Part I: Project Information

GEF ID
10982

Project Type
MSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Biosecurity Implementation Framework for the Management of Biological Resources in Moldova

Countries
Moldova

Agency(ies)
UNEP

Other Executing Partner(s)
Ministry of Environment

Executing Partner Type
Government

GEF Focal Area
Biodiversity

Sector

Taxonomy
Focal Areas, Forest, Biodiversity, Species, Animal Genetic Resources, Invasive Alien Species, Threatened Species, Plant Genetic Resources, Supplementary Protocol to the CBD, Biosafety, Mainstreaming, Agriculture

and agrobiodiversity, Biomes, Mangroves, Rivers, Temperate Forests, Lakes, Grasslands, Protected Areas and Landscapes, Community Based Natural Resource Mngt, Climate Change, Climate Change Mitigation, Agriculture, Forestry, and Other Land Use, Land Degradation, Sustainable Land Management, Sustainable Pasture Management, Sustainable Development Goals, International Waters, Influencing models, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Demonstrate innovative approache, Stakeholders, Civil Society, Academia, Trade Unions and Workers Unions, Community Based Organization, Non-Governmental Organization, Type of Engagement, Partnership, Consultation, Participation, Information Dissemination, Indigenous Peoples, Local Communities, Communications, Awareness Raising, Strategic Communications, Public Campaigns, Gender Equality, Gender results areas, Participation and leadership, Knowledge Generation and Exchange, Gender Mainstreaming, Beneficiaries, Gender-sensitive indicators, Sex-disaggregated indicators, Women groups, Integrated Programs, Food Security in Sub-Sahara Africa, Crop Genetic Diversity, Capacity, Knowledge and Research, Innovation, Capacity Development, Learning, Adaptive management, Theory of change, Indicators to measure change, Enabling Activities, Knowledge Exchange, South-South, Conference, Peer-to-Peer, Targeted Research, Knowledge Generation, Training

Rio Markers

Climate Change Mitigation

No Contribution 0

Climate Change Adaptation

No Contribution 0

Biodiversity

Principal Objective 2

Land Degradation

Significant Objective 1

Submission Date

10/30/2023

Expected Implementation Start

1/1/2024

Expected Completion Date

12/31/2026

Duration

36In Months

Agency Fee($)

83,433.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
BD-2-6	Strengthened institutional biosecurity frameworks in the management of invasive alien species and living modified organisms through a coordinated risk analysis measure in line with Cartagena Protocol, its Supplementary Protocol and relevant Invasive Alien Species regulations in place in Moldova	GET	439,121.00	700,000.00
BD-3-8	Biological diversