling up successful climate adaptation measures on agricultural farmlands will be supported through matching grants that will be available to eligible farmers and agricultural producers, including rural households and private/agricultural entities in Moldova. The Project will make available climate adaptation grants for on-farm climate-smart investments and technologies such as anti-hail protection, rain water/surface water harvesting, drip irrigation, greenhouse climate control systems, no-till and other soil conservation measures. It is anticipated that the great majority of grants will benefit farmers operating on small plots and will support micro-investments for low-cost solutions with the remaining grants targeted at bigger, commercial farmers for small- and medium-size investments in more complex technologies. This sub-component will also include promotion and public awareness of CSA as well as a special training program to facilitate the farmers' adoption of climate adaptation measures and technologies.

Sub-component 1.2: Support to community-based irrigation. This sub-component provides grant financing to Water User Associations (WUAs) to help their member farmers to access 10 existing large-scale irrigation systems that were recently rehabilitated under the US-funded Millennium Challenge Corporation (MCC) program. This activity will address the current lack of adequate and appropriate on-farm irrigation equipment that can also satisfy the minimum pumping capacity requirement of the rehabilitate MCC schemes. Climate adaptation grants for eligible investments (e.g. mobile aspersions irrigation machines with reel and console and a hydraulic turbine) will be provided on a demand-driven basis to eligible WUAs. This sub-component will also provide capacity building to WUAs to manage irrigation more effectively and improve their governance and management processes. Capacity building will be delivered by the Sustainable Development Account (SDA) Moldova, a public institution established to continue the implementation of the MCC program.

Component 2: Climate-resilient Forest and Pasture Management. This component aims to improve the climate resilience of the forestry and pasture lands through improved climate-smart management.

Sub-component 2.1: Community Forest and Pasture Management. Activities will support integrated participatory forest and pasture management planning at the Local Public Authority (LPA) level, as well as investments in afforestation and rehabilitation of community forest lands

and pastures. The plans will facilitate the holistic and integrated approach to the management of LPA land resources (pastures and forests) and contribute to more efficient and sustainable use of these resources. Investment activities will be concentrated in selected LPAs within six priority rayons, and will include afforestation, rehabilitation of forest belts, new shelterbelts, riparian buffers, and rehabilitation of degraded lands and pastures. Approximately 2500 ha of communal forest lands and 700 ha of degraded pastures are expected to be restored.

Sub-component 2.2: Ecological Restoration of Degraded Forests. This sub-component will include the establishment of a National Centre for Forest Genetics and Seeds (NCFGs); investments in a modern nursery production facility to enhance the national capacity for seedling production; capacity building and training on climate-resilient ecological restoration that would include field trials and best practice demonstration sites.

Component 3: Climate and Disaster Risk Management. This component aims to strengthen Moldova's climate and disaster risk management systems and, in the event of an eligible crisis or emergency, provide immediate financing to respond quickly to such emergency.

Sub-component 3.1: Improved climate-related disaster preparedness and response. This sub-component aims to strengthen the capacity of national and regional Civil Protection authorities to prepare for and respond to extreme weather events linked to climate change by supporting (i) preparedness and response equipment and training (ii) modernization and upgrading of the Balti regional Emergency Command Center (ECC) to international standards.

Sub-component 3.2: Contingent Emergency Response Facility. The objective of this sub-component is to improve Moldova's capacity to better respond to disasters. Following an adverse natural or man-made event that causes a major disaster; the Government of Moldova may request the Bank to re-allocate project funds to this component to partially cover emergency response and recovery costs. This sub-component could also be used to channel additional funds should they become available as a result of the emergency¹.

Component 4: Project Management and Monitoring.

Project location. While providing support for climate smart agricultural practices (sub-component 1.1) will be done country wide, the support for community based irrigation will be provided only for the Water Users Association of the communities located in the meadow of the Prut and Dniester Rivers. The main focus of the sub-component 2.1 on Community Forest and Pasture Management will be implemented in six vulnerable to climate change districts of the Central part of the country (Cimislia, Criuleni, Nisporeni, Rezina, Telenesti and Ungheni), which have indicated willingness for restoration of degraded land through the National Plan for Afforestation (NPA) for 2015-18. These priority rayons offer a potential to provide sufficient areas of lands to be covered by project activities. The selection of these rayons was based on information from Soil Science Institute, taking into account climate vulnerability and availability of suitable land for interventions as well as openness for degraded land restoration. With regard to ecological reconstruction of degraded forests at this stage the projects sites have not been yet identified. All proposed activities would not generate any significant environmental and social risks as no major civil works or large scale ecological reconstruction activities in the forests will be supported.

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

¹ Such a reallocation would not constitute a formal Project restructuring (*Including Contingent Emergency Response Components in Standard Investment Projects, Guidance Note to Staff, April 2009, footnote 6*).

Bank's *Category B*. As at this stage are not yet identified the project activities and matching grants to be supported, the Bank requires, that client will screen all of them, ensuring that the beneficiaries carry out appropriate Environmental Assessment for each matching grant or activity. For this purpose the client has to prepare an Environment and Social Management Framework (ESMF).

Project potential impacts. Generally, the Project will provide many *environmental and social benefits*, such as improved farmer skills and investments in climate change adaptation technologies, improved forest management, strengthening disaster response capacity, etc. At the same time, the proposed project activities (production of forest reproductive material for climate resilience; ecological reconstruction of priority degraded forests; rehabilitation and establishment of shelter belts to protect fields and riparian buffers to protect water bodies; afforestation of degraded land; improvement of community-based pasture management; matching grant facility, which would support investments in on-farm water-harvesting structures and efficient small-scale irrigation, anti-hail systems, soil and water conservation techniques; improving emergency prevention and preparedness capacities by modernization and upgrading of a regional Emergency Command Center; etc.) if not adequately implemented, might also generate a series of various adverse environmental and social impacts related to: biodiversity degradation and loss; increased pollution of waters and soils; soil degradation; noise, dust, air and water pollution, health hazards and labor safety issues during the civil works; etc. The anticipated adverse *social impacts* of such activities include health and safety risks as well as land acquisition, physical and economic displacement, lost access to natural resources issues. All of identified social and environmental impacts are expected to be typical for agriculture production, afforestation and irrigation activities and for small-scale construction/rehabilitation works, temporary by nature and site specific, and can be easily mitigated by applying best agricultural, agro-forestry and construction environmental practices or relevant mitigation measures.

Triggered WB OPs. The OP 4.01 on *Environmental Assessment* is triggered as the project will support a series of activities and matching grants which will generate some environmental and social impacts. The OP/BP 4.36 on *Forests Policy* also will be triggered as the project will support afforestation activities along with the forest reconstruction activities in the degraded forests. In order to make sure these activities will not affect natural habitats and biodiversity conservation, the ESMF has to specify the rules and procedure for environmental screening in terms of biodiversity issues of land plots given for afforestation or for creating forest shelterbelts, as well as, of the degraded forests selected for reconstruction activities. The OP 4.12 on *Involuntary Resettlement* is also triggered. Although it is expected all activities/sub-projects will be implemented on public lands, in some cases the proposed activities might affect private households or restrict access of the local population to the afforested lands or to pastures to be improved. To address the involuntary resettlement issues including impacts on livelihoods on protected lands, and restriction to access to natural resources, the client has prepared the Resettlement Policy Framework that includes a Process Framework. The project triggers also the OP 7.50 on *International Waters*. Providing grant financing to Water User Associations (WUAs) to help their member farmers to access 10 existing large-scale irrigation systems that were recently rehabilitated under the US-funded Millennium Challenge Corporation (MCC) Program "Compact" do not require any new civil works and will not lead to incremental abstraction of water from the Dniester and Prut Rivers which are Transboundary Rivers and pass through Moldova's territory, flowing into the Black Sea or Danube River. Accordingly, the works to be funded under the Project can be qualified as minor additions, or alterations to the existing irrigation and drainage schemes which will not (i) adversely change the quality or quantity of water flows to the other riparians; and (ii) be adversely affected by the other riparians' possible water use. Based on that the project team has obtained a waiver from VP on not required notification of riparian parties.

Involuntary Resettlement issues. Although, it is expected all activities/subproject will be implemented on public lands, in some cases the proposed activities might affect private households or restrict access of the local population to the afforested lands or to pastures to be improved. To address the involuntary resettlement issues including impacts on livelihoods on protected lands, and restriction to access to natural resources, the client conducted a Social Impact Assessment (SIA), based on what prepared a Resettlement Policy Framework. The RPF focuses on social risk assessment /screening of interventions to identified appropriate mitigation measures, screening checklists and safeguards instruments, key principles for livelihood restoration, ‘access restriction framework’ in case there are limitations for users to access forest, pasture and other nature resources, public consultation and participation plan with affected persons prior and during project implementation, draft entitlement matrix and institutional arrangement for RPF implementation. As part of Social Impact Assessment, a stakeholder engagement plan has been prepared which outlines the key stakeholders including the Project Affected People who are supposed to be consulted and engaged in planning and implementation of interventions to build local ownership and thus contribute to sustainability and better project outcomes.

Environmental and Social Management Framework (ESMF). In order to address safeguard issues, PMT prepared the project’s ESMF. The ESMF provides guidelines to determine when Environmental Impact Assessments (EIAs) and/or Environmental Management Plans (EMPs)/EMP Checklists should be prepared; as well as procedures and requirements for their preparation, implementation and monitoring. The document, also, includes Environmental Guidelines for different types of proposed sub-projects, provides guidance on potential impacts and generic mitigation measures to be undertaken for sub-projects at all stages – from identification and selection, through the design and implementation phase, to the monitoring of results. Furthermore, the ESMF provides a monitoring plan format that includes monitoring indicators, timing, methods, and institutional responsibilities.

EA supervision and reporting. The status of the compliance with the EMPs’ requirements shall be provided by the contractors to the Project Management Team (PMT), and then to the Bank by the PMT, in form of their semi-annual report. For that purpose the PMT would perform regular supervisions of the sites to confirm compliance with EA instruments. Similarly, the beneficiaries of Category B matching grants will present the results of EMPs implementation to ACSA and then to PMT on semi-annual basis. Separately, World Bank experts will also carry out annual site specific visits to review compliance. In the case of complaints related to non-compliance, the territorial representative of the SEI and other authorities could also perform environmental supervision and monitoring to identify the level of compliance with agreed design, and required mitigation measures to bring it into full compliance with the EMPs or making sure the necessary corrective measures have been implemented.

Integration of the EMPs into project documents. The ESMF provisions will form part of the design documents for the project, and will be included in construction contracts for proposed activities, both into specifications and bills of quantities. Respectively, the contractors and matching grants beneficiaries will be required to include the cost of EMP requirements in their financial bids/project documents and required to comply with them while implementing the project activities.

ESMF implementing arrangements. The ESMF implementing responsibilities will be assigned to the existing Project Management Team (PMT) in the Ministry of Environment. The PMT supported the implementation of the Persistent Organic Pollutants (POPs) in the past, and recently completed Disaster and Climate Risk Management Project (DCRMP). The PMT has not

only worked with the World Bank, but has prior experience in working with both State Hydro-Meteorological Service and Department of Emergency Situations. Currently, the PMT has adequate capacity to implement the project, including in terms of safeguards issues, - the PMT performance in this regard always has been considered as satisfactory. The matching grant facility will be implemented by the Agency for Rural Development (ACSA) which has also experience and good track record in implementing safeguards issues. For the project implementation the PMT and ACSA will hire a safeguards specialists, responsible for both environmental and social safeguards. They will be in charge of overall coordination for implementing and reporting on the ESMF, inspecting environmental and social compliance and coordinating the overall environmental monitoring at project level. The major responsibilities in this regard are: evaluation of the sub-project's eligibility from the environmental point of view and conducting sub-projects environmental screening; provision of necessary information and advices on the environmental issues to sub-project applicants (especially inform them about the environmental criteria to be used, explain all obligations regarding the subprojects EIA, etc.); monitoring environmental impacts within the overall monitoring of the sub-projects implementation and reporting to the GoM and WB; and communicating with EIA competent authorities (ME, SEI).

Although the proposed activities with regard to afforestation and pasture improvement overall will have positive impacts, in order to avoid adverse effects on biodiversity conservation and natural habitats they will be subject to a preliminary environmental screening for the purpose of excluding from the lands allocated for that purpose those which represent environmental sensitive areas or areas valuable from biodiversity point of view. This will be done during formulating the PLAs' forest/pasture management plans by ICAS, which has extensive experience in such activities. ICAS has been the key implementing institution for a series of WB carbon sequestration projects, supported by Prototype Carbon and BioCarbon Funds, and its safeguards performance was qualified as highly satisfactory.

Lastly, with regard to providing access to irrigation by purchasing and installing mobile aspersion irrigation machines with reel and console and a hydraulic turbine operated by the pressure provided from the hydrant, the responsibilities in terms of environmental screening will be with the Sustainable Development Account Moldova (SDA Moldova), which will conduct a preliminary environmental screening of the grant applications, making sure no any environmental and social impacts will be generated. The SDA has in its staff qualified environmental specialists, which have proved their high environmental management performance during the Compact Program implementation.

Environmental Assessment requirements in the case of Contingent Emergency Response Component activities. The scope of the EA for such activities is to ensure due diligence in managing potential risks, while recognizing the emergency nature of the proposed rapid response operation and the need for providing immediate assistance. The safeguards issues, including consultation and disclosure, will be done, in a flexible yet timely manner during preparation and supervision of such activities. For that purpose the Task Team will prepare an *Environmental and Social Screening and Assessment Framework* (ESSAF) that would provide guidance on the approach to be taken during implementation for the selection and design of proposed investments and the planning of mitigation measures, including consultation and disclosure requirements. The ESSAF² is subject to consultation and disclosure by the Borrower during project implementation, which should be undertaken at a time appropriate for the nature of the operation.

² The relevant guidance on ESSAF and other issues in this regard are provided on the OPCS website at <http://opcs>.

Public consultations and information disclosure. PMT sent short description of ESMF to the relevant departments and to other stakeholders for consideration and receiving of comments, as well as disclosed it on 30 January, 2017 for the public on the websites (www.moldovapops.md and www.mediu.gov.md) in Romanian. In addition, PMT announced availability of the document for all stakeholders, as well as the dates and the venue of public consultations concerning ESMF. Consultation on draft ESMF took place on 13 February, 2017 at premises of Ministry of Environment in Chisinau with participation of representatives of implementing agencies, national environmental authorities, NGO's and PMT. Stakeholder concerns' were minor, and can be found in Annex 5 of the document. After the meeting, on the basis of input from participants as well as received comments on draft ESMF posted two weeks earlier for consultation, there were made relevant corrections both in the main text and annexes of the ESMF to better meet stakeholders' concern.

1. Project Description

1.1 Project objective

Moldova Climate Adaptation Project (MCAP) objective is to enhance productivity and resilience through climate-smart forestry and agriculture in targeted landscapes and through strengthening national climate forecasting and disaster management systems.

1.2 Project components and activities

The Project is composed of the following components:

1.2.1 Component 1: Climate-resilient Practices in the Agriculture Sector

This component aims to enhance adoption of climate-resilient agriculture practices in selected rural landscapes by supporting: (i) scale-up of farmers' climate-smart agricultural (CSA) practices and provision of related-advisory services; and (ii) community-based irrigation and strengthening of Water User Associations (WUA).

Sub-component 1.1: Scale-up of Farmers' Climate Smart Agricultural Practices.

Demand-driven investments aimed at scaling up successful climate adaption measures on agricultural farmlands will be supported through matching grants that will be available to eligible farmers and agricultural producers, including rural households and private/agricultural entities in Moldova. The Project will make available climate adaptation grants for on-farm climate-smart investments and technologies such as anti-hale protection, rain water/surface water harvesting, drip irrigation, greenhouse climate control systems, no-till and other soil conservation measures. It is anticipated that the great majority of grants will benefit farmers operating on small plots and will support micro-investments for low-cost solutions with the remaining grants targeted at bigger, commercial farmers for small- and medium-size investments in more complex technologies.

Grant size and co-financing ratio vary depending on the type and size of investments: up to 90% of micro-investments with a grant size ceiling of US\$2,200; up to 70% of small-size investments with a grant ceiling of US\$20,000 and up to 50% of medium-size investments with a grant ceiling of US\$40,000.

Eligibility criteria include among others: (i) land titling rights; (ii) willingness to contribute financially; (iii) commitment to participate in capacity building activities; and (iv) willingness to provide access to the farm/site for knowledge and experience sharing. Matching grants will be delivered through the National Rural Development Agency (ACSA) given its experience and successful performance in managing similar grants in the agriculture sector under Bank-funded projects and its country-wide network. Farmers from at least 200 villages are expected to participate in the Project.

This sub-component will also include promotion and public awareness of CSA as well as a special training program to facilitate the farmers' adoption of climate adaptation measures and technologies.

Sub-component 1.2: Support to community-based irrigation.

This sub-component provides grant financing to Water User Associations (WUAs) to help their member farmers to access 10 existing large-scale irrigation systems that were recently rehabilitated under the US-funded Millennium Challenge Corporation (MCC) program. This activity will address the current lack of adequate and appropriate on-farm irrigation equipment that can also satisfy the minimum pumping capacity requirement of the rehabilitate MCC schemes. Climate adaptation grants for eligible investments (e.g., mobile aspersion irrigation machines with reel and console and a hydraulic turbine) will be provided on a demand-driven basis to eligible WUAs. This sub-component will also provide capacity building to WUAs to manage irrigation more effectively and improve their governance and management processes. Capacity building will be delivered by the Sustainable Development Account (SDA) Moldova, a public institution established to continue the implementation of the MCC program.

1.2.2 Component 2: Climate-resilient Forest and Pasture Management

This component aims to improve the climate resilience of the forestry and pasture lands through improved climate-smart management. The first sub-component focuses on afforestation and rehabilitation of forest lands and pastures. The second sub-component will support provision of native and climate-adapted seeds and capacity building on ecological restoration.

Sub-component 2.1: Community Forest and Pasture Management.

Activities will support integrated participatory forest and pasture management planning at the Local Public Authority (LPA) level, as well as investments in afforestation and rehabilitation of community forest lands and pastures. The plans will facilitate the holistic and integrated approach to the management of LPA land resources (pastures and forests) and contribute to more efficient and sustainable use of these resources. Investment activities will be concentrated in selected LPAs within six priority rayons, and will include afforestation, rehabilitation of forest belts, new shelterbelts, riparian buffers, and rehabilitation of degraded lands and pastures. Eligibility and selection criteria will apply to the LPA's sites to be restored/rehabilitated. Approximately 2500 ha of communal forest lands and 700 ha of degraded pastures are expected to be restored. Technical assistance and financial support to LPAs will be provided through ICAS, a state forestry research and management institute, that has had previous and successful experience with similar projects funded by the WB/BioCarbon Fund.

Sub-component 2.2: Ecological Restoration of Degraded Forests.

This sub-component will include the establishment of a *National Centre for Forest Genetics and Seeds (NCFGs)* to improve production capacity (both quantity and quality) of certified reproductive material from native climate change resilient species; investments in a modern nursery production facility to enhance the national capacity for seedling production; capacity building and training on climate-resilient ecological restoration, that would include field trials and best practice demonstration sites.

1.2.3 Component 3: Climate and Disaster Risk Management

This component aims to strengthen Moldova's climate and disaster risk management systems and, in the event of an eligible crisis or emergency, provide immediate financing to respond quickly to such emergency.

Sub-component 3.1: Improved climate-related disaster preparedness and response.

This sub-component aims to strengthen the capacity of national and regional Civil Protection authorities to prepare for and respond to extreme weather events linked to climate change by supporting (i) preparedness and response equipment and training (ii) modernization and upgrading of the Balti regional Emergency Command Center (ECC) to international standards.

The provision of equipment and certified training, such as the renewal of fire and rescue units, will reduce critical response time and improve the safety and efficiency of interventions. A decrease of the environmental impact of emergency operations (due to more modern environmentally-friendly equipment), a more streamlined management process, and reduced maintenance costs are expected.

The refurbishment of the regional ECC in Balti will provide redundancy and interoperability to the national emergency management system, ensuring a modern and continuous management of incidents of diverse scales at local and national levels, and will render a more efficient use of resources for emergency preparedness and response. The regional ECC will further facilitate joint disaster response with local agency representatives. Training of ECC staff will enhance crisis management decision-making processes, allowing CPES to issue timely warnings and undertake prevention and response measures, including evacuating affected populations.

Sub-component 3.2: Contingent Emergency Response Facility.

The objective of this sub-component is to improve Moldova's capacity to better respond to disasters. Following an adverse natural or man-made event that causes a major disaster; the Government of Moldova may request the Bank to re-allocate project funds to this component to partially cover emergency response and recovery costs. This sub-component could also be used to channel additional funds should they become available as a result of the emergency³.

1.2.4 Component 4: Project Management and Monitoring

This Component will finance the operating costs of a Project Management Team (PMT) housed within the Ministry of Environment (ME) to carry out project management functions for the Project. Support will be provided for procurement, financial management, coordination, reporting, and monitoring and evaluation. The PMT will be responsible for coordination among the implementing agencies to ensure smooth project implementation.

1.3 Project location

While providing support for climate smart agricultural practices (sub-component 1.1) will be done country wide, the support for community based irrigation will be provided only for the Water Users Association of the communities located in the meadow of the Prut and Dniester rivers. The main focus of the sub-component 2.1 on Community Forest and Pasture Management will be implemented in six vulnerable to climate change districts of the Central part of the

³ Such a reallocation would not constitute a formal Project restructuring (*Including Contingent Emergency Response Components in Standard Investment Projects, Guidance Note to Staff, April 2009, and footnote 6*).

country (Cimislia, Criuleni, Nisporeni, Rezina, Telenesti and Ungheni), which have indicated willingness for restoration of degraded land through the National Plan for Afforestation (NPA) for 2015-18. These priority rayons offer a potential to provide sufficient areas of lands to be covered by project activities. The selection of these rayons was based on information from Soil Science Institute, taking into account climate vulnerability and availability of suitable land for interventions as well as openness for degraded land restoration. With regard to ecological reconstruction of degraded forests at this stage the projects sites have not been yet identified. All proposed activities would not generate any significant environmental and social risks as no major civil works or large scale ecological reconstruction activities in the forests will be supported.

2. Environmental Policy and Regulatory Framework

2.1 National environmental management regulatory framework

The national legal basis for environmental protection is fairly comprehensive. It includes a set of environmental laws and regulations⁴, and there is a general opinion that this existing body of laws, governmental and ministerial decrees, official rules and standards are a sufficient base for effectively addressing the country's environmental issues. Nevertheless, being under the European choice, Moldova is continuously improving legal frameworks toward approximation with European legislation.

2.1.1 Environmental legal framework

This section describes the laws relevant to environmental management of sub-projects to be supported by the MCAP:

Land Code #828 (1991). The Land Code establishes the relations and rights of land ownership and the basic framework of land use. Art. 5 states that land conservation should be a priority while implementing any kind of activities. Art. 23 is particularly important because it stipulates cases of termination of land rights, including use of the land in ways that result in soil degradation, chemical and other pollution, deterioration and destruction of ecosystems or their components. The obligations of the land owners (art. 29) are: use of land to conform to its intended and planned use, observe conditions of land exploitation, to ensure structure of crop rotation to conform to good agricultural practices, to apply chemical inputs only to recommended levels and to provide protection and improvement of soil fertility.

Law #1515 on Environmental Protection (1993). This Law establishes the basic legal framework for drafting special normative acts and instructions in particular issues of environmental protection in order to:

- ▶ ensure the right of each person to a healthy and aesthetically pleasant environment;
- ▶ achieve the ultimate responsibility of each generation for environmental protection towards the future generations;
- ▶ obtain a wider range of use of natural resources without exceeding the allowable limits, avoiding their depletion and degradation, the risk for people's health and other unwanted and unpredictable consequences;
- ▶ protect the soil and subsoil, water and air from chemical, physical and biological pollution;
- ▶ maintain the biodiversity and genetic resources, integrity of natural systems, historical and cultural national values; and
- ▶ restore ecosystems and components affected by human activity or natural disasters.

⁴ Reference: Registrul de Stat al Actelor Juridice (State Register of Legal Acts) - <http://lex.justice.md/>

Law #440 on Water Protection Strips along the Rivers and Water Bodies (1995). The Law establishes the rules for creation of water protection zones and strips along rivers and water bodies, the regime of their use and protection.

The Law determines: (i) dimension of protected zones and strips; (ii) water protection regime (permitted economic activities) within the water protection strips, etc. According to the Law, use of pesticides is restricted on the strip of 300 m width along the river bank; sitting of livestock farms, septic tanks and solid waste from livestock farms, location of technical services stations, machinery and transport wash, location of municipal and industrial waste disposals, and irrigation by sewage is to be controlled with respect to distance from river bank.

Law #439 on Animal Kingdom (1995). The main purpose of the Law is creating conditions for effective protection and rational use of fauna resources. The Law determines that design and construction of any facility should be implemented only if animal protection measures (habitat, reproduction, and means of migration) are undertaken. Art. 13 stipulates that sites for construction of enterprises, facilities, installations and other objects are coordinated with the Ministry of Environment, with local public authorities and other agencies; Art. 14: while carrying out agricultural and construction works, exploitation of transport and implementation of other activities, physical and juridical persons are obliged to undertake measures to prevent the loss of animals.

Law #851 on Ecological Expertise and Environment Impact Assessment (1996). The law determines goals, objectives and principles of State Ecological Expertise (SEE) and Environmental Impact Assessment (EIA), as well as fundamentals of both procedures. The Law describes in detail EIA procedures, demands the reporting, rules for compliance and submission of documentation on EIA, public involvement, revision of EIA e documentation, rules for conducting the SEE. The State Ecological Expertise is a part of a group of activities working toward environmental protection through which the potential impacts on environment from planned economic activity, compliance of parameters of these activities with legislation and normative acts, norms and standards in force are identified and mitigated.

According to the Law, project documentation for the objects that may adversely affect the environment is a subject of State Ecological Expertise which in turn determines whether it complies or not with environmental protection requirements. Decisions on Ecological Expertise can be considered as the basis for approval or refusal of the project. Ecological Expertise is conducted prior to making decisions on planned economic activities, and it is mandatory for all economic activities that may have a negative impact on the environment regardless of their destination, ownership, investments, location, source of financing etc. In case the objects can affect the environment severely, their planning documentation is a subject of EIA to be conducted prior to Ecological Expertise.

Forest Code #887 (1996). The Code aims to regulate housekeeping of the forest fund through its rational use and regeneration, forest defense and protection, maintenance, conservation and improvement of forest biodiversity to ensure current and future needs of society for forest resources.

Law #721 on Quality in Construction (1996). This Law determines juridical, technical, economic and institutional aspects related to the construction activities and its quality. The Law stipulates that construction requirements should guarantee resistance and stability, fire, hygiene and environmental safety, etc. Art. 13: construction, modernization, strengthening, repair/renovation are implemented only in accordance with project documentation worked out by physical and juridical persons authorized for such types of works and verified by authorized specialists in the

field; Art. 14: design and construction of buildings is implemented by physical and juridical persons licensed for activity in the field.

Law #835 on Principles of Urbanism and Territorial Improvement (1996). This Law relates to planning, location and construction of buildings, including any modifications to buildings. Art. 6(3) states that documentation for town-planning and territorial development establishes the location of land zones and rules for their use. City-planning certificates and permits for construction are issued on the basis of this documentation. For construction purposes based on approved documentation, Art. 52 stipulates that local public administration shall provide permits for operations and also for any changes of operation location. Assessment of potential environmental impacts of above activities and developments, and the provision of ecological expertise is to be conducted in accordance with the Law on State Ecological Expertise and Environmental Impact Assessment.

Law #1422 on Air Protection (1997). This Law is aimed at maintaining the air purity 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.

Law #1102 on Natural Resources (1997). This Law provides the basic principles of natural resource management and use. The legal act includes, among others, provisions for “payment for use of natural resources” and “payment for pollution pay” principles and other economic mechanisms aimed at the improvement of economic entities’ production technology to minimize utilization of natural resources and enhance their protection and encouraging environmentally friendly economic activities.

Law #1236 on Regime of Harmful Products and Substances (1997). The Law establishes the role and responsibilities of the Government and other central and local authorities in relation to harmful products and substances, and describes the regime of harmful products and substances (licensing, production, storing, transportation, use, registration, neutralization, import and export).

Law #1347 on Production and Household Wastes (1997). This Law regulates, according to the Law on Environmental Protection, the management of production and household waste in order to reduce them, recycle and prevent environmental pollution. Concomitantly, this Law regulates the relations appeared from waste management in the process of: mining and processing of raw materials; manufacturing, transportation and storage of technical articles, consumer goods, energy and energy sources; carrying out construction, agricultural, mining and other activities; providing services; and consumption of industrial and consumer goods.

Law #1540 on Taxes for Pollution of the Environment (1998). This Law refers to the penalties for the discharge of pollutants into the environment. Art. 9(1) describes the penalty charges for pollutants released from waste water discharges both to water bodies and effluents into sewerage systems where such discharges exceed established limits. Part (2) indicates that penalties for pollutants released into sewage facilities and on filtration fields are to be imposed on the basis of the total volume of water allocation. Part (3) describes the penalty for release of water from fish ponds in the case of excessive volume of pollutants. Annex 6 of the Law provides norm for counting of fees for pollutants released from cattle, pig and poultry farms into septic tanks; Annex 7 - for collection and storage of other solid wastes, including toxic.

Law #1538 on the Fund for Natural Areas Protected by State (1998). This Law establishes the list of objects/areas under state protection, protection regime and buffer zones around protection objects/areas.

Law #1041 on Improvement of Degraded Lands by Afforestation (2000). In accordance with the Law, these lands, regardless of property type, can be ameliorated by afforestation works to protect soil, restore water balances and to improve environmental conditions.

According to this Law, the degraded lands shall be considered the one that by erosion, pollution or destructive action of anthropogenic factors have lost the agricultural production capacity, but which can be improved by afforestation and other works to restore ecosystems, namely:

- a) lands with strong and excessive erosion surface;
- b) lands with deep erosion - basins, ravines, etc.;
- c) lands affected by active landslides, collapses, landslides and mud leakage;
- d) sandy soils exposed to erosion by wind or water;
- e) gravel lands, blocks, detritus, and torrential alluvial deposits;
- f) lands with permanent excess humidity;
- g) salty lands;
- h) lands polluted with chemicals, oil or noxious;
- i) lands occupied by open pit, mining tailings, waste production or household etc.;
- j) lands with damaged or destroyed biocenosis, unproductive lands.

Law #149 on Fish reserve, fishing and fish-farming (2006). Most of national natural water streams, lakes and reservoirs are classified as fish-water. The Law prohibits; (i) to discharge to fish water of un-treated waste water, (ii) to use fertilizers, pesticides and other chemicals on the water bodies and at the banks (300 m), (iii) to lowering water level or use water for agricultural purposes without a permit issued by Fishery Service under the State Ecological Inspectorate, (iv) to abstract water without fish protection installations, etc.

Law #94 on the Ecological Network (2007). The Law establishes a legal framework for creation and maintenance of the National Ecological Network as an integral part of Pan-European Ecological Network.

Subsoil Code #3 (2009). This Code provides improved regulatory frameworks for mineral resources management to ensure scientifically substantiated, rational and complex use of mineral resources to ensure their long-term availability for the national economy, and establishes responsibilities physical and juridical persons in the field.

Law #10 on State Supervision of Public Health (2009). This Law regulates the organization of the state supervision of public health, establishing the general requirements for public health, the rights and obligations of individuals and legal entities and the modality to organize the public health state supervision system and to ensure the optimal conditions for achieving the health potential of each individual throughout the life by the society's organized effort to prevent diseases, protect and improve people's health and the quality of life.

Law #228 on Plant Protection and Phytosanitary Quarantine (2010). This Law, among others, establishes the requirement of those responsible for the storage, transportation, selling and use of pesticides used for plant protection to observe the stated rules and norms for such. As well, the law bars environmental pollution and other negative impact that they may have on humans and animals.

Law #272 on Waters (2011). This Law, partially harmonized with European Council directives: #91/271/EEC of May 21, 1991 concerning urban waste water treatment and #91/676 EEC of December 12, 1991 on the protection of waters against pollution caused by nitrates from agricultural sources, with the European Parliament and Council Directives; #2000/60/EC of October 23, 2000 establishing a framework for the Community action in the field of water policy; #2006/7/EC of February 15, 2006 concerning the management of bathing water quality; #2007/60/EC of October 23, 2007 on the assessment and management of flood risks; #2008/105/EC of December 16, 2008 on environmental quality standards in the field of water policy, establishes the legal framework necessary for the water management, protection and use. This Law is aimed at:

- i) establishing a legal framework for the management, protection and efficient use of surface water and groundwater based on the evaluation, planning and participatory decision-making;
- ii) establishing the rights on water use and promotion of investments in the water sector;
- iii) establishing the mechanisms for water protection, preventing further degradation of water, protecting and restoring the aquatic environment, gradual convergence and systematic protection and their management in line with the European requirements; and
- iv) providing a sufficient supply of good quality surface water and groundwater, that it is necessary for a sustainable, balanced and equitable water use.

Law #86 on Environmental Impact Assessment (2014). This Law 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. The EIA is carried out to determine the requisite measures to prevent adverse ecological impacts due to the implementation of certain planned objects and types of activities. The Law describes the requirements for documentation on the EIA (materials in which the direct and indirect impacts of planned objects on air, water, soil, landscape, protected areas, fauna, flora, cultural and historic monuments, socio-economic situation are establishing, describing and evaluating; comparison of alternative solutions and substantiation of the best one; suggested mitigation activities). On the basis of the developed documentation for the EIA, the client designs a Statement on the EIA in which all materials, calculations and research are presented and systematized, as well as the EIA content (title of the project; character of activity; location; substantiation for location; project duration; technical and technological characteristics of the project; suggested technical solutions; project cost; localities affected by projects; information of direct impacts on the environment (water, soil, air, etc.); land to be occupied by project; water abstraction; water use, water source; sources of raw materials, transport and other infrastructure, emissions to air, wastes and their utilization, etc.); order of elaboration and submission documentation on EIA, evaluation of EIA documentation, environmental decision on EIA documentation, etc.

2.1.2 International conventions, ratified by Republic of Moldova

Republic of Moldova is a party to about 26 international environmental conventions. Among them are the following treaties, which directly or indirectly are related to the proposed project activities:

- ▶ Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991), ratified in 1993;
- ▶ Convention on the Conservation of European Wildlife and Natural Habitats (Bern,

- 1979), 1993;
- ▶ Convention on the Protection of Trans boundary Watercourses and International Lakes (Helsinki, 1992), 1993;
 - ▶ Convention on Biological Diversity (Rio de Janeiro, 1992), 1993;
 - ▶ United Nations Framework Convention on Climate Change (Rio de Janeiro, 1992), 1995;
 - ▶ Convention on Wetlands of International Importance Especially Waterfowl Habitat (Ramsar, 1971), 1999;
 - ▶ The United Nations Convention to Combat Desertification (Paris, 1994), 1999;
 - ▶ Convention on Access to Information, Public Participation in Decision-Making Process and Access to Justice in Environmental Matters (Aarhus, 1998), 1999;
 - ▶ Convention on Cooperation for the Protection and Sustainable Development of the Danube River (Sofia, 1994), 1999;
 - ▶ European Landscape Convention (Florence, 2000), 2001;
 - ▶ Convention on Plant Protection Service (Rotterdam, 1998), 2004;
 - ▶ Stockholm Convention on Persistent Organic Pollutants (Stockholm, 2001), 2004;

2.1.3 Regional water agreements and applicability of OP 7.50 to the project activities

As indicated above, the project sub-component 1.2 will provide financing for creating farmers' access to existing irrigations schemes which recently have been rehabilitated under the US Millennium Challenge Corporation Program "Compact". Specific investments will target the rehabilitation of on-farm canals or and/or installing pipelines on existing irrigation areas. These would require fairly small scale civil works which would have minimal environmental impacts. There will be no additional use of water under the project. All investments will apply national environmental laws and regulations as well as the applicable World Bank safeguard policies (described in this ESMF). Accordingly, the works to be funded under the project are primarily rehabilitation of existing irrigation and drainage schemes which will not (i) adversely change the quality or quantity of water flows to the other riparians; and (ii) be adversely affected by the other riparians' possible water use.

Moldova along with Ukraine and Romania, is riparian country to the Dniester and Prut rivers. Between these countries have been signed several bilateral treaties which regulate transboundary water use and protection.

The *Agreement between the Governments of the Republic of Moldova and Ukraine on the Joint Management and Protection of Cross-Border Waters* was signed on November 23, 1994. It sets out joint obligations of the parties with regard to the use and management of cross-border waters and transboundary water bodies and requires that a contracting party would seek the prior consent in order to carry out water management actions that affect water conditions in areas under the jurisdiction of the other party. *Inter alia*, the contracting parties are required to: (a) Ensure proper technical maintenance of hydro-engineering, water protection and flood protection facilities associated with these transboundary waters; (b) Agree on operations regimes of hydro-engineering facilities and planned water protection and management actions; (c) Inform and jointly consult with one other about the implementation of water protection and management actions which may affect cross-border waters, and about accidents and emergency situations; and (d) Take joint action to manage and protect water resources as and when required including agreeing on timing and volume of environmental flow releases, and maintaining appropriate water levels in water bodies so as to be able to ensure the optimal regime for conservation of drinking water supplies, fisheries and ecosystem biodiversity.

The main provisions of this Agreement have been further developed and included in the *Treaty between the Republic of Moldova and Ukraine on cooperation in the field of protection and sustainable development of the Dniester River Basin*, which was signed on 29 November 2012. The Treaty has already been ratified by the Republic of Moldova in January 2013, but its ratification by Ukraine is still pending. This document identifies principles and provides a framework for cooperation on water pollution prevention and control, water flow regulation, conservation of biodiversity and protection of the Black Sea environment. It also addresses the monitoring of data exchange, public participation and cooperation in emergency situations. A bilateral Dniester Commission is being established, to facilitate sustainable use and protection of the Basin and encourage countries to develop and implement joint and coordinated Dniester River basin management plans.

In both specified documents there are no any special provisions with regard to regulating irrigation and abstraction of water for this purpose.

Both Ukraine and Moldova are also parties to the *Convention on the Protection and Use of Transboundary Watercourses and International Lakes* (Helsinki, 1992). The Convention obliges the parties to take action, individually and jointly, in order to prevent, control and reduce the transboundary water pollution from point and non-point sources by taking appropriate measures, where possible, at source. Pursuant to Article 9 of the Convention, the key requirement on the parties to the Convention is to enter into bilateral and multilateral agreements or other arrangements in order to define their mutual relations and conduct within specific shared water basins.

The legal regime, established under the Helsinki Convention, was further developed through the adoption of two protocols to the Convention: the *Protocol on Water and Health* (London, 1999) and *Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters* (Kyiv, 2003). Ukraine joined the Protocol on Water and Health on 26 September 2003, while Moldova signed the Protocol on 10 March 2000 and ratified it on 29 July 2005, with the effective date of 4 August 2005. The Protocol on Civil Liability was signed by Ukraine and Moldova, but still remains to be ratified in order to come into force. These Protocols do not have any stipulations related to irrigation activities and water abstraction for this purpose.

Apart from the Helsinki Convention, three other UNECE conventions are to be taken into account when addressing the issues pertaining to the transboundary water management. These include: the *Convention on the Transboundary Effects of Industrial Accidents* (Helsinki, 1992), the *Convention on Environmental Impact Assessment in a Transboundary Context* (Espoo, 1992), and the *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* (Aarhus, 1998). The status of international commitments of Ukraine and Moldova to each of these conventions is different. Only Moldova is party to the Convention of the Transboundary Effects of Industrial Accidents (since 4 January 1994); the Espoo Convention was signed/ratified by both Ukraine (on 20 July 1999) and Moldova (on 4 January 1994). Similarly, both Ukraine and Moldova are parties to the Aarhus Convention, since 18 November 1998 and 9 August 1999, respectively. Both countries have signed, but not yet ratified the *Protocol on Strategic Environmental Assessment* and *Protocol on Emission Inventories to the Espoo Convention*, adopted in 2003.

Agreement between the autonomous Administration of Romanian Waters from Romania and the State Concern for Administration of Waters “Apele Moldovei” from the Republic of Moldova relating to the collaboration on administration of the Prut and Danube rivers was signed in 1993. Later, in 2010 was signed a new treaty – the Agreement between the Government of the

Republic of Moldova and the Government of Romania on cooperation for the protection and sustainable use of water of Prut and Danube rivers, which stipulates, in particular: (a) the parties are responsible for maintaining water management infrastructures and flood protection; and (b) the parties should inform one other in case of accidental water pollution of the Prut and Danube rivers, and take necessary corrective actions. No special provisions with regard to water abstraction for the purpose of irrigation of other scope are provided.

As indicated above, the project is not expected to have any adverse effects on the both Dniester and Prut transboundary/international rivers. Moreover, because of the rehabilitation nature of the works, there is no requirement for notifying other riparian of the proposed project under mentioned above agreements and political declaration with other riparian countries. Accordingly, because of the rehabilitation nature of the activities under the proposed project, the Task Team has obtained an exception to the notification requirement under OP 7.50.

2.1.4 Environmental Impact Assessment procedure

In Moldova, the EIA procedure is established by the *Law #86 on Environmental Impact Assessment (2014)*. EIA procedures are applicable to projects that are complex and potentially dangerous (to the environment) and which could lead to significant impact; it aims to prevent and mitigate the project's impact even at the 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 national environmental approval procedures, all projects may be conventionally divided into three main categories:

First category - projects which may have a significant impact on the environment. They require a full EIA before the design stage and can be further developed (detailed engineering design) with a positive approval (Environmental Agreement) of the EIA findings by the State Ecological Expertise (SEE)⁵. The projects in this category mainly correspond to World Bank 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 one thousand m³/day and more for underground water intake and 10 thousand m³ per day for surface water intake), etc.

Second category - projects not listed in “First category” projects, which may have less significant impact on the environment. They require ecological substantiation of project activities. Such substantiation should be described in a special Environmental Chapter of the project design documentation, which has to contain information on potentially affected environment as well as outline the main potential environmental impacts and mitigation measures. The Environmental Chapter has to be included in the project design documentation and, respectively, be passed through the State Ecological Expertise before project implementation. This category mainly

⁵ According to *Instruction #188 on Order of Organization and Conducting of the State Ecological Expertise (2002)*, the State Ecological Expertise (SEE) is applied for any new construction, its modernization and upgrading. All design documents should be presented to the State Ecological Expertise units (headquarters of the State Ecological Inspectorate and territorial ecological inspections). Technical solutions, reflected in the submission for SEE technical documentation have to be sufficiently substantiated in relation to reduction/mitigation of the impact on environment. The Instruction is accompanied by a series of annexes, which: (i) describe in detail requirements for project documentation submitted to SEE; (ii) nominate subdivisions of ME responsible for SEE different types and scales of projects; and (iii) establish requirements for every chapter or volume of project documentation, etc.

corresponds to World Bank Category B projects. Based on the proposed project activities, it is clear that most of sub-projects under the MCAP would fall under this Category.

Third category - projects which are expected to have minor impact on the environment and therefore do not need to be passed through the formal procedures of EIA and SEE. This Category fully corresponds to WB Category C projects. It is expected many of the MCAP sub-projects which would support only minor rehabilitation of civil works, farm equipment and trainings will fall under this Category.

Brief analysis of the proposed project activities show most of them would be of Category III or II per national EA legislation.

EIA review and approval process. According to the *Law #86 on EIA (2014)*, documentation for the projects that may adversely affect environment is subject to examination by the Ministry of Environment. The main goal of this examination is to determine whether the project documentation complies with environmental protection requirements and to check whether all environmental standards/principles are adhered, and the environmental protection measures are addressed. An EIA should be conducted prior to making decisions on planned economic activity, and is compulsory for project and planning documentation with regard to planned economic objectives and activities that affect or may affect environmental conditions and/or envisage use of natural resources, regardless of destination, placement, type of ownership and subordination of these objectives, the amount of capital investments, source of funding and method of execution of construction works.

The decision (*Environmental Agreement*) of the state examination is the basis for further approval or refusal of the project design documentation. The purpose of the EIA is to identify the impact that these projects may have on the environment and to provide solutions to mitigate any significant effects that could occur as a result of project implementation. All EIA conclusions, including list of mitigation measures and environmental management plan should be outlined in the special chapter on “Environmental Protection” of the Detail Design Document.

Above procedure mainly corresponds to a full EIA required by the World Bank for Category A projects.

According to the national procedure, for the enterprises which exists already and are operating but which plan to be reconstructed, modernized, enlarged, etc. an EIA should be conducted only for those parts which are going to be under reconstruction, modernization, enlargement, etc.

The list of objects, buildings and installations which has to be presented to the relevant subdivisions of the Ministry of Environment for conducting of the State Ecological Expertise is presented the in *Table 1* below.

According to the Law, the central environmental authority is compelled to inform the public about the results of the State Ecological Expertise on the EIA. This must be done no more than 10 days after a positive or negative decision is made on EIA documentation.

In the case of the MCAP, for the most of the sub-projects it will be necessary to organize the SEE at the local level – in the case of designing EMP Checklists and only when it will be necessary to conduct simple EIA&EMP – mostly for construction, irrigation, water supply and sanitation activities – to present the documents to the SEE at the level of SEI headquarters.

Table 1. List of objects, buildings, installations documentation which has to be presented to the relevant sub-divisions of the Ministry of the Environment

#	Title of branch and object	Division for Pollution Reduction of the ME	Direction of the Ecological Expertise and Authorisation of the SEI	Territorial ecological agencies and inspections of the SEI
A	PROJECT OF THE SOCIO-CULTURAL AND COMMUNAL DESTINATION			+
B	PROJECTS OF THE INDUSTRIAL, COMMUNAL, TRANSPORTATION, ENERGY, COMMUNICATION, WAREHOUSES AND OTHERS			
I	Industrial destination:			
1	Enterprises of metallurgical, chemical, engineering, electro-technical industries		+	
2	Enterprises of forestry, woodworking, light, food, meet and dairy and construction materials industries		+	
3	Agricultural projects		+	
a	Cattle and pig farms, poultries		+	
b	Cattle and pig farms		+	
c	Processing: - in towns, cities and district centers - in rural localities		+	+
d	Oil and flour mills in rural areas			+
4	Irrigation and other water management objects		+	
a	Projects, construction working projects, construction, re-construction, enlargement of irrigation systems, hydro-technical installations, etc.		+	
b	Projects on fish protection installation, sedimentation and flood prevention ponds as well as projects to prevent dangerous geological processes		+	
5	Open pits and mines for extraction of mineral resources		+	
6	Exploration and exploitation of gas- and oilfields		+	
7	Documentation on other projects not listed in items A & B		+	
II	Projects of communal destination			
1	Water intakes and waste water treatment plants, sewage		+	
2	Water supply systems; industrial, municipal and storm sewage, heating, sanitary treatment, transport: - on the national level - towns, cities, district centers, rural localities	+	+	
3	Municipal solid waste incineration plants, polygons on treatment and disposal of industrial, municipal and toxic wastes: - for municipalities Chisinau, Balti, Tiraspol, Bender - for other localities.	+	+	
III	Warehouses of any destination, projects of communication, transportation service, ports, tunnels		+	
IV	Energy objects			
1	Power station 330/110/35 kV, district, industrial and heating houses		+	
2	Other energy enterprises, objects and installations			+
C	LINEAR PROJECTS AND FACILITIES			
I	Transport, energy, communication			
1	River bridges, crossroads in urban localities, international roads		+	
2	Roads of national and inter-district significance, etc.		+	
3	Roads in rural localities and between them		+	
4	Oil filling stations (regardless their location)		+	
5	Sites for open parking and garages for cars: - with technical service - without technical services		+	+
6	High-voltage power lines:			

#	Title of branch and object	Division for Pollution Reduction of the ME	Direction of the Ecological Expertise and Authorisation of the SEI	Territorial ecological agencies and inspections of the SEI
a	110 kV and more	+		
6	35 kV and less			+
7	Heating networks:			
a	From municipal and district heating houses		+	
b	From local heating houses		+	
8	Communication lines on pylons and underground:			
a	Main (magisterial)		+	
b	Between localities and inside them			+
9	Gas pipelines:			
a	Main of high and medium pressure, international and inter-district, gas distribution stations		+	
b	Gas pipelines from gas distribution points to customers in rural and urban areas		+	
10	Water supply and waste water collection systems in bounds of localities (without installations)			+
11	Oil pipelines		+	
D	DOCUMENTATION ON TOWN BOUILDING AND URBAN DEVELOPMENT			
V	Schemes of a complex use and protection of water resources and river basins	+		
VI	Drafts of the environmental laws and other regulatory documents, including standards as well as those regarding environmental conditions and/ or regulating potentially hazardous activities, use of natural resources and enviornmental protection	+		
VII	Drafts of international Conventions and concession agreements presuming use of natural resources	+		
IX	Projects of the national and special importance as well as ones developing by foreign economic agents	+		
X	Documentation on EIA	+		
XI	Other documents and materials not listed in items A-D		+	

Notes:

- i) Volume, content and composition of the project documentation on construction, re-construction, technical modernization, re-profiling of enterprise should correspond to requirements of normative, methodical, instruction and directive documents and environmental legislation in force.
- ii) Ecological Expertise of the projects, materials and documents related to development and adoption of new technologies, equipment and materials, including foreign ones, is being implemented by the Institute of Ecology and Geography of the Academy of Sciences at the *initial stage* of the elaboration of project documentation.

EIA disclosure and consultation. Public consultations for the projects which require a full EIA are compulsory at the initial stage of the project before preparing the EIA (at the *scoping stage*) and at a later stage, when the Statement on EIA is disclosed to the public prior to reviewing the final (updated) documentation by the state environmental authority; the existing national public consultation procedure for “First category” fully complies with the Bank’s required procedures for Category A projects. For projects not listed in the Law, public consultation is not compulsory, thus the procedure is not consistent with World Bank requirements for Category B projects. In such cases the ESMF requires to follow WB rules and for all category B projects necessary EA disclosure and public consultations.

Based on the results of the EIA documentation and public consultations, the responsible environmental authorities prepare the official decision on the EIA. A positive decision on the EIA documentation serves as official basis to proceed with further project design.

Obviously, the EIA procedure is a complex one, and consists of subsequent steps of documentation submission and approval. The developer (initiator of the planned activity) is responsible for the organization of the EIA study, conducting consultations, presentation of EIA documentation, and its associated cost.

Projects that require SEE of design documentation. The all projects which may have a negative impact on the environment, but are not listed in the *Law #86 on EIA* (“Second category”), will require a SEE before construction. The SEE procedures are usually applied after the feasibility and engineering design stages. The project design documentation for these projects - usually linked with construction, reconstruction and enlargement - are to be developed in line with technical documentation.

The sections “Environmental Protection” and “Environmental Protection during Construction” in the project design documentation should be developed only by specialists in this field. Technical solutions, reflected in the technical documentation submitted to SEE have to be sufficiently substantiated in relation to mitigation of impact on the environment.

Projects that not require EIA and SEE of the design documentation. Projects that do not need an EIA study and/or SEE of design documentation normally relate to activities when no (re)construction takes place, e.g., purchase of equipment and machinery for crop cultivation, small-scale irrigation, infrastructure maintenance projects, capacity building activities, etc.

Steps in conducting EIA and SEE. For project approval the following steps are to be followed:

Step 1. Applicant presents a project description (location and intention) to relevant local (rayon or municipal) authorities where it is going to be located to get its approval to proceed.

Step 2. Applicant submits the project business plan to the district authority (often, in order to review the business plan, a commission is established, and one member of the Commission should be a representative of environmental authority) to receive its approval. The Commission determines whether an EIA is required. *If the Commission disagrees on approval of the plan*, the applicant may have to provide additional information and/or the commission may request input from other interested parties. *If it is confirmed that no EIA is required* (as per list provided in Law #86 on EIA) the applicant can proceed with the implementation of the project in case he/she received all other needed approval and permits. *If the Commission requires an EIA*, then the applicant shall hire an authorized body to conduct the EIA on his/her behalf.

Step 3. Once the EIA is conducted, the applicant submits it to the central (in the case of Category A and B projects, specified in the Annex to the SEE Regulation) or local environmental authorities (for small-scale projects of Category B – specified in the Annex to the SEE Regulation) for EIA approval. The EIA is submitted to the environmental authorities for their review and comments. Comments may be followed by the: (i) approval, (ii) conditional approval, or (iii) outright rejection of EIA, and hence, the project.

Step 4. Upon approval from environmental authorities and obtaining permits issued by all concerned institutions (the officers of entities visited by applicants to get an approval determine what kind of special permits on maximum admissible discharges of wastewater, maximum admissible emissions to air - both are calculated for each particular case; water use; construction

authorization as well as license on other than water natural resources use should be obtained from specialized institutions), project implementation is allowed to commence.⁶

2.2 National environmental management institutional system

2.2.1 Central public authorities

Ministry of the Environment (ME). This is the central authority body responsible for the development and promotion of state policy in the field of environment and natural resources. It is responsible for: state control over the natural resources use; coordination and control over the implementation of environmental laws and policies; initiating and drafting laws and regulations and issuing relevant instructions/decisions; issuing permits on natural resources uses and licenses for polluting emissions; elaboration, approval and introduction of environmental standards and normative documents in the field of its competence; environmental monitoring; imposing economic sanctions in case of violations of environmental legislation; supervising territorial development and its infrastructure, town-planning, architecture, industry of construction materials and introduction of new techniques and technologies in the sphere of its competence; and drinking water supply and waste water treatment in urban areas, etc. The following institutions are subordinated to the Ministry of the Environment: State Ecological Inspectorate; State Hydrometeorological Service, Agency for Geology and Mineral Resources, Agency “Apele Moldovei”, Agency “Moldsilva”, Fisheries Service, State Enterprise Hydro-geological Expedition from Moldova, and Institute of Ecology and Geography. [www.mediu.gov.md]

State Ecological Inspectorate (SEI). The SEI is an environmental protection regulatory and enforcement agency which performs the state control over the rational use and protection/conservation of natural resources. Its role is to control implementation of environmental legislation. The SEI through its country-wide network of territorial headquarters monitors industrial facilities with impacts on environment – its central body deals with the higher level risk while the district level inspections – with lower risk projects. The SEI issues permits on use of natural resources and environmental pollution in admissible limits; supervises the level of respecting ecological norms and requirements, instructions, recommendations, norms on use of natural resources, dangerous products and substances, and wastes; evaluates EIA applications for new developments; provides ecological expertise; regulates and establishes Emission Limit Values (ELVs) and Maximum Allowable Concentrations (MACs) and regulates the emission of dangerous substances into the environment as well as the storage limits of industrial, domestic, hazardous and other wastes; performs environmental pollution monitoring; carries out enforcement of the permits by inspection visits, monitors, and levies fines in cases of non-compliance, initiates legal processing, ceases the activity in case of non-compliance with environmental protection requirements, etc. [www.inseco.gov.md]

State Hydrometeorological Service (SHS). Through the Monitoring Centre on Environmental Quality, the SHS performs regular monitoring of the air, water and soil quality as well as atmospheric radiation background level. Among other responsibilities are monitoring of meteorological conditions, Prut and Dniester Rivers' water flows, hydrological forecast, weather forecast, agro-meteorological monitoring and forecast, etc. [www.meteo.md]

⁶ The institutions issuing relevant permits might be: State Ecological Inspectorate (wastewater discharge volumes, pollutants in effluent and emissions to air), Agency for Geology and Mineral Resources (use of underground water resources), Agency “Apele Moldovei (use of surface water resources), local public authorities/mayoralties (certificates, construction authorizations), etc.

Agency for Geology and Mineral Resources (AGMR). The AGMR is responsible for promoting state policy in the field of management and monitoring of underground resources in Moldova and provides an overall umbrella for state organizations and enterprises specialized in underground water use; administrations at district and regional level, as well as organizations specialized in the design and investigation of underground water objects. It performs management of underground water resources and their protection; counting of groundwater resources and monitoring of groundwater quality and regime. [www.agrm.gov.md]

Agency “Apele Moldovei”. This institution is subordinated to the Ministry of Environment. It is the central technical and administrative body dealing with surface water resources, and is responsible for management of water resources used for irrigation, domestic and industrial water supply purposes as follows: development of long-term programs concerning river basins and water administration works throughout the country, including centralized water supply facilities, irrigation and drainage, protection against floods or other damage, coordinating of construction, design, and operation activities in the field of water. [www.apemoldovei.gov.md]

Agency “Moldsilva”. Agency is the central public administration body on state policy in forestry and hunting in the country. The general task of the Agency is to implement the constitutional prerogatives and international ratified obligations of the Republic of Moldova on development, promotion and implementation of its policy in forestry and hunting, directed on the international trends of socio-economic sustainable development, rural development, rural employment, sustainable forestry, development, guarding, forests and wildlife protection, maintenance and conservation of biodiversity, professional training, access to environmental benefits and forestry research and education. [www.moldsilva.gov.md]

State Enterprise Hydro-Geological Expedition from Moldova is the geological research center in Moldova and it has history of over half a century of activity. It is the state institution under the Ministry of Environment, entrusted with the prospecting works and construction of objects for exploitation of groundwater, by means of which increasing access of the population to quality drinking water sources. Also, in collaboration with the Agency for Geology and Mineral Resources participating in realization of the geological researches, state policies, rational use and protection of subsoil and ensure the implementation of state geological research of subsoil programs in order to extend the mineral raw material base and monitoring of subsoil status. [www.ehgeom.gov.md]

Institute of Ecology and Geography of the Academy of Sciences of Moldova (IEG). The IEG was founded in 2005 by unifying the National Institute of Ecology of the Ministry of Ecology and Natural Resources and the Institute of Geography of the Academy of Sciences of Moldova. Scientific potential is about 85 scientific researchers, including 43 with PhD degree. The main directions of researches are: dynamics and evolution of natural and anthropogenic geo- and ecosystems on regional, local and trans-boundary levels; elaboration of Geographical Informational Systems of environmental and natural resources; integrated monitoring of environmental components and ecological restoration. [www.ieg.asm.md]

2.2.2 Local public authorities

Responsibilities of local public authorities include: approval and supervision of local programs in the field of environmental protection; protection and conservation of historical and natural monuments; natural parks and protected areas; and approval of admissible limit values of emissions and discharges (admissible level of environmental pollution) and limits of natural

resources (water, soil) use. These institutions do not have any responsibilities with regard to environmental review of project documents (SEE) – all these are done by the national or local environmental authorities, depending on the level of environmental risks – as specified above.

2.3 World Bank Environmental Assessment Policies and Procedures

2.3.1 Safeguard Policies and their relevance to the MCAP

There are 10 key Environmental and Social World Bank Safeguard Policies, which are intended to ensure that potentially adverse environmental and social consequences of projects financed by Bank are identified, minimized and mitigated. World Bank Safeguard Policies have a three-part format:

- ▶ *Operational Policies (OP)* - statement of policy objectives and operational principles including the roles and obligations of the Borrower and the Bank;
- ▶ *Bank Procedures (BP)* - mandatory procedures to be followed by the Borrower and the Bank, and
- ▶ *Good Practice (GP)* - non-mandatory advisory material.

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 project activities and matching grants to be supported, the Bank requires that client will screen all of them, ensuring that the beneficiaries carry out appropriate Environmental Assessment for each matching grant or activity. For this purpose the client has to prepare an Environment and Social Management Framework (ESMF).

In order to address safeguard issues, PMT prepared the project’s ESMF which provides guidelines to determine when Environmental Impact Assessments (EIAs), and/or Environmental Management Plans (EMPs)/EMP Checklists should be prepared; as well as their preparation, implementation and monitoring. The document also includes Environmental Guidelines for different types of proposed sub-projects, provides guidance on potential impacts and generic mitigation measures to be undertaken for sub-projects at all stages – from identification and selection, through the design and implementation phase, to the monitoring of results. Furthermore, the ESMF provides a monitoring plan format that includes monitoring indicators, timing, methods, and institutional responsibilities.

World Bank’s Safeguard Policies and their relevance to sub-projects to be funded under the MCAP are indicated in the *Table 2* below.

Table 2. World Bank’s Safeguard Policies and their relevance to MCAP sub-projects

Safeguard Policies	Relevance
<p>Environmental Assessment (OP/BP 4.01) This Policy aims at ensuring 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</p>	<p>Yes (refer to the description below). As the project will support a series of activities and matching grants which will generate some environmental and social impacts</p>

Safeguard Policies	Relevance
<p>Natural Habitats (OP/BP 4.04) This Policy aims at safeguarding 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</p>	<p>No. For the purpose of avoiding potential impacts on NHs in particular for pasture and forest management activities as well as for ecological restoration of degraded forests, the ESMF guidance on preliminary environmental screening of all selected project sites which will be done by Forest Research and Management Institute (ICAS) which has large experience in conducting such activities.</p>
<p>Forestry (OP/BP 4.36) 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</p>	<p>Yes. While the project will not support any commercial wood harvesting this OP is triggered as the project will support afforestation activities along with the forest reconstruction activities in the degraded forests. In order to make sure the project activities will not affect natural habitats and biodiversity conservation the ESMF specifies the rules and procedure for environmental screening and assessment of land plots given for afforestation or for creating forest shelterbelts as well as of the degraded forests selected for reconstruction activities.</p>
<p>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</p>	<p>No. While the project will not finance the purchasing and/or application of pesticides, it might support purchasing special equipment and would provide training on best pest management practices in the forestry sector, and thus the project triggers this OP. To address these issues the ESMF includes measures to raise awareness and educate foresters regarding safe pesticide handling and use of Integrated Pest Management to enhance sustainability and reduce human and environmental exposure to pesticides</p>
<p>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 EA</p>	<p>No. All proposed sub-projects will be screened in regard to PCRs and in the case there might be such impacts those sub-projects will be not supported.</p>
<p>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.</p>	<p>No. This Policy is not applicable for Moldova.</p>
<p>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</p>	<p>Yes. Although it is expected all activities/sub-project will be implemented on public lands, in some cases the proposed activities might affect private households or restrict access of the local population to the afforested lands or to pastures to be improved. To address the involuntary resettlement issues, including impacts on livelihoods on protected lands and restriction to access to natural resources, the client conducted a Social Impact Assessment (SIA), based on what prepared a Resettlement Policy Framework. The RPF focuses on social risk assessment /screening of interventions to identified appropriate mitigation measures, screening checklists and safeguards instruments, key principles for</p>

Safeguard Policies	Relevance
	livelihood restoration, ‘access restriction framework’ in case there are limitations for users to access forest, pasture and other nature resources, public consultation and participation plan with affected persons prior and during project implementation, draft entitlement matrix and institutional arrangement for RPF implementation. As part of Social Impact Assessment, a stakeholder engagement plan has been prepared which outlines the key stakeholders including the Project Affected People who are supposed to be consulted and engaged in planning and implementation of interventions to build local ownership and thus contribute to sustainability and better project outcomes.
<p>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</p>	<p>No. The project will not support any activities which might have impact on dam safety.</p>
<p>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</p>	<p>Yes. Providing grant financing to Water User Associations (WUAs) to help their member farmers to access 10 existing large-scale irrigation systems that were recently rehabilitated under the US-funded Millennium Challenge Corporation (MCC) Program “Compact” do not require any new civil works and will not lead to incremental abstraction of water from the Dniester and Prut rivers, which are Transboundary Rivers and pass through Moldova’s territory, flowing into the Black Sea or Danube River. Accordingly, the works to be funded under the Project can be qualified as minor additions, or alterations to the existing irrigation and drainage schemes which will not (i) adversely change the quality or quantity of water flows to the other riparians; and (ii) be adversely affected by the other riparians' possible water use. Based on that, the project team received a waiver from WB VP on not required notification of riparian parties</p>
<p>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</p>	<p>No. The Project will not support any activities in disputed areas.</p>
<p>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</p>	<p>Yes. The ESMF was disclosed and consulted in the country before appraisal and in the WB Info Shop.</p>

Note: Reference Documents on World Bank’s Operational Policies (OP) and Bank Procedures (BP) are presented in Annex D.

2.3.2 Screening categories and Environmental Assessment procedures

Environmental Screening is a mandatory procedure under OP/BP 4.01 *Environmental Assessment*. The Bank undertakes an environmental screening of each proposed project for which it will provide funding in order to determine the appropriate extent and type of the Environmental Assessment to be conducted. The Bank classifies a 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 impacts⁷. These four categories are A, B, C, and FI (Financial Intermediary).

Category A projects are likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may be sensitive, irreversible, and diverse, with attributes such as direct pollutant discharges large enough to cause degradation of air, water, or soil; large-scale physical disturbances of the landscape, site and/or surroundings; extraction, consumption, or conversion of substantial amounts of forest and other natural resources; measurable modifications of hydrological cycles; hazardous materials in more than incidental quantities; and involuntary displacement of people and other significant social disturbances. The impacts are likely to be comprehensive, broad, sector-wide, or precedent-setting. Impacts generally result from a major component of the project and affect the area as a whole or an entire sector. They may affect an area broader than the sites or facilities subject to physical works. The EIA for a Category A project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without project" scenario), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. For a Category A project, the beneficiary is responsible for preparing a report, normally a full EIA (or a suitably comprehensive regional or sector EIA). Category A projects include activities listed in the *Law #86 on EIA (2014)* in case they attribute to newly planned activities/enterprises. As mentioned above, no such sub-projects are eligible to be supported under MCAP.

Category B projects have potential adverse environmental impacts on human populations or environmentally important areas - including wetlands, forests, grasslands, and other natural habitats - which are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; in most cases mitigating measures can be designed more readily than for Category A projects. The scope of an EIA for a Category B projects varies from project to project, but it is narrower than that of Category A assessment. Like Category A, a Category B environmental assessment examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. The findings and results of an EIA for Category B projects are described in the project documentation (Project Appraisal Document and Project Information Document). Most of the sub-projects to be financed under MCAP would be of Category B – e.g. rehabilitation, maintenance and upgrading projects (small-scale), small scale irrigation, soil protection, afforestation and biodiversity conservation activities.

Category C. An EIA or environmental analysis is not required for Category C projects because they have negligible or minimal direct disturbances on the physical setting. Beyond screening, no further EA action is required. To the Category C projects mainly correspond activities related to the conventional 3rd Category of projects, which are expected to have minor or no impacts on environment and therefore do not need to be passed through the formal procedures of EIA and SEE. A series of sub-projects expected to be financed under the MCAP and, in particular, those related mostly to institutional development, technical assistance and procurement of farm equipment activities will fall under this Category.

Examples of projects that fall under Categories A, B, and C are provided in *Table 3* below. However, this list is just a good starting point and framework for the screening decision. Because of other factors involved such as project sitting, the nature of impacts, and the need for the EIA

⁷ See: Environmental Assessment Update Sourcebook, Environmental Department, April 1993. The World Bank

process to be flexible enough to accommodate them, the lists should not be used as the sole basis for screening.

Projects with multiple components are classified accordingly to the component that with the most significant adverse impact; if there is a Category A component, the project is classified as A, and, respectively, requires a full EIA.

The selection of the category should be based on professional judgment and information available at the time of project identification. If the project is modified or new information becomes available, Bank EA policy permits to reclassify a project. For example, a Category B project might become Category A, if new information reveals that it may have diverse and significant environmental impacts when they were originally thought to be limited to one aspect of the environment. Conversely, a Category A project might be reclassified as B, if a component with significant impacts is dropped or altered. The option to reclassify projects relieves some of the pressure to make the initial decision the correct and final one.

Projects in Category B often differ from A projects of the same type only in scale. In fact, large irrigation and drainage projects are usually Category A, however, small-scale projects of the same type may fall into Category B. The same relates to aquaculture projects and many others. Projects entailing rehabilitation, maintenance or upgrading, rather than new construction, will usually be in Category B. The projects with any of these characteristics may have impacts, but they are less likely to be “significant”. However, each case must be judged on its own merits. Many rehabilitation, maintenance and upgrading projects as well as privatization projects may require attention to existing environmental problems at the site rather than potential new impacts. Therefore, an environmental audit may be more useful than an impact assessment in fulfilling the EA needs for such projects.

Table 3. Types of projects under the World Bank’s Categories A, B, and C

Category A <i>Projects/project components which may have diverse and significant impacts – normally require EIA</i>	Category B <i>Projects/project components which may have diverse and significant impacts – more limited EIA is appropriate</i>	Category C <i>Projects which are unlikely to have direct adverse impacts – no EIA is required</i>
<ul style="list-style-type: none"> • Dams and reservoirs; • Forestry production projects; • Irrigation, drainage and flood control (large scale); • Industrial plants (large scale*) and industrial estates, including major expansion, rehabilitation, or modification; • Aquaculture and marine culture (large scale); • Land clearance and leveling; • Mineral development • Port and harbor development; • Reclamation, new land development; • Resettlement and all projects with potentially major impacts on people; • River basin development; • Thermal and hydropower development; 	<ul style="list-style-type: none"> • Agro-industries (small scale); • Electrical; transmission; • Irrigation and drainage (small scale); • Renewable energy; • Rural electrification; • Tourism; • Rural water supply and sanitation; • Watershed projects (management or rehabilitation); • Rehabilitation, maintenance, and upgrading projects (small-scale); • Protected areas and biodiversity conservation; • Rehabilitation or modification of existing industrial facilities (small scale); • Rehabilitation of highways or rural roads; • Energy efficiency and energy conservation 	<ul style="list-style-type: none"> • Education; • Family planning; • Health; • Nutrition; • Institutional development; • Technical assistance; • Most human resource projects

Category A <i>Projects/project components which may have diverse and significant impacts – normally require EIA</i>	Category B <i>Projects/project components which may have diverse and significant impacts – more limited EIA is appropriate</i>	Category C <i>Projects which are unlikely to have direct adverse impacts – no EIA is required</i>
<ul style="list-style-type: none"> • Manufacture, transportation, and use of pesticides or other hazardous and/or toxic materials 		

Note: *Large scale here is defined as enterprises with annual sales of USD 3 million or more equivalent.

The selection of a screening category often depends also substantially on the project location, while the “significance” of potential impacts is partly a function of the natural and socio-cultural surroundings. There are a number of locations which should cause a project to be considered an “A” Category:

- ▶ in or near sensitive and valuable ecosystems (wetlands, natural areas, habitat of endangered species);
- ▶ in or near areas with archaeological and/or historical sites or existing cultural and social institutions;
- ▶ in densely populated areas, where resettlement may be required or potential pollution impacts and other disturbances may significantly affect communities;
- ▶ in regions subject to heavy development activities or where there are conflicts in natural resource allocation;
- ▶ along watercourses, in aquifer recharge areas or in reservoir catchments used for drinking water supply; and
- ▶ on lands or waters containing valuable resources (such as fisheries, minerals, medicinal plants, agricultural soils).

2.3.3 Public consultation and disclosure

For all Category A and B projects proposed for WB financing, during the EIA process, the beneficiary consults all involved parties, including project-affected groups and local non-governmental organizations (NGOs) about the project's environmental aspects and takes their views into account. The beneficiary initiates such consultations as early as possible. For Category A projects, the beneficiary consults these groups at least twice: (a) shortly after the environmental screening and before the terms of reference for the EIA are finalized; and (b) once a draft EIA report is prepared. In addition, the beneficiary consults with such groups throughout project implementation as necessary to address EIA-related issues that affect them.

For meaningful consultations between the beneficiary and project-affected groups and local NGOs on all Category A and B projects proposed for World Bank financing, the beneficiary provides relevant materials in a timely manner prior to consultation and in a form and language that are understandable and accessible to the groups being consulted.

For Category A projects, the beneficiary provides for the initial consultation a summary of the proposed project's objectives, description, and potential impacts; for consultation after the draft EIA report is prepared, the beneficiary provides a summary of the EIA's conclusions. In addition, for a Category A project, the beneficiary makes the draft EIA report available at a public place accessible to project-affected groups and local NGOs.

In any Category B project, the EIA report for a project proposed for WB financing is made available to project-affected groups and local NGOs. Public availability in the borrowing country

and official receipt by the Bank of the EIA report for projects proposed for WB funding is a prerequisite to Bank appraisal [or certain restructurings] of these projects.

2.4 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 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, Ecological Expertise. 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 B⁸. 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 authority⁹. While organizing such expertise, within 7 days, the local public authorities should inform the NGO about decisions taken concerning permission

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.

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.

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.

3. Baseline and Impact Analysis

3.1 Overview of the status of the country's environment¹⁰

The Republic of Moldova is located in the South-Eastern part of Europe and neighbored by Ukraine and Romania.

Its territory administratively is organized in villages, cities, districts, and two autonomous territorial units – the Gagauzia Autonomous Unit and the Administrative Territorial Unit on the left side of the Nistru/Dniester River.

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

The Republic of Moldova has modest water reserves. The rivers are part of the Black Sea Basin. The small rivers prevail. The biggest rivers are: Nistru, Prut, Raut, Bic, Botna, Ialpuș. A few natural lakes are found in the territory of the country. The majority of them are the lakes from the river meadows of the Prut (Beleu, Rotunda, Foltane) and Nistru (Old Nistru), which are called meadow lakes and river-lagoon lakes, such as the Salas, Cahul, and Cuciurgan lakes.

The number of anthropic lakes is large (over 3000). An important role is played by the phreatic water, which is used for the drinking water supply to the majority of the rural population. The deep underground water, with a more constant regime as compared to the phreatic water, is sometimes highly mineralized, having even curative qualities (Cahul, Camenca, Varnita, and others).

The vegetation, animal world, and soils have a zonal distribution on the territory of the country depending on the climate and are divided into levels based on the relief. Two vegetation zones are distinguished in the Republic of Moldova: steppe and forest-steppe.



¹⁰ Reference: State of the Environment in the Republic of Moldova 2007–2010 (National Report - Synthesis) - http://mediu.gov.md/images/documente/starea_mediului/rapoarte/nationale/p3_SM_eng.pdf

The variability of the natural conditions led to heterogeneous and complicated *soil coverage* formation. The zonal peculiarities of the soils are represented by three types of soil: Brown and Grey soils, and Chernozem. Soil resources are heavily exploited and are subject to different types of degradation, the most dangerous being erosion.

According to the Land Cadastre (Cadastrul Funciar al Republicii Moldova), on 01 January 2014, the total area of the land found in the Republic of Moldova is accounted for 3384.6 thousand ha, including 2499.6 thousand ha (73.9%) of agricultural lands.

Land degradation is a significant threat to the country's land resources. About 2 million ha of agricultural lands are situated on slopes with a variety of degrees of inclination, making them vulnerable to degradation.

Figures from 2014 classified 898,653 ha – 36.0% of the agricultural land area and 26.5% of the total land area – as subject to erosion. About 4.6% of the agricultural area and 13% of the eroded land was seriously eroded. Land erosion is advancing by an average of around 8,400 ha a year.

The quality of soil is affected by the annual humus loss of between 5 to 7 tons/ha. In addition, the continuous diminution of the soil's nutrient reserves by 150 to 180 kg/ha/year is disturbing the nitrogen, phosphorus and potassium balance of the soil.

The *forestry resources* of the Republic of Moldova are important strategic natural resources. In 2014 the area of forestry lands accounted for about 464462 ha or 13,7% of the total land fund, a value close to that which ensures the ecological balance maintenance – 15%.

The composition of the Moldovan forests is represented mainly by lamellar species (97.8%), including cvercinee – 39.6%, locust – 36.1%, ash – 4.6%, hornbeam – 2.6%, poplar – 1.6% etc., and mastic representing only 2.2%.

To keep the biota resources at a level which would be favorable for the ecologic balance in the ecosystems populated by these organisms, the forest-covered areas, the steppe sectors, meadow and swamp areas, and the share of the state protected natural areas all need to increase from 4.65% up to 5.50% of the country's territory, which is still lower than the average from Central and Eastern Europe (9%), and Western Europe (15%) (Europe's Environment: The Third Assessment, 2003).

Central Moldova eco-systems specifics. The selected for forest and pasture management activities rayons (Cimislia, Criuleni, Nisporeni, Rezina, Telenesti and Ungheni) are located mainly in the central part of Moldova. The Central zone of the country incorporates the Central Moldavian Plateau, at an average elevation of about 350 to 400 m, are ridges interlaced by deep, flat valleys, ravines, and landslide-scoured depressions. Steep forest-clad slopes account for much of the terrain, where the most common trees are hornbeam, oak, linden, maple, wild pear, and wild cherry.

The plateau can be divided into 5 parts: Ciuluc-Solonet Hills (Romanian: Dealurile Ciuluc-Soloneț), alongated in the north along the right side of the Raut River, 1,690 sq. km, Cornesti Hills (Romanian: Dealurile Cornestilor), also known as Cordi Hills (Romanian: Dealurile Codrilor), 4,740 sq. km, Lower Dniester Hills (Romanian: Dealurile Nistrului Inferior), alongated to the south of the Botna River, 3,040 sq. km, Tigheci Hills (Romanian: Dealurile Tigheciului), alongated in the south along the left side of the Prut River, 3,550 sq. km, and

between the latter and the Prut River, the Lower Prut Valley (Romanian: Valea Prutului Inferior), 1,810 sq. km.

The area, about 30% of the country's area, is undulating with hilly terrain interspersed with plains and large valleys and hence the vegetation ranges from forest to step ecosystems. Soil erosion is also a serious issue in this area. The two major soils types occupying this zone are Gray Forest Soil and Chernozem. Annual mean temperature is 9.2°C, annual mean precipitation for the majority of the zone - 636 mm.

Current climatic hazards, include *flooding* from May-August, *spring frost* between April and May, *summer hail* events and frequent *droughts* throughout the growing period from spring through to fall.

3.2 Major environmental concerns of the country and of Central ecosystems related to project activities

In the current conditions, the project major environmental problems can be considered:

- a) soil degradation and intensified erosion and landslides;
- b) soil and water pollution by storing waste in unauthorized zones and forest protection strips of the agricultural fields, rivers and water basins, ravines and on degraded lands.
- c) overgrazing on pasture lands and unorganized in forests, which led to the degradation of grassy cover of pastures and damage to natural regeneration of forests, thus the productivity of pastures is extremely low;
- d) fragmentation of forest sectors as a result of overexploitation, so the majority of natural forest ecosystems have become fragmented and degraded;
- e) destruction of shelter belts to protect agricultural fields and watercourses led to acceleration of soil erosion, disruption and siltation of watercourses and water basins;
- f) cutting trees on the river banks, which led to intensification of water evaporation and reducing the environmental capacity of water bodies and maintaining the wide diversity of aquatic animals;
- g) irrational use of systems, equipment and methods for irrigation and unauthorized use of water sources with a high level of pollution and mineralization, leading to an irreversible degradation of agricultural soils.

3.3 Environmental impacts from agriculture

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. At the beginning of 2010, approximately one third of the land was under small farms of maximum 2-3 ha. The rest of agriculture land was consolidated to various extents and in various forms (e.g. leasing, cooperatives, farmers associations, etc.). 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.

3.4 Project potential impacts

Generally, the project will provide many *environmental and social benefits*, such as improved farmer skills and investments in climate change adaptation technologies, improved forest management, strengthening disaster response capacity, etc. The MCAP will also provide a series of *environmental benefits* and in particular:

- ▶ ensuring an ecological balance on Moldova's territory
- ▶ improving biodiversity and ensuring sustainable use of natural resources
- ▶ restoring degraded lands, conserving and increasing soil fertility
- ▶ restoring shelter belts to protect rivers and water basins from pollution
- ▶ restoring protection strips for agricultural fields and increasing their productivity and productivity of natural pasture lands
- ▶ reducing fragmentation and vulnerability of natural ecosystems
- ▶ contributing to preventing and combating desertification, natural disasters, and
- ▶ reducing negative impacts of global climate change due to carbon sequestration.

The proposed project activities (production of forest reproductive material for climate resilience; ecological reconstruction of priority degraded forests; rehabilitation and establishment of shelter belts to protect fields and riparian buffers to protect water bodies; afforestation of degraded land; improvement of community-based pasture management; matching grant facility, which would support investments in drainage of waterlogged areas, in irrigation infrastructure rehabilitation and modernization, in on-farm water-harvesting structures and efficient small-scale irrigation, anti-hail net systems, soil and water conservation techniques; improving emergency prevention and preparedness capacities by establishment of two regional Emergency Command Centers; etc.) might also generate a series of various *adverse environmental and social impacts*. These activities, if not adequately implemented, may cause some *negative environmental impacts* related to:

- ◀ biodiversity degradation and loss;
- ◀ increased pollution of waters and soils;

- ◀ soil degradation;
- ◀ noise, dust, air and water pollution, health hazards and labor safety issues during the civil works; etc.

The anticipated *adverse social impacts* of such activities include health and safety risks as well as lost access to natural resources issues.

All of identified social and environmental impacts are expected to be typical for agriculture production, afforestation and irrigation activities and for small scale construction/rehabilitation works, temporary by nature and site specific, and can be easily mitigated by applying best agricultural, agro-forestry and construction environmental practices or relevant mitigation measures.

The description of potential impacts, which may arise from sub-projects from forestry and agricultural production sectors as well as typical measures to be taken to prevent and mitigate impacts for activities in agricultural sector were developed by the World Bank Group in 2007 in its *Environmental, Health, and Safety Guidelines*¹¹, as well as outlined in the *Best Available Techniques to the EU Integrated Pollution Prevention Control Directive*¹² and summarized in *Table 4* below, which should be consulted while conducting the EIA studies and preparing the Environmental Management Plans for selected for financing sub-projects and matching grants.

¹¹ See: <http://www.ifc.org/ifcext/sustainability.nsf/Content/EnvironmentalGuidelines>

¹² See: http://europa.eu/legislation_summaries/environment/waste_management/128045_en.htm

Table 4. Potential environmental impacts generated by proposed project activities

Sub-project Type	Positive Impacts	Adverse Impacts	Mitigation Measures
Small scale construction of the forest seed facility	Ensuring sustainable forest seed production, reducing vulnerability to unfavourable climate factors; improving quality of propagation materials	Degradation of natural soil cover; increased risks of pollution of ground and surface waters; threats to human health due to poor handling of pesticides and fertilizers; noise, dust, air and water pollution, health hazards and labor safety issues during the civil works	On-site investigation of local conditions, incl. soil survey; prepare individual technical detail design; proper handling of construction wastes if any; training on health hazards and labor safety; select and install an adequate equipment; training and implementation of good maintenance practices; implementing IPM techniques; proper handling of pesticides and fertilizers if any
Ecological reconstruction of degraded forest	Improving biodiversity and ensuring sustainable use of natural resources; restoration of degraded forest areas; reducing of vulnerability of natural ecosystems; preventing and combating desertification and natural disasters	Loss of existing biodiversity and impacts on natural habitats; increasing soil erosion; risk of pollution of surface and ground waters and soils due to improper use of pesticides and fertilizers	On-site investigation of local conditions, incl. soil survey and pest/disease risks; prepare individual design; planting of recommended native and adapted species and varieties; implementing IPM techniques and proper handling of pesticides and fertilizers if any; on-site monitoring and protection
Afforestation of degraded agricultural land	Improving biodiversity and ensuring sustainable use of natural resources; restoration of degraded land; reducing of vulnerability of ecosystem; preventing and combating desertification and natural disasters; protection of rivers and water basins, reducing water contamination; increasing productivity of agricultural lands and natural pastures	Loss of existing biodiversity and natural habitats; increasing erosion and degradation	On-site investigation of local conditions, incl. soil survey; prepare individual design; planting of recommended native and adapted species and varieties; on-site monitoring and protection
Rehabilitation and establishment of shelter belts to protect farmlands and riparian buffers to protect water bodies	Improving biodiversity and ensuring sustainable use of natural resources; reducing of vulnerability of local ecosystems; preventing and combating desertification and natural disasters; preventing and reducing soil erosion; protection of rivers and water basins, reducing water contamination; increasing productivity of agricultural lands	Loss of existing biodiversity and natural habitats; increasing risk of soil erosion, pollution of surface and ground waters and soils due to improper use of pesticides and fertilizers	On-site investigation of local conditions, incl. soil survey and pest/disease risks; prepare individual design; planting of recommended native and adopted species and varieties; implementing IPM techniques; proper handling of pesticides and fertilizers if any; on-site monitoring and protection
Improvement of forest pest/disease management	Prevention and effective combating of forest pests/diseases; reducing vulnerability of	Threats to human health and wildlife due to poor handling of pesticides and fertilizers;	Procuring necessary adequate equipment; providing capacity-building trainings;

Sub-project Type	Positive Impacts	Adverse Impacts	Mitigation Measures
	ecosystems; improving biodiversity and ensuring sustainable use of natural resources	increasing risk of pollution of surface and ground waters and soils due to improper use of pesticides and fertilizers	promoting and implementing best IPM techniques; minimizing use of chemicals;
Improvement of forest fire management	Prevention and effective combating of forest fires and natural disasters; reducing vulnerability of forest/natural ecosystems; improving biodiversity and ensuring sustainable use of natural resources	Soil and biodiversity degradation as the result of construction of access roads, artificial water ponds.	Procuring necessary adequate equipment; providing capacity-building trainings; promoting and implementing best fire protection practices
Rehabilitation, restoring productivity of community pastures	Improving biodiversity and ensuring sustainable use of natural resources; restoring of degraded pastures; increasing productivity and reducing vulnerability of local ecosystems; preventing and combating desertification	Grass cover degradation and soil compaction due intensive pasturing; biodiversity degradation	Implementing of adequate and sustainable management of pasture lands; evaluation of local conditions, preparing recommendations and providing trainings to local communities on good pasture practices; providing adopted seed materials; on-site monitoring and protection
Small scale greenhouses	Ensuring sustainable crop production, reducing vulnerability to unfavourable climate factors; improving quality of produced crops	Degradation of natural soil cover; increased risks of pollution of ground and surface waters; threats to human health due to poor handling of pesticides and fertilizers; energy and water consumption and losses	On-site investigation of local conditions, incl. soil survey; quality and quantity evaluation of local water source; prepare individual technical detail design; select and install an adequate equipment; training and implementation of good agricultural practices; ensure rational use of energy and water resources; implementing IPM techniques; proper handling of pesticides and fertilizers if any; ensuring organic wastes control
Small scale irrigation system (for forest nurseries)	Increasing productivity of soils; reducing vulnerability of agricultural and forest plantations; minimizing, combating and preventing drought impact; improving quality of crops	Soil degradation; increased pollution of ground and surface waters and soils; threats to human health and wildlife due to poor handling of pesticides and fertilizers; energy and water consumption and losses; degradation of existing biodiversity	Field investigation of local conditions, incl. soil survey; quality and quantity evaluation of local water source; prepare proper technical detail design; select and install an adequate equipment; training and implementation of good maintenance practices; ensure rational use of energy and water resources; implementing IPM techniques; proper handling of pesticides and fertilizers if any
Climate Smart Agriculture technologies (frost busters; water condensation techniques; production ventures of perennial grass seed; energy-smart technology investment etc.)	Improving biodiversity and ensuring sustainable use of natural resources; increasing soil fertility and productivity of agricultural and pasture lands; reducing fragmentation and vulnerability of local	n/a	Provide trainings to farmers on good agricultural practices (GAP) and techniques; organize GAP promotional events, field sessions, demo plots etc.

Sub-project Type	Positive Impacts	Adverse Impacts	Mitigation Measures
	ecosystems; preventing and combating desertification and natural disasters		
On-farm water-harvesting structure	Adaptation and reducing of vulnerability of farms; minimizing, combating and preventing water-deficit risks; promotion of good practices and benefits of on-farm water harvesting and water saving	Increasing risk of water logging in places of storage reservoirs; health hazards and labor safety issues during the civil works	Prepare proper technical design; select and install adequate equipment; implement good maintenance practices; ensure rational use of water resources
Equipment for anti-hail net system	Efficient protection of plantations and reducing of vulnerability to hail natural disasters; reducing losses of crop harvest; promotion of good practices and benefits of anti-hail net system	n/a	Prepare proper technical design; select and install adequate equipment; implement good maintenance practices
Conservation agriculture technology to address soil erosion and drought impacts in perennial plantations; restoration of degraded soils through integrated soil fertility management (ISFM); and equipment for no-till conservative agriculture	Improving biodiversity and ensuring sustainable use of soils; increasing soil fertility and productivity of agricultural lands; reducing fragmentation and vulnerability of local ecosystems; reducing soil erosion risks; saving energy and labor costs	Increased dependence on herbicides; slow soil warming on poorly drained soils; increased moisture levels in the soil may lead to an increased risk of fungal crop diseases; risk of pollution of soils and waters due to increased use of farm chemicals	Provide trainings to farmers on no-till techniques and good agricultural practices, incl. IPM; ensure soil quality monitoring; implementing best IPM techniques and minimizing use of chemicals; proper handling of farm chemicals and fertilizers if any
Training and capacity/equipment support to meteorological service delivery	Increasing quality, timeliness and coverage of meteorological service delivery; reducing and prevention of unfavourable impacts of meteorological factors	n/a	Procuring necessary adequate equipment and providing capacity-building trainings
Small scale construction/renovation for regional Emergency Command Center (ECC)	Increasing quality, timeliness and coverage of delivered services	Noise, dust, air and water pollution, health hazards and labor safety issues during the civil works; construction waste generation	On-site investigation of local conditions; prepare individual technical detail design; proper handling of construction wastes if any; training on health hazards and labor safety
Training and related equipment for regional ECC	Increasing quality, timeliness and coverage of delivered services	n/a	Procuring necessary adequate equipment and providing capacity-building trainings

4. Project Environmental Guidelines

4.1 Purpose and content of Environmental Guidelines

The purpose of these Environmental Guidelines is to assist the PMT staff and project beneficiaries in terms of conducting environmental screening, Environmental Impact Assessment of the selected sub-projects and matching grants, as well as determining their potential environmental impacts and provide mitigation and monitoring measures to minimize or prevent them. Respectively, the Guidelines provide criteria and procedures for sub-project screening and EIA to be applied by the PMT and ACSA and recommendations for improving environmental performances of sub-project proposals to promote sound environmental practices. These Guidelines will be also be used for the purpose of environmental supervision monitoring of sub-projects as well as for reporting on EMPs implementation.

Since, these are only guidelines and the information contained within is generalized, in some instances, the PMT and ACSA safeguards specialists would be advised to seek local professional opinion (e.g., from local environmental authorities, forestry and agricultural extension staff, researchers, designers, etc.) for more specific information and consultation.

The Environmental Guidelines provide the following:

- a) Rules and Procedures for sub-projects environmental screening to be funded under the project;
- b) Requirements and steps in conducting Environmental Impact Assessments of proposed project activities and matching grants;
- c) Proposed mitigation measures to be applied during the project activities and matching grants implementation;
- d) Content and format for the Environmental Management Plan (EMP) and Environmental Monitoring Plan;
- e) and
- f) EMP Checklist for small-scale construction and reconstruction sub-projects.

4.2 Rules and procedures for the environmental screening

Screening of each proposed sub-project supported under the MCAP is to be undertaken in order to assign a project environmental category and determine the appropriate extent and type of Environmental Assessment as well as to ensure it does not trigger any other World Bank safeguards policies than those specified above. It is also targeted at identifying those types of activities which the project will not support. The attribution of the sub-project type to the WB's EA category and respectively, environmental risk that might be generated is, to some extent, an expert judgment. High risk sub-projects (Category A) are not expected within this project and would be automatically excluded from receiving support under MCAP; moderate to low risk sub-projects (Category B) and low to no risk sub-projects (Category C) will be screened according to these Guidelines.

Generally, the significance of impacts and the selection of screening category accordingly, depend on the type and scale of the sub-project, the location and sensitivity of environmental issues, and the nature and magnitude of the potential impacts.

Examples of potential sub-project activities to be financed under the MCAP that fall under Categories B and C, and the proposed type of EIA instrument are provided in the *Table 5* below.

For Category C sub-projects beyond screening, no further EIA action is required. If the MCAP implementers meet difficulties with WB categorization of sub-projects it should consult the local environmental authorities.

The implementing agency/PMT and ACSA, based on an *Environmental Screening Checklist*, presented in the *Annex A*, and the indicative screening of potential types of projects that might be financed under the project (table 5 below) decides what category is proposed for sub-project and informs the beneficiary on the type of the EIA that needs to be designed.

4.2.1 Screening and criteria for selecting lands for afforestation, planting new forest belts and for pasture improvement activities

As specified in the *Table 4* above, in order to make sure the project activities will not affect natural habitats and biodiversity conservation the ESMF has to specify the requirements for environmental screening in terms of biodiversity issues of land plots given for afforestation or for creating forest shelterbelts as well as of the degraded forests selected for reconstruction activities. The location and scale of the proposed for afforestation and pasture improvement lands are very important in avoiding potential impacts on biodiversity and on natural habitats, and first of all critical ones¹³, as well as for predicting environmental impacts while implementing these activities when most impacts, but temporarily, can be expected.

While assessing lands proposed for afforestation or pasture improvement it is critical first of all avoiding any Protected Areas (PAs), both national and local ones, which would include nature reserves and national parks, reserved natural resources and natural habitats for rare and endangered species, wetland areas as well as areas located near the physical cultural objects. A special attention should be given to the sites proposed for natural pastures improvements as in some cases there might proposed those areas which are important as natural habitats for steppe herbal vegetation, especially in the Southern rayons of the country. In ensuring that ICAS, the responsible institution in this regard and the PMT have to consult the List of PAs included in the *Law #1538 on the Fund for Natural Areas Protected by State* (1998). Furthermore, in order to make sure no such areas are proposed for project investments and activities as well as areas which might be under such considerations, ICAS and PMT, before selecting any sub-project for specified activities, will seek the State Ecological Inspectorate preliminary approval. In case of impossibility of avoiding natural habitats (not critical ones where no any project interventions will be allowed), the sub-project beneficiary will conduct a site specific EIA and prepare an EMP, which would clearly specify the project alternatives along with the proposed mitigation and monitoring activities. These EA documents have to be further reviewed and approved by the rayon environmental authorities.

¹³ As defined in the WB OP 4.04 on Natural Habitats

Table 5. Sub-project types, their environmental categories, and suggested EIA documents

Sub-project type	Category C	Category B	EIA procedure document*	Comments
Small scale construction of the forest seed facility	-	X	EMP Checklist	-
Ecological reconstruction of degraded forest	-	X	Site specific EIA& EMP	-
Afforestation of degraded/eroded land	X	-	-	Before sub-project designing, ICAS will conduct a preliminary biodiversity assessment to avoid NHs. During designing of the afforestation scheme, ICAS will specify, based on field investigations, the afforestation formula (in terms of species composition) along with necessary soil conservation measures, if any
Rehabilitation and establishment of shelter belts to protect farmlands and riparian buffers to protect water bodies	X	-	-	Before sub-project designing, ICAS will conduct a preliminary biodiversity assessment to avoid NHs. During designing of the afforestation scheme, ICAS will specify, based on field investigations, the afforestation formula (in terms of species composition) along with necessary soil conservation measures, if any
Improvement of forest pest/disease management	X	-	-	The suggested activities require mandatory preliminary training and public awareness activities.
Improvement of forest fire management	X	-	-	This would related to purchasing of adequate equipment and training activities
Rehabilitation, restoring productivity of community pastures	X	-	-	Before sub-project designing, ICAS will conduct a preliminary biodiversity assessment to avoid NHs. During designing of the sub-project, ICAS will specify, based on field investigations, necessary soil conservation measures, if any
Small scale greenhouses	X	-	-	This would require only very limited civil works and no purchasing and construction of a special boiler or heating systems
Small scale irrigation system (for forest nurseries), on-farm irrigation equipment	X	-	-	The Project will support mainly drip irrigation sub-projects, and which would use authorized water sources only
Climate Smart Agriculture technologies (frost busters; water condensation techniques; production ventures of perennial grass seed; energy-smart technology investment etc.)	X	-	-	In the case of no any civil works or hydro-technical activities
On-farm water-harvesting structure	X	-	-	Excluding investments in construction of water reservoirs
Equipment for anti-hail net system	X	-	-	-
Conservation agriculture technology to address soil erosion and drought impacts in perennial plantations; restoration of degraded soils through integrated soil fertility management (ISFM); and equipment for no-till conservative agriculture	X	-	-	Excluding large scale land improvement works that would trigger the slopes stability. Each subproject on restoration of soils will be preliminary screened to avoid any environmental impacts

Sub-project type	Category C	Category B	EIA procedure document*	Comments
Training and capacity/equipment support to meteorological service delivery	X	-	-	-
Small scale construction/renovation for regional Emergency Command Center (ECC)	-	X	EMP Checklist for small scale (re)constructions	-
Training and related equipment for ECC	X	-	-	-

Note: *For **Category B** sub-projects/components, which may have diverse and significant impacts – *more limited EIA is appropriate*; **Category C** sub-projects, which are unlikely to have direct adverse impacts – *no EIA is required* (for detailed explanation on screening categories and procedures see pp. 2.1.4, 2.3.2 and 2.4 above).

4.2.2 EIA procedure for Category B sub-projects

After the initial environmental screening of sub-project proposal, for the Category B sub-projects – the implementers should initiate a site specific EIA and prepare the EMP for the sub-projects involving afforestation, forest reconstruction/rehabilitation, and irrigation. The sub-projects involving small scale construction/or reconstruction activities would only require the preparation of an EMP Checklist in order to identify, evaluate and prevent potential environmental impacts and identify mitigation measures that may be incorporated into the design documentation¹⁴. *Table 5* above specifies, in which case what type of EIA instruments should be applied.

EMP Checklist for small scale construction and reconstruction activities. In the case of sub-projects, which would involve typical small scale (re)construction activities, it is proposed that a generic EMP checklist-type format (“EMP Checklist”) be used, developed by the World Bank to provide “pragmatic good practice” and designed to be user-friendly and compatible with safeguard requirements (see *Annex B*). 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 would provide the key elements of an Environmental Management Plan to meet Environmental Assessment requirements of the World Bank (under OP/BP/GP 4.01).

The EMP Checklist has four parts:

- Part 1* is descriptive (“site passport”) and describes sub-project specifics in terms of physical location, description and list of permits 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” format.
- Part 4* is a site-specific monitoring plan for activities to be carried out during the construction/rehabilitation activities.

Environmental Assessment requirements in the case of Contingent Emergency Response Component activities. The scope of the EA for such activities is to ensure due diligence in managing potential risks, while recognizing the emergency nature of the proposed rapid response operation and the need for providing immediate assistance. The safeguards issues, including consultation and disclosure, will be done, in a flexible yet timely manner during preparation and supervision of such activities. For that purpose the Task Team will prepare an *Environmental and Social Screening and Assessment Framework* (ESSAF) that would provide guidance on the approach to be taken during implementation for the selection and design of proposed investments and the planning of mitigation measures, including consultation and disclosure requirements. The ESSAF¹⁵ is subject to consultation and disclosure by the Borrower during project implementation, which should be undertaken at a time appropriate for the nature of the operation.

¹⁴ The purpose of the EIA and/or EMP is to predict potential effects and improve the environmental aspects of sub-projects by minimizing, mitigating or compensating for negative effects. The *Terms of Reference for an Environmental Impact Assessment* and an *Environmental Management Plan* are attached as *Annexes A/Form 3* and *Annex C* of the ESMF. The sub-project’s applicant is responsible for conducting this study and for preparing the EMPs.

¹⁵ The relevant guidance on ESSAF and other issues in this regard are provided on the OPCS website at <http://opcs>.

4.2.3 Types of sub-projects that will be not supported by the MCAP

The MCAP does not support the following sub-projects:

- ▶ in the case they may cause significant impacts for which it would be necessary a full EIA (Category A sub-projects);
- ▶ any investments related to wood harvesting and/or those that might have impacts on the forest health (Ref.: OP/BP 4.36 *Forestry*);
- ▶ production and processing of Genetically Modified Organisms (GMOs);
- ▶ located in protected areas, critical habitats or culturally or socially sensitive areas (Ref.: OP/BP 4.36 *Forestry*, OP/BP 4.04 *Natural Habitats*, OP/BP 4.11 *Physical Cultural Resources*) (the screening process and criteria are provided in p. 4.2 above);
- ▶ any sub-projects used to invest in a business which would require the involuntary displacement of existing occupants or economic users of any plot of land, regardless of its current ownership, or loss of or damage to assets including standing crops, kiosks, fences and other (Ref.: OP/BP 4.12 *Involuntary Resettlement*);
- ▶ purchasing pesticides (Ref. OP. 4.09 Pest Management);
- ▶ large scale irrigation systems and sub-projects involving discharging waste waters directly in the international waterways, sub-projects related to discharging waste materials in a location that could impact on international waters, construction of any dams that might affect international waters and hydrological regime, etc. (Ref.: OP/BP 7.50 *Projects on International Waterways*).

4.3 Steps to be followed while performing sub-projects EIA

The steps to be followed while performing sub-projects EIA procedure, along with the responsibilities of the various concerned institutions, are presented in *Table 6* below.

The screening should be done at the initial stage of the sub-projects selection. Based on the description of the proposed activities and on their potential environmental impacts, the PMT and Local Specialized Service Provider (LSSP) will decide, which project category should be attributed as well as what type of EA instrument to be applied.

For the purpose of sub-project EIA it should be used special checklists and templates presented in *Annexes A-C (Table 6)*. These documents will be attached to all submitted sub-project proposals.

Table 6. EIA procedure documents by sub-project categories

Preparer*	EIA document	Sub-project category	
		C	B
B	Environmental Screening Checklist <i>Part 1</i> (Annex A/Form 1)	X	X
LSSP/PMT	Environmental Screening Checklist <i>Part 2</i> (Annex A/Form 1)	X	X
LSSP/PMT	Environmental Screening Checklist <i>Part 3</i> (Annex A/Form 1)	X	X
LSSP/PMT	Field Inspection Checklist (Annex A/Form 2)	-	X
B	Environmental Impact Assessment Study (Annex A/Form 3)	-	X
B	Environmental Management Plan Format (Annex C/Form 1-2)	-	X
B	Environmental Monitoring Plan (Annex C/Form 3)	-	X
B	Environmental Management Plan Checklist for small scale	-	X

Moldova Climate Adaptation Project

	constructions/rehabilitations (Annex B) and for afforestation or pasture improvement activities		
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Note: *B – Project Beneficiary; LSSP – Local Specialized Service Provider (ACSA, SDA, ICAS); PMT – Project Management Team.

The necessary steps in conducting EIA and preparing EMP documents for Category B sub-projects/activities are presented in the *Table 7* below.

Table 7. Steps to be followed while performing the EIA procedure of sub-projects

Steps	Category A sub-projects	Category B sub-projects	Category C sub-projects
Step 1	The potential beneficiary prepares an <i>initial sub-project concept</i> and submits it to Local Specialized Service Providers (ACSA, SDA or ICAS), or PMT (in the case of sub-projects within sub-component 2.2 and component 3). <i>Notes:</i> i) The beneficiary is responsible for obtaining <i>appropriate permits and approvals</i> that may be required for the particular type of activity to be financed, and are issued by the local authorities responsible for environmental issues. It should be noted also that a <i>construction permit</i> would be required in case of new construction or substantial reconstructions; ii) At this time the beneficiary may initiate preliminary discussions, if needed, with the respective of environmental authorities to determine requirements for environmental review		
Step 2	If the sub-project receives preliminary endorsement of Local Specialized Service Providers (LSSP) or PMT, the beneficiary completes <i>Part 1</i> of the <i>Environmental Screening Checklist (Annex A/Form 1)</i>		
Step 3	LSSP/PMT based on the findings of the environmental screening and scoping process completes <i>Part 2</i> of the <i>Environmental Screening Checklist (Annex A/Form 1)</i>		
Step 4	LSSP/PMT Safeguards Specialist, based on the Environmental Screening Checklist, <i>determines the environmental category, and makes a conclusion that a full EIA should be done</i> and informs beneficiary that such sub-project cannot be supported by the project.	LSSP/PMT Safeguards Specialist, based on the Environmental Screening Checklist, <i>determines the environmental category of sub-project is “B”, and makes a conclusion what kind of EIA is to be conducted</i> – an EIA and an EMP and/or partial EIA, or an EMP Checklist, including or not an environmental site assessment, and informs beneficiary	LSSP/PMT Safeguards Specialist, based on the Environmental Screening Checklist, <i>determines the environmental category of the sub-project is C and approves for financing</i> , and informs beneficiary
Step 5	N/A	In the case of a sub-project which require an EIA and EMP and/or an environmental site assessment, the LSSP/PMT Safeguards Specialist organizes a field site visit and completes the <i>Field Site Visit Checklist (Annex A/Form 2)</i>	N/A
Step 6	LSSP/PMT Safeguards Specialist completes <i>Part 3</i> of the <i>Environmental Screening Checklist (Annex A/Form 1)</i>		
Step 7	N/A	7.1) If the applicant wishes to follow further, she/he arranges preparation of <i>Environmental Impact Assessment of a required level</i> and an <i>Environmental Management Plan</i> ; 7.2) For that, LSSP/PMT provides the beneficiary the <i>Terms of Reference</i> for preparation of EIA study (<i>Annex A/Form 3</i>) 7.3) At beneficiary’s request, an authorized institution prepares the Environmental Impact Assessment/Environmental Analysis and Environmental Management Plan	N/A

Steps	Category A sub-projects	Category B sub-projects	Category C sub-projects
		<p>Notes:</p> <p>i) Category B sub-projects which are listed in the <i>Instruction on the Order of Organization and Conducting of the State Ecological Expertise</i>, which presume new construction, technological modernization, application of new technologies, change of land use patterns “some Environmental Assessment” is a subject of the <i>State Ecological Expertise</i>;</p> <p>ii) In the case of small scale construction and reconstruction activities it is recommended to apply a generic <i>Environmental Management Plan Checklist</i>, proposed by the WB to address potential environmental impacts; this document is provided in <i>Annex B</i>;</p> <p>iii) <i>Content and Description of the Environmental Management Plan</i> are presented in <i>Annex C/Form 1</i>;</p> <p>iv) <i>Environmental Management Plan Format</i> is presented in <i>Annex C/Form 2</i>;</p> <p>v) <i>Environmental Monitoring Plan Format</i> is presented in <i>Annex C/Form 3</i></p>	
Step 8	N/A	<p>8.1) The beneficiary prepares and submits to LSSP/PMT prepared <i>Environmental Impact Assessment Report and the EMP and/or EMP Checklist</i> together with other documents needed for environmental approval as well as other relevant documentation upon LSSP/PMT’s request, when needed;</p> <p>8.2) The LSSP/PMT reviews the submitted documentation and completes <i>Part 4</i> of the <i>Environmental Screening Checklist (Annex A/Form 1)</i></p> <p>Notes:</p> <p>i) LSSP/PMT may suggest some revisions and/or clarification (which the applicant has to provide upon PIA ’s request), the Environmental Management Plan and accompanied all necessary permits (the applicant is responsible for obtaining appropriate permits, clearances and approvals which may be required by other local authorities);</p> <p>ii) LSSP/PMT may return the EIA documents in case</p>	N/A

Steps	Category A sub-projects	Category B sub-projects	Category C sub-projects
		they didn't correspond to specified requirements	
Step 9	N/A	<p>When the EIA is conducted and Statement on EIA is ready, the beneficiary organizes its <i>Disclosure and Public Consultation</i>, involving NGO's, community representatives, affected groups, etc. and records input from the public Formal Minutes records the participants as well as issues raised toward EIA, and recommended activities to further address stakeholders' concerns.</p> <p>Note: In the case of small scale sub-projects which require only an <i>EMP Checklist</i> the beneficiary organize its <i>Disclosure without special public consultation</i>.</p>	N/A
Step 10	N/A	<p>10.1) After the consultation the beneficiary incorporates the received recommendations as well as those received during the review and clearance by other public authorities into the sub-project technical design documentation (and Environmental Management Plan) and submit it for conducting of the <i>State Ecological Expertise</i>.</p> <p>Note: The Category B sub-projects which require only an EMP Checklists are not needed to be presented to the SEE</p> <p>10.2) When required, beneficiary gets also from the environmental authorities the final authorizations (permits) with regard to sub-project activities.</p>	N/A
Step 11		<p>11.1) Beneficiary submits full set of EIA documents to LSSP/PMT for their consideration and further decision on funding.</p> <p>11.2) LSSP/PMT shall inform the beneficiary in writing regarding approval or rejection of financing.</p> <p>Note: The EIA documentation for the first two Category B sub-projects from LSSP or PMT will be subject to prior review and approval by the World Bank.</p>	

4.4 EMP disclosure and consultation

Disclosure of the EIA documents for Category B sub-projects is mandatory, and is to be done at a public place accessible to project-affected groups & local NGOs. This might be at the beneficiary office/web site, local authority offices and/or the central State Ecological Inspectorate or its rayon sub-division. Furthermore, the project beneficiary provides a forum or hearing for consultation and comment by project-affected groups ensuring balanced representation and voice for both women and men and local non-governmental organizations during the environmental assessment process and takes their views into account before finalizing project design and submission of the sub-project to the PMT for final approval. The beneficiary provides any relevant materials (process descriptions, maps, building plans, etc.) to participants in a timely manner and in a form and language that are understandable to the group being consulted and records and describes details of consultations held in the project screening form. This should be done in both ways – on the websites and by providing hard copies to the local councils where the proposed activities will be implemented.

In the case of Category B sub-projects the consultation can be done at the stage when the draft EIA report is ready.

However, in case of all other types of sub-projects (Category C) which involve mostly new small construction, insignificant reconstruction, change of machinery and equipment on a new, more ecological one, purchase of small-scale irrigation equipment, purchase of a water collection or orchard anti-hail protection systems and some others which will not significantly affect the environment, there will be no need for a special public hearing, but the project proponent should provide information to all interested parties about these activities by posting on the website relevant information. In the case of construction/reconstruction activities the project beneficiaries should also install a notice plate placed in the site of project implementation.

4.5 Integration of the EMP into project documentation

The EA provisions would be used for the following:

- a) including of environmental requirements in the Project Operational Manual and into the Matching Grant Facility Operational Manual;
- b) including of EMP/EMP Checklist in construction or afforestation and pasture improvement contracts for individual sub-projects as well as EMPs for Category B matching grants, both the specifications and bills of quantities. Contractors are required to include the cost in their financial bids;
- c) identification of EMP/EMP Checklist follow-up responsibility within the implementing agency/PMT or ACSA; and
- d) monitoring and evaluation of mitigation/avoidance measures identified in the site-specific review and in the EMP/ and EMP Checklist. The necessary mitigating measures would constitute an integral part of sub-project implementation, including being part of the contracts binding the contractors to carry out the environmental obligations during carrying out of works¹⁶.

¹⁶ 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.

4.6 Sub-projects' EA review and approval

EA review and approval. The project beneficiaries in the case of Category B sub-projects which require State Ecological Expertise will submit the sub-project documentation to the State Ecological Inspectorate for examination and approval. The PMT and ACSA will ensure no MCAP supported such sub-projects will be permitted to start until a favorable official written response is received from SEI. Documentation of successful SEI approval, including State Ecological Expertise, should be placed in the sub-project file and available for World Bank verification.

Supervision and monitoring activities. During sub-project implementation the PMT/ACSA will have overall supervision responsibility for assuring that the measures indicated in the EMP/EMP Checklist are properly performed. In collaboration with the local authorities and the SEI, the PMT/ACSA will perform the sub-project environmental monitoring during both the construction and operation phases, as specified in the monitoring plan of the EMP/EMP Checklist.

Reporting. Regular semi-annual progress reports on MCAP implementation should include a section entitled "Environmental Management". The section should provide a condensed description of the monitoring activities, any issues identified and how they were or are planned to be resolved.

4.7 Environmental monitoring

Environmental monitoring during sub-project implementation has to provide information about key environmental aspects of the sub-project, particularly its environmental impacts and the effectiveness of taken mitigation measures. Such information enables the implementing agency to evaluate the success of mitigation measures as part of project supervision, and allows corrective action(s) to be implemented in a timely manner, when needed. The ESMF identifies monitoring objectives and specifies the types of monitoring, and their link to impacts and mitigation measures. Specifically, the monitoring section of the EMP provides: (a) a specific description, and technical details of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and, (b) monitoring and reporting procedures to: (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

If approved, during the sub-project's operation phase, the project beneficiaries which should perform regular supervisions of the sites to confirm compliance with EA instruments and periodically (on quarterly basis) provide reports to the PMT/ACSA. The proposed format of Environmental Monitoring Plan is presented in *Annex C*.

The project beneficiaries make available information on monitoring of environmental management activities and mitigation measures in its routine reporting on sub-project implementation to PMT/ACSA and during their periodic implementation support visits.

4.8 Environmental due diligence of associated activities

As specified above, under the sub-component 1.2. *Support to community-based irrigation*, the Project will provide grant financing to Water User Associations (WUAs) to help their member farmers to access 10 existing large-scale irrigation systems that were recently rehabilitated under the US-funded Millennium Challenge Corporation (MCC) Program “Compact”. Climate adaptation grants for eligible investments would include only on-farm irrigation equipment (e.g. mobile aspersion irrigation machines with reel and console and a hydraulic turbine). This sub-component will also support capacity building to WUAs to manage irrigation more effectively and improve their governance and management processes. The proposed activities do not require any new civil works and will not lead to incremental abstraction of water from the Dniester and Prut Rivers which are Transboundary Rivers and pass through Moldova’s territory, flowing into the Black Sea or Danube River. Accordingly, the works to be funded under the Project can be qualified as minor additions, or alterations to the existing irrigation and drainage schemes which will not (i) adversely change the quality or quantity of water flows to the other riparians; and (ii) be adversely affected by the other riparians' possible water use. Taking into account the rehabilitated irrigation pumping stations are “associated” to the project activities, the ESMF has undertaken their short environmental due diligence.

The received from the MCC information shows both the Program design and its implementation can be considered as highly satisfactory in terms of environmental and social safeguards and in full compliance with the WB OPs.

The MCC “Environmental Guidelines” applied for conducting EA (see: <https://www.mcc.gov/resources/doc/environmental-guidelines>) directly indicates, that they are prepared based on “...on sound sustainable development project design principles and international best practices in this field, including, the environmental and social policies and guidelines of the multilateral development banks, the *Common Approaches* developed by export credit agencies through the Organization for Economic Cooperation and Development (OECD)”. Furthermore, the document specifies the projects MCC finances under Compact will be developed and implemented in a manner consistent with the environmental and social performance standards set forth in the *Performance Standards on Environmental and Social Sustainability* of the International Finance Corporation, as amended from time to time (IFC Performance Standards). Consistent with MCC’s principle of country ownership, the host country is responsible for managing environmental and social risks and impacts consistent with the requirements of the IFC Performance Standards. In addition, MCC may provide such additional guidance to a host country during the implementation of a Program as may be advisable in light of host-country norms and international standards, such as the Environmental, Health, and Safety Guidelines of the World Bank Group (2007, or as amended from time to time) or World Health Organization guidelines and standards”.

Further assessment of the MCC EA rules and procedures, including on EA disclosure and public consultation, shows all of them are fully in line with the requirements of all WB OPs. Based on specified MCC Guidelines the Moldova Compact Program for both Prut and Dniester rivers has conducted specific Environmental and Social Impact Assessments and prepared Environmental and Social Management Plans¹⁷, which have been largely accepted during a series of public

¹⁷ Reference: MWH Americas. Environmental and social impact assessment of central irrigation system projects in the Prut River Basin in Moldova, proposed for MCC funding, 2010; and MWH Americas. Environmental and social

consultations on the ground and officially approved by the State Ecological Expertise and by the MCC management.

The documents submitted by the Compact Program show also the EA documents have been effectively implemented¹⁸. During the Program implementation the PIU has been constantly conducting necessary supervision and reporting activities which overall was implemented without any major inconsistencies with the ESMPs requirements. The Final Independent Review of the Compact Program implementation shows there are no any outstanding environmental or social issues and that the Program has met its initial scope and objectives.

impact assessment of central irrigation system projects in the Dniester River Basin in Moldova, proposed for MCC funding.

¹⁸ *Reference:* Economisti Associati. Millennium Challenge Account Moldova. Final Program Review. July, 2015.

5. Safe Pesticide Handling and Integrated Pest Management

5.1. Proposed training and awareness activities

Measures to raise awareness and educate potential beneficiaries regarding safe pesticide handling and use of Integrated Pest Management (IPM) are targeted at providing a framework for educating stakeholders and thus, understanding and managing pest problems in the forestry sector, reducing human health and environmental risks associated with pesticide use, and protecting ecosystems by conserving beneficial agents such as natural enemies of pests and pollinators to protect forests.

The Project will hire a national research institution and/or an NGO with necessary expertise in forestry, and IPM capabilities as well as with capacity to deliver trainings for project beneficiaries. Based on the research and technical support, needs of the project beneficiaries, the selected company will develop IPM packages for forest ecosystems, develop and deliver a training program with the aid of demonstrations, adaptive research trials and experiential learning on the forest plots. The proposed activities would also cover field demonstrations with improved pesticides usage as well as IPM technologies (*Table 8*).

Table 8. Proposed training and information dissemination activities on safe pesticide handling and IPM

Items of the training and information dissemination activities	Target group	Number of sessions and participants	Requested financing, US\$
1) Training on the following: (a) Pests and diseases characteristics (forestry sector); (b) Control measures, including IPM approaches in forestry sector, involving cultural, physical, biological, and chemical control techniques; and (c) Safety issues (for chemical knowledge, pesticide handling, transportation, usage, storage, first aid, waste management, environment)	Local participating foresters; Moldsilva specialists, local environmental inspectors	3 regional sessions (North, South and Central) with the participation of about 20 participants per session	18.000 (6000 per session)
2) Training for forest nurseries workers on IPM and safety issues including field demonstrations	Local participating foresters; Moldsilva specialists, local environmental inspectors	3 regional sessions (North, South and Central) with the participation of about 20 participants per session	21.000 (7000 per session)
3) Preparing and publishing a sets of training course materials on Pest Management in forestry sector	Local participating foresters; Moldsilva specialists, local environmental inspectors, public health specialists		6000
Total			45.000

Note: The total amount of requested financing for the proposed training and information dissemination activities is \$45,000, and is requested in PAD budget sheet under the sub-component 2.2, as an Intervention on *Enhanced capacity for afforestation and ecological reconstruction*.

5.2 Curricular for proposed training

Primarily, the Project will train local foresters on Integrated Pest Management and will promote cultural, and reduced-risk pest management practices or treatments, such as biological controls and botanicals, before recommending the pesticides. Project beneficiaries and foresters will be trained to properly monitor and identify ecologically and economically damaging pest levels and to only apply pesticides when populations surpass ecologic/economic thresholds and at times during the vegetation season and pest life cycle when pesticides are most effective, thus reducing the need for additional applications.

The following IPM reduced-risk practices will be promoted:

- ▶ Planting with pest-resistant and/or more productive seed varieties;
- ▶ Conservation of beneficial insects and natural enemies by delaying pesticide application when beneficial insects are foraging or natural enemies appear to be gaining control of pests;
- ▶ Coordinated planting calendars to offset pest life cycles;
- ▶ Soil conservation (hedgerows, alley cropping, contour lines and terracing, gully plugs, cover cropping etc.); Soil quality management (vermiculture, fertilization etc.);
- ▶ Traps;
- ▶ Others as recommended for specific pests and forest species.

The following is a summary of pesticide safer use training topics to be addressed:

- ▶ *Chemical knowledge:* registration, correct use, application procedures and label specifications. This training includes an in-depth review of label information (resources in Romanian/Russian and/or with photos will be provided wherever possible), as well as a discussion of dosage and application rates, equipment calibration and maintenance, application, re-entry and pre-harvest intervals and demonstrations of proper equipment use.
- ▶ *Storage:* proper storage of chemicals in relation to other structures on the property. The need for a separate, clearly marked and locked facility will be emphasized for exclusive storage of farm chemicals. Pesticides should be kept away from food for human or animal consumption or sources of drinking water. Pesticides should always be stored in their original containers.
- ▶ *Transport:* safe transport of pesticides will be discussed (i.e. not using public transportation if possible, keeping chemicals in a closed environment, how to avoid punctures and torn bags, etc).
- ▶ *Worker protection:* types of personal protective equipment (PPE), when they should be worn and why, and how they should be cared for. The basic PPE recommended for all pesticide applications includes long-sleeved shirts, long pants and boots. Participants will be encouraged to wash PPE separate from everyday clothing and to keep their PPE in good condition.
- ▶ *Safety practices:* proper mixing techniques, the importance of using clean water for mixing, and the importance of not contaminating water sources. The types of containers used for chemicals, their proper use, cleaning and storage will be addressed. Applicators are taught not to eat/drink/smoke while applying pesticides.
- ▶ *First aid and medical facilities:* first aid materials must be made available (soap,

- clean water and a towel) in case of spills. Participants will be taught to identify the primary symptoms of chemical exposure and what do to in an emergency.
- ▶ *Waste management*: how to clean up and safely dispose of any chemical not used. For liquids, empty containers should be rinsed 3 times, and emptied into the spray tank as part of the application mixture. When the product is used completely, chemical containers should be triple rinsed and punctured before being buried. Containers should NEVER be reused.
 - ▶ *Protection of drinking water*: training will emphasize the importance of protecting potable water sources and avoiding contamination of ground and surface waters. Participants will be trained to identify their drinking water source and to keep all pesticides away from that source. Characteristics of the water source and mitigation measures to avoid contamination will be addressed.
 - ▶ *Environmental safety*: the importance of protecting natural resources and the proper use of pesticides to avoid environmental contamination and impacts on non-target organisms will be addressed.

6. ESMF Implementation

6.1 Overall MCAP implementing arrangements

Government of Moldova will set up a Steering Committee to provide strategic guidance and facilitate inter-agency coordination during the implementation of the proposed MCAP. The Steering Committee will be headed by the Minister of State, who is in charge of donor aid coordination. The other members of the Steering Committee will include representatives from the Ministry of Finance, Ministry of Environment, Ministry of Agriculture and Food Industry, and the Ministry of Internal Affairs. In addition, the State Agency “Apele Moldovei”, the State Agency “Moldsilva” and the Civil Protection and Emergency Situations Service (CPESS) will be part of the Steering Committee. It should be noted, that the Apele Moldovei and Moldsilva report to the Ministry of Environment¹⁹, and the CPESS reports to the Ministry of Internal Affairs.

The Government also intends to invite its donor partners to join the Steering Committee.

PMT will assist the Steering Committee with all the fiduciary responsibilities, including safeguards issues along with the necessary logistics and secretariat support.

6.2 Major responsibilities of the Project Management Team

The PMT will ensure that all project activities are being assessed from an environmental point of view and that when needed, the EMPs are prepared and adequately implemented. Its major responsibilities in this regard are the following:

¹⁹ The Governmental reform is expected in the beginning of 2017 and most probably the Ministry of Environment will be merged with the Ministry of Agriculture and Food Industry.

- (a) coordination of environmental and EA related issues
- (b) evaluation of the sub-project's eligibility from the environmental point of view and sub-projects environmental screening as well as ensuring this is adequately done by ACSA for the matching grants (see point below)
- (c) provision of necessary information on the environmental issues to sub-project applicants and, if needed, to Agency for Rural Development (ACSA) and Forestry Research and Management Institute (ICAS), in particular, in terms of environmental screening criteria to be used, explaining all obligations regarding the EIA procedure etc.
- (d) supervision and monitoring environmental impacts within the overall monitoring of the sub-project EMPs implementation
- (e) reporting the national environmental authorities and WB on ESMF implementation and environmental compliance; and
- (f) communicating with EIA competent authorities (ME, SEI).

6.2.1 PMT capacity to implement project safeguards issues

The PMT supported in the past the implementation of several WB projects, and, in particular, the Persistent Organic Pollutants (POPs) and of the Disaster and Climate Risk Management Projects (DCRMP). The second project have financed, to a large extent, same type of activities as within the proposed project and, in particular, agricultural climate adaptation practices (small scale irrigation; plantation of forest protective belts; anti-hail protection; small scale (re)construction activities; etc.).

The PMT staff has substantial experience in implementing environmental and social safeguards and until now, the PMT EA capacity have been qualified as satisfactory. As specified in the last AMs for the recently completed Disaster and Climate Risk Project, the project environmental management was satisfactory. The conducted civil works were in compliance with the provisions of the project EMP and EMP Checklists for hydro-meteorological stations and for Department for Emergency Situations Command Center. The PIU has integrated in the bidding and contract documents relevant environmental clauses. The EMP environmental requirements are followed by the constructors and there were no complaints from the HS and DESC, and supervising engineers. All construction and refurbishing activities have been reported as being undertaken in a manner consistent with the existing national environmental and construction requirements and permits.

Under the pilot activities for the consolidation of the agricultural sector's resilience to adverse weather effects, the PIU has assessed from environmental point of view all selected grants and checked if they have relevant environmental permits and authorization, including approvals from the state environmental authorities.

For the project implementation the PMT will hire a full-time Safeguards Specialist (SS), responsible for both environmental and social safeguards, and if needed, WB Environmental Specialist will provide adequate on the job training.

6.2.2 PMT Safeguards Specialist

As was mentioned, for the purpose of implementing environmental and social safeguards, a full-time Safeguards Specialist (SS) will be hired within the PMT during the first year of MCAP implementation. Thereafter, SS would be hired on a full-time or part-time basis, based on

periodic assessment of project environmental arrangements, and the associated level of effort required to sustain them.

The PMT SS will be in charge of overall coordination for implementing and reporting on the ESMF, inspecting environmental compliance at worksites, advising ACSA and project participants on environmental issues, and coordinating the overall environmental monitoring at project level. The SS will also be responsible for assisting, when needed, ACSA and ICAS in reviewing environmental management plans, monitoring their implementation, advising and guiding on specific environmental issues and management options, and ensuring that cumulative environmental impacts are addressed. The SS will periodically collect information on changes and impact of the project activities and will study the environmental condition of the areas of supported by MCAP sub-projects and identify main environmental parameters.

The SS will also be responsible for monitoring any land acquisition and/or resettlement issues under MCAP sub-projects. The SS will also have to selectively visit sub-projects, and ensure proper monitoring for all Category B sub-projects.

The PMT SS would work under the supervision of PMT Executive Director as well as in close collaboration with ACSA, ICAS and relevant ME/SEI staff and other stakeholders including local public authorities and concerned NGOs.

6.3 Implementing responsibilities for project components

Implementation of the project components of the proposed MCAP will be undertaken by the respective line ministries. Therefore, the Ministry of Agriculture and Food Industry will implement *Component 1*, the Ministry of Environment will implement the *Component 2*, and the Ministry of Internal Affairs will implement *Component 3*.

6.3.1 Implementation of the Component 1: *Climate-resilient Practices in the Agriculture Sector*

This Component has two sub-components and for their implementation a special institutional arrangement through Local Specialized Service Providers (LSSPs).

Implementing arrangements for sub-component 1.1: Scale-up of Farmers' Climate Smart Agricultural Practices. The activities within this sub-component, including capacity building program and climate adaptation grants, will be implemented by the National Rural Development Agency (ACSA). This is an institution, which has preliminary knowledge and experience in implementing such grants and various agricultural and climate adaptation sub-projects within several WB projects: Rural Investment and Services Program (RISP-I and RISP-II); Disaster Risk Mitigation and Adaptation Project; and ongoing Moldova Agricultural Competitiveness Project (MACP and its extension). Its performances under these projects have been always considered as highly satisfactory.

ACSA has full organizational capacity at Chisinau, as well as, at regional level with specialized staff and technical means. MCAP envisages involvement of local farmers in capacity building process and allocation of grants to sustain various initiatives to adopt climate smart measures by agricultural producers in more than 200 villages throughout the country with an evident target to

obtain short-term visible results in adoption of CSA techniques and technologies. ACSA has such records in successful implementation of projects on climate adaptation and CSA technologies. ACSA will be responsible for the component management and for the implementation of the two main activities: *Capacity Building Program* and *Climate Adaptation Grants*.

ACSA will be responsible for the design and operation of the *Capacity Building Program*. It will recruit the specialized expertise, and will recruit and train the project-specific extension operators. ACSA will also assist grant beneficiaries and be in charge of design, supervision of works and backstopping during implementation of each sub-project.

With regard to the *Climate Adaptation Grants*, the ACSA will announce and organize the ‘rounds for the call of proposals’. Applications will be received by the Project and will be first analyzed against eligibility criteria, after which the proposals will be reviewed on their merit. The process will be scrutinized by the nominated Selection Committee outside ACSA, at the PMT level with involvement of various governmental agencies and led by MAFI. The selection is completed through the signature of grant agreements between the Project with the awarded beneficiaries. All sub-projects must undergo a ‘Monitoring and Evaluation’ activity. Each sub-project will have specific key indicators for results’ monitoring.

ACSA will also be responsible for the selection and evaluation of the suppliers of goods and services of each sub-project. The selected beneficiaries will have the obligation to undertake the specific training under the Capacity Building activity. ACSA will need to perform a financial and economic analysis of each sub-project, and will check the same against the project ESMP²⁰.

ACSA will monitor the progress of selected indicators under the sub-component as described in the Results Framework, provided in the Project Appraisal Document, and will produce quarterly and annual reporting in the format and as requested by the PMT. Project results will be measured against progress of actual adoption of climate adaptation technologies on production units. The evidence on successful adoption of the technologies will be shown by an increased crop productivity (15-20%). Progress on number of beneficiaries involved in the two main activities of the sub-component (Capacity Building and Climate Adaptation Grants) will also be measured.

ACSA safeguards responsibilities. In terms of performing safeguards activities ACSA have been also considered as satisfactory as has in its staff highly qualified agriculture and environmental specialists. ACSA will ensure all grants are assessed from environmental point of view and that beneficiaries conduct an appropriate EIA and, where necessary, prepare an Environmental Management Plan (EMP) for each sub-project, per stipulations of the ESMF Environmental Guidelines.

ACSA will be involved in the process of grant implementation from the very beginning, i.e. at the grant appraisal stage. They will evaluate the grant proposals, to assign them an environmental category according to ESMF Environmental Guidelines and to determine the type of Environmental Assessment that must be conducted for the proposed sub-project. ACSA will review the set of documents prepared by beneficiaries, completing the Environmental Screening Checklist and submitting the grants documents along with the EA forms to the PMT. Before grants appraisal, ACSA will ensure that proposed grants are in compliance with all national environmental laws and standards, as certified by the relevant local or national authorities of the country. All relevant documents and permits should be kept in each grant document file maintained by the ACSA, and be made available for review by PMT and WB representatives. The grant EMPs implementation will remain under the direct responsibility of ACSA, and of

²⁰ Environmental and Social Management Plan.

beneficiaries, including responsibilities for their supervision and monitoring. Compliance with the EMPs and monitoring of the impact during the implementation phase will be undertaken by ACSA and periodically by PMT Safeguards Specialist. In case of non-compliance with presumed mitigation measures during grant implementation, ACSA will propose to PMT recommendations whether or not to suspend funding. The Matching Grants Manual, that will be developed, will set forth the rules and procedures for environmental assessment of grants as described in the ESMF, eligibility criteria for beneficiaries, that can benefit from the MCAP, criteria for the eligible investments, terms and conditions of the financing, and other modalities and agreements of the MCAP and it should be satisfactory to WB. The grants EMPs will be also integrated into the contracts for approved activities, and the contractors will be required to include the cost in their financial bids and grant proposals. To ensure successful implementation of the MGF, the ACSA agency will hire/assign in its staff a Safeguards Specialist. The Project will also provide him/her capacity-building activities prior to approving of any grants.

Implementing arrangements for sub-component 1.2: Support to community-based irrigation.

The Project will provide financing for upscaling adoption of irrigation through assisting groups of farmers united in Water Users Associations (WUA) to access existing large-scale irrigation systems rehabilitated by the Compact Program, and by providing access to small-scale irrigation in the hinterlands through investments in shared on-farm irrigation equipment, in particular mobile aspersion irrigation machines with reel and console and a hydraulic turbine operated by the pressure provided from the hydrant.

Similarly to the first sub-component, a qualified local service provider with proved successful past experience in working with Water Users Associations and participatory irrigation management is expected to implement these activities. It is suggested, that the Sustainable Development Account Moldova (SDA Moldova), which is a newly created Public Institution and it is the successor entity of the Millennium Challenge Account Moldova (MCA Moldova), will be assigned with the responsibilities to manage the implementation of both sub-component activities, the *Capacity Building* and *Climate Adaptation Grants* for WUAs.

SDA has the office presence in Chisinau staffed with professionals and all necessary technical means to support the successful implementation of the sub-component activities and provide the necessary backstopping.

SDA will be responsible for the design and operation of the *Capacity Building* activities. With regards to *Climate Adaptation Grants* for WUAs, SDA will be in charge to works with each WUA individually to see if they first meet the project selection criteria and, if so, to continue supporting them in preparing the grant application proposal. The Applications will be received by the Selection Committee at the PMT level and will be first analyzed against eligibility criteria, after which the proposals will be reviewed on their merit. The selection is completed through the signature of grant agreements between the PMT with the WUAs.

SDA will monitor the progress of selected indicators under the sub-component as described in the Results Framework provided in the Project Appraisal Document (PAD). SDA will produce quarterly and annual reporting in the format and as requested by the PMT. Project results will be measured against progress of actual numbers of water users' members adopting irrigated agriculture and increase of the irrigated the area. The evidence on successful adoption of the irrigation will be shown by an increased crop productivity (15-30%). Progress on number of beneficiaries involved in the two main activities of the sub-component (*Capacity Building* and *Climate Adaptation Grants* for WUAs) will also be measured.

SDA safeguards responsibilities. The Climate Adaptation Grants to WUAs would be collected

and assessed by Sustainable Development Account Moldova (SDA Moldova), and then submitted for approval to the PMT and project Evaluation Committee, and provided on a demand-driven basis to eligible WUAs who apply and obtain approval of their proposals. The SDA will conduct a preliminary environmental screening of the grant applications, making sure no any environmental and social impacts will be generated. The SDA has in its staff qualified environmental specialists, which have proved their high environmental management performance during the Compact Program implementation (see *p. 4.8*).

6.3.2 Implementation of the Component 2: *Climate-resilient Forest and Pasture Management*

This Component has two sub-components. For the first, a special partnership arrangement between the ICAS (Forestry Research and Management Institute), designated Service Provider, and PLAs, being developed, while the second sub-component (*establishing of National Center on Forest Genetics and Seeds*) will be implemented by the PMT under direct supervision of the Ministry of Environment.

Implementing arrangements for sub-component 2.1: Community Forest and Pasture Management. These activities are going to be implemented by ICAS, state institute within the State Agency “Moldsilva” under the Ministry of Environment. ICAS has been the key implementing institution for a series of WB carbon sequestration projects, supported by Prototype Carbon and BioCarbon Funds, and its performance was qualified as highly satisfactory.

ICAS will be responsible for the design and implementation of the proposed multiplayer participatory approach between the PMT, ICAS itself as the component implementing entity, LPAs, various state agencies (Moldsilva, Apele Moldovei, Cadaster offices, etc.), as well as land and livestock owners, and of the capacity building activities. ICAS will be in charge to works with each LPA individually to see if they first meet the project selection criteria and, if so, to continue supporting them in preparing the forest/pasture management plans and assist them to receive respective plans’ approval at local Councils. ICAS will further be responsible to execute all the necessary technical design and develop technical specifications for respective works and acquisitions to be conducted by PMT within the component frame. ICAS will facilitate preparation of the technical specifications from LPAs to PMT, which in turn will present them to the Project Steering Committee for their approval. The applications from each LPA will be first analyzed against eligibility criteria, after which the proposals will be evaluated on their socio-economic and environmental impact. Once the selection is completed, PMT will proceed to procurement of civil works and goods according to finally approved technical specifications.

ICAS safeguards responsibilities. Although the proposed activities overall will have positive impacts, in order to avoid adverse effects on biodiversity conservation and natural habitats they will be subject to a preliminary environmental screening for the purpose of excluding from the lands allocated for that purpose those which represent environmental sensitive areas or areas valuable from biodiversity point of view. This will be done during formulating the PLAs’ forest/pasture management plans by ICAS, which has extensive experience in such activities.

6.3.3 Implementation of the Component 3: *Climate and Disaster Risk Management*

Since the CPESS is in charge of emergency management, and since it reports to the Ministry of Internal Affairs, the CPESS will implement Component 3 on a day-to-day basis. The safeguards

responsibilities in the case of modernization and upgrading of the regional Command Center in Balti are delegated to the PMT, which will be responsible for designing an EMP Checklist as well as for supervision and monitoring of its implementation.

6.4 Monitoring and reporting activities

Environmental Monitoring and Reporting during the MCAP implementation, which is to be performed by the PMT and ACSA, has to provide information about key project environmental aspects, particularly project environmental impacts and the effectiveness of taken mitigation measures. Such information enables to evaluate the success of mitigation as part of project supervision, and allows corrective action(s) to be implemented, when needed. If approved, during the sub-project's operation phase, PMT and ACSA along with the local (rayon) environmental authorities/inspections, when required (in the cases prior informed of non-compliance), perform environmental supervision and monitoring to identify the level of compliance with agreed design and mitigation measures to ensure that the sub-projects will be implemented in full compliance with the EMPs or making sure the necessary corrective measures have been implemented. The status of compliance with agreed environmental mitigation measures is to be reported by the PMT and ACSA in their regular (semiannually) reports to the WB on project implementation. In the case of non-compliance, the PMT and ACSA environmental specialists (with State Ecological Inspectorate assistance, if needed) investigate the nature and reason(s) for non-compliance, and a decision has to be made on what is needed to bring a sub-project into compliance, or whether financing should be suspended. The PMT and ACSA makes available information on monitoring of environmental management plans and mitigation measures in its routine reporting on sub-project implementation to the World Bank and during periodic Bank supervision missions.

Integration of the EMPs into project documents. The ESMF and in particular EMPs' provisions will form part of the design documents for the project, and will be included in construction contracts for proposed activities. Respectively, the Contractors and matching grants beneficiaries will be required to include the cost of EMP requirements in their financial bids/project documents and required to comply with them while implementing the project activities.

6.5 ESMF's disclosure and consultation

Draft Environmental and Social Management Framework disclosure occurred on 30 January, 2017 by its posting for consultation on national public web-platform (*particip.gov.md*), as well as on website of the Project Management Team (*moldovapops.md*) PMT has further forwarded electronically the ESMF Summary to environmental NGO's, and to the involved state institutions - to the Ministry of Environment, Ministry of Agriculture, and others interested stakeholders.

Consultation on draft ESMF took place on 13 February, 2017 at premises of Ministry of Environment in Chisinau with participation of representatives of implementing agencies, national environmental authorities, NGO's and PMT.

During the meeting there were no significant comments or comments on improving the ESMF

documents. After the meeting, on the basis of input from participants as well as received comments on draft ESMF posted two weeks earlier for consultation, there were made relevant corrections both in the main text and annexes of the ESMF to better meet stakeholders' concern. The Report on Consultation on the Draft ESMF with interested parties is presented in *Annex E*.

Final version of the Environmental and Social Management Framework approved by World Bank is to be posted on World Bank's InfoShop for its disclosure as well as on website of the Project Management Team in Moldova.

References

- ▶ Acord între Cabinetul de Miniştri al Ucrainei şi Guvernul Republicii Moldova privind colaborarea în domeniul protecţiei şi dezvoltării durabile a bazinului riului Nistru, semnat la Roma la 29 noiembrie 2012. Available from http://www.eco-tiras.org/docs/ACOR_DNIESTER_MD_final-UA_per_cent20final.pdf
- ▶ Agency “Apele Moldovei”. Official website - www.apelemoldovei.gov.md
- ▶ Agency “Moldsilva”. Official website - www.moldsilva.gov.md
- ▶ Agency for Geology and Mineral Resources. Official website - www.agrm.gov.md
- ▶ Agreement between the Government of the Republic of Moldova and the Government of Romania for the cooperation for the protection and sustainable use of Prut and Danube waters, Chisinau, 28 June 2010
- ▶ Environmental Assessment Update Sourcebook, Environmental Department, April 1993. The World Bank
- ▶ Europe’s Environment: The Third Assessment, 2003
- ▶ Institute of Ecology and Geography of the Academy of Sciences of Moldova. Official website - www.ieg.asm.md
- ▶ Millennium Challenge Account Moldova. Official website - <http://mca.gov.md/ro/platforma.html>
- ▶ MillenniumChallenge Corporation - Irrigation Sector Reform Services project in Moldova, (2010-2015). Available from <http://www.aht-group.com/index.php?id=621>
- ▶ Ministry of the Environment. Official website - www.mediu.gov.md
- ▶ Registrul de Stat al Actelor Juridice (State Register of Legal Acts) - <http://lex.justice.md/>
- ▶ State Ecological Inspectorate. Official website - www.inseco.gov.md
- ▶ State Enterprise Hydro-Geological Expedition from Moldova. Official website - www.ehgeom.gov.md
- ▶ State Hydrometeorological Service. Official website - www.meteo.md
- ▶ State of the Environment in the Republic of Moldova 2007–2010 (National Report - Synthesis). Available from http://ies.gov.md/file/rapoarte/SM_eng.pdf
- ▶ United Nations Economic Commission for Europe UNECE. Republic of Moldova Environmental Performance Review. 3rd Review. United Nations, New York and Geneva, 2014
- ▶ World Bank project – Management of disasters and climatic risks in Moldova (2010-2013). Available from <http://www.meteo.md/bm20102013.htm>
- ▶ World Bank. Integrating Environment into Agriculture and Forestry. Progress and Prospects in Eastern Europe and Central Asia. Volume II, Moldova – Country Review, November 2007. Available from www.worldbank.org/eca/environmentintegration

Annexes

- Annex A. Environmental screening checklist
- Annex B. EMP Checklist for small scale construction and rehabilitation activities
- Annex C. Content of the Environmental Management Plan
- Annex D. Reference documents for World Bank Operational Policies (OP) and Bank Procedures (BP)
- Annex E. Report on consultation on the draft ESMF with interested parties

Annex A. Environmental screening checklist

Annex A/Form 1

ENVIRONMENTAL SCREENING CHECKLIST

Part 1

(to be completed by applicant/beneficiary)

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?			
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?			
Soil & underground water pollution			
Land degradation, water pollution & aesthetics: Construction			
Other impacts			
Air quality			
Will the project provide pollutant emissions?			
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 located in vicinity of protected area or wetlands supporting both local avifauna and birds on passage?			
Weeds, pests, diseases: will the project contribute to spreading of weeds, pests and animal and plant diseases?			
Sedimentation of water bodies			
Other impacts			
Socio-economic environment			
Will the project assure non-deterioration of human health, occupational			

Environmental Component	Construction Phase	Operational Phase	Mitigation Measures
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			

Annex A/Form 1

ENVIRONMENTAL SCREENING CHECKLIST

Part 2

(to be completed by the PMT/ACSA based on the findings of the environmental screening)

- 5. Sub-project Environmental Category (A, B or C) _____
- 6. Environmental Assessment required (yes or no) _____
- 7. Type of Environmental Assessment (full EIA for Category A projects; partial EIA for Category B sub-projects)

- 8. Types of EA documents (EIA report and detailed Environmental Management Plan for Category A sub-projects; partial EIA, including site assessment and Environmental Management Plan for Category B sub-projects; Site Assessment and EMP checklists for small scale Category B sub-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:

Date:

Annex A/Form 1

ENVIRONMENTAL SCREENING CHECKLIST

Part 3

Final Environmental Assessment Checklist

(to be completed by the PMT/ACSA SS based on review of the conducted environmental impact assessment for Category B sub-projects)

Was an Environmental Impact Assessment needed? (Y or N) ___ If yes, was it done? ___

Have national and World Bank requirements for public consultation been met and fully documented? (Y or N) ___

Was an Environmental Management Plan prepared? (Y or N) _____

Are the mitigation measures to be included in project implementation adequate and appropriate? (Y or N) _____

Will the project comply with existing pollution control standards for emissions and wastes? (Y or N) ___ If No, will an exemption be sought? _____

Is an Environmental Monitoring Plan necessary? (Y or N) ___ If so, has it been prepared? (Y or N) ___
What follow-up actions are required by the proponent?

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

Dates

Participants

_____	_____
_____	_____
_____	_____

Environmental Screener:

Date:

Annex A/Form 2

ENVIRONMENTAL SCREENING CHECKLIST

Field site visit checklist

Project Name: **Date/time of Visit:**
Rayon: **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 users of the site?
- What were previous uses of the site (give dates if possible)?
- Are there any encroachers or illegal users of the site whose livelihoods or assets are going to be affected by the project?

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 A / Form 3

ENVIRONMENTAL SCREENING CHECKLIST

Terms of reference for conducting an Environmental Impact Assessment study

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

The Environmental Impact Assessment Report should include the following elements:

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

These section should include:

- (i) The list of EIA 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 B. EMP Checklist for small scale construction and rehabilitation activities

EMP Checklist

(for small scale construction/rehabilitation sub-projects)

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	Contactior
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			

Beneficiary:

Signature:

Date:

Annex B

EMP Checklist

(for small scale construction/rehabilitation sub-projects)

Part 2: Safeguards Information

ENVIRONMENTAL /SOCIAL SCREENING			
Will the site activity include/involve any of the following:	Activity	Status	Additional references
	A. Building rehabilitation	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section B below
	B. New construction	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section B below
	C. Individual wastewater treatment system	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section C below
	D. Historic building(s) and districts	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section D below
	E. Acquisition of land ²¹	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section E below
	F. Hazardous or toxic materials ²²	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section F below
	G. Impacts on forests and/or protected areas	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section G below
	H. Handling / management of medical waste	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section H below
	I. Traffic and Pedestrian Safety	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section I below

Part 3: Mitigation Measures

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
A. 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) All work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. (e) Workers 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.
B. General Rehabilitation and /or Construction Activities	Air Quality	(a) During interior demolition use debris-chutes above the first floor (b) Keep demolition debris in controlled area and spray with water mist to reduce debris dust (c) Suppress dust during pneumatic drilling/wall destruction by ongoing water spraying and/or installing dust screen

²¹ The project will support construction of new buildings only in the case when land acquisition is not necessary and there are no any resettlement issues; for such cases the investor should have the landownership title as well as has to prove the land at the moment of sub-projects application is not occupied or used even illegally

²² Toxic / hazardous material includes and is not limited to asbestos, toxic paints, removal of lead paint, etc.

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		enclosures at site (d) Keep surrounding environment (side walks, roads) free of debris to minimize dust (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 should 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)
C. 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. 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, notify and obtain approval/permits from local authorities and address all construction activities in line with local and national legislation (b) Ensure that provisions are put in place so that artifacts or other possible “chance finds” encountered in excavation or construction are noted, officials contacted, and works activities delayed or modified to account for such finds.
E. Acquisition of land	Land Acquisition Plan/Framework	(a) If expropriation of land was not expected and is required, or if loss of access to income or damage to assets of legal or illegal users of land was not expected but may occur, that the bank Task Team Leader is consulted. (b) The approved by the Bank Land Acquisition Plan (if required by the project) will be implemented prior to start of project works.
F. Toxic Materials	Asbestos management	(a) If asbestos is located on the project site, mark 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 (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 should be placed in an leak-proof container to prevent spillage and leaching (c) The wastes are transported by specially licensed carriers and disposed in a licensed facility.

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		(d) Paints with toxic ingredients or solvents or lead-based paints will not be used
G. Affects forests and/or protected areas	Protection	(a) All recognized natural habitats 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) For large trees in the vicinity of the activity, mark and cordon off with a fence large trees and protect root system and avoid any damage to the trees (c) Adjacent wetlands and streams will be protected, from construction site run-off, with appropriate erosion and sediment control feature to include by not limited to hay bales, silt fences (d) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.
		▪
I. Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	(a) 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 <ul style="list-style-type: none"> ▪ Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards ▪ Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. ▪ Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement ▪ Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public. ▪ Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public.

Part 4: MONITORING PLAN

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

Beneficiary:

Signature:

Date:

Annex C. Content of the Environmental Management Plan

Annex C/Form 1

ENVIRONMENTAL MANAGEMENT PLAN CONTENT

Part 1

General Remarks. Environmental Management Plan (EMP) for the Category A projects should outline the mitigation, monitoring and administrative measures to be taken during project implementation to avoid or eliminate negative environmental impacts. For projects of intermediate environmental risk (Category B projects), EMP may also be an effective way of summarizing the activities needed to achieve effective mitigation of negative environmental impacts (**description of Environmental Management Plan** is provided in **Annex B/Form 1** below).

The Management Plan format provided in **Annex B/Form 2** below. It represents a model for development of an EMP. The model divides the project cycle into three phases: construction, operation and decommissioning. For each phase, the preparation team identifies any significant environmental impacts that are anticipated based on the analysis done in the context of preparing an environmental assessment. For each impact, mitigation measures are to be identified and listed. Estimates are made of the cost of mitigation actions broken down by estimates for installation (investment cost) and operation (recurrent cost). The EMP format also provides for the identification of institutional responsibilities for "installation" and operation of mitigation devices and methods.

To keep track of the requirements, responsibilities and costs for monitoring the implementation of environmental mitigation identified in the analysis included in an environmental assessment for Category A or B projects, a monitoring plan may be useful. A **Monitoring Plan format** is provided in **Annex B/Form 3** below. Like the EMP the project cycle is broken down into three phases (construction, operation and decommissioning). The format also includes a row for baseline information that is critical to achieving reliable and credible monitoring. The key elements of the matrix are:

- What is being monitored?
- Where is monitoring done?
- How is the parameter to be monitored to ensure meaningful comparisons?
- When or how frequently is monitoring necessary or most effective?
- Why is the parameter being monitored (what does it tell us about environmental impact)?

In addition to these questions, it is useful 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.

Part 2

Description of the of the Environmental Management Plan

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

Monitoring

3. Environmental monitoring during project implementation provides information about key environmental aspects

of the project, particularly the environmental impacts of the project and the effectiveness of mitigation measures. Such information enables the borrower and the Bank to evaluate the success of mitigation as part of project supervision, and allows corrective action to be taken when needed. Therefore, the EMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the EA report and the mitigation measures described in the EMP. Specifically, the monitoring section of the EMP provides (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

Capacity Development and Training

4. To support timely and effective implementation of environmental project components and mitigation measures, the EMP draws on the EA's assessment of the existence, role, and capability of environmental units on site or at the agency and ministry level.³ If necessary, the EMP recommends the establishment or expansion of such units, and the training of staff, to allow implementation of EA recommendations. Specifically, the EMP provides a specific description of institutional arrangements that is responsible for carrying out the mitigatory and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). To strengthen environmental management capability in the agencies responsible for implementation, most EMPs cover one or more of the following additional topics: (a) technical assistance programs, (b) procurement of equipment and supplies, and (c) organizational changes.

Implementation Schedule and Cost Estimates

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

Integration of EMP with Project

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

Resource: OP 4.01, Annex C - Environmental Management Plan.

<http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/EXTPOLICIES/EXTOPMANUAL>

Annex C/Form 2

ENVIRONMENTAL MANAGEMENT PLAN CONTENT

Environmental Management Plan Format

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

Annex C/Form 3

ENVIRONMENTAL MANAGEMENT PLAN CONTENT

Environmental Monitoring Plan Format

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

Annex D. Reference documents on World Bank Operational Policies (OP) and Bank Procedures (BP)

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/toc2/55FA484A98BC2E68852567CC005BCBDB?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/C12766B6C9D109548>

[525672C007D07B9?OpenDocument](#)

BP 4.37 Safety of Dams

<http://wbIn0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/D3448207C94C92628525672C007D0733?OpenDocument>

OP 4.76 Tobacco

<http://wbIn0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/DBE1A283D3BF9D078525672C007D075E?OpenDocument>

OP 7.50 Projects on International Waterways

<http://wbIn0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/5F511C57E7F3A3DD8525672C007D07A2?OpenDocument>

BP 7.50 Projects on International Waterways

<http://wbIn0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/47D35C1186367F338525672C007D07AE?OpenDocument>

OP 7.60 Projects in Disputed Areas

<http://wbIn0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/72CC6840FC533D508525672C007D076B?OpenDocument>

BP 7.60 Projects in Disputed Areas

<http://wbIn0018.worldbank.org/Institutional/Manuals/OpManual.nsf/toc2/5DB8B30312AD33108525672C007D0788?OpenDocument>

Annex E. Report on consultation on the draft ESMF with interested parties**Report on Consultation on the Draft ESMF with Interested Parties****Date:** February 13, 2017 | **Venue:** Ministry of Environment, Chisinau

Location/venue	Objective	Invitees	Participants (see attached List)	Summary, conclusions and comments
Chisinau, Ministry of Environment	<p>To introduce the MCAP project and its components, including ESMF, safeguards procedures and RPF, and solicit feedback.</p> <p>Note: The draft documents were disclosed for public two weeks earlier on the Ministry of Environment website (mediu.gov.md) and PMT website (moldovapops.md).</p>	<p>The invitation to participate in Consultation was sent to the following institutions:</p> <ul style="list-style-type: none"> – Ministry of Environment – Ministry of Agriculture and Food Industry – Ministry of Internal Affairs – World Bank Chisinau Office – ACSA Agency – Moldsilva Agency – ICAS – Sustainable Development Agency – State Ecological Inspectorate – Institute of Ecology and Geography – National Environmental Center (NGO) – Climate Change Office 	<ol style="list-style-type: none"> 1. Podoroghin Inga, ME 2. Oprea Alexandru, MIA 3. Busuioc Corneliu, SDA 4. Ojog Constantin, Acsa 5. Fala Anatolie, Acsa 6. Talmaci Ion, ICAS 7. Palancean Alexei, Moldsilva Agency 8. Mustea Mihai, NEC 9. Osipov Dumitru, SEI 10. Cyrille Valett, ME 11. Popov Leonid, CEA Garantie SA 12. Ivanov Octavii, CALM 13. Tronza Serafima, ME 14. Barbarasa Ion, PMT 15. Plesca Valentin, PMT 16. Gorasov Igor, PMT 17. Popovici Ciprian, PMT consultant 18. Overcenco Aureliu, PMT consultant 	<p>At the meeting, there were presented and discussed: Moldova Climate Adaptation Project, its components and activities (presenter Igor Gorasov), Environmental and Social Management Framework and safeguards procedures (presenter Aureliu Overcenco) and Resettlement Policy Framework for proposed project (presenter Ciprian Popovici).</p> <p>The attendees actively participated in discussions which were mainly focused on the proposed activities within project components, environmental screening/impact assessment procedures and social aspects of project implementation, and mainly were referred to: Consultation process with municipalities and representatives of local communities for assuring their commitment for participating within the project – to be performed asap – clear provisions to be included in the stakeholder engagement plan; Criteria for afforestation of river banks – to be determined and included in the project documents; Discussions were also about different species of trees that should be planted during afforestation actions - to be consulted with local communities; The compensation process – this needs to be transparent and communicated very clear to all impacted persons from early stage. Furthermore, it should be clearly communicated the way financial compensation will be granted, and others.</p> <p>After the meeting, on the basis of input from participants, there were made relevant corrections both in the ESMF and PFP documents to better meet stakeholders' concern.</p>

List of participants

Lista participanților

la Consultări publice privind Cadrul de Management de Mediu și Social pentru Proiectul Adaptării Climatice în Moldova

Chișinău, Ministerul Mediului
13 februarie 2017, ora 14.00

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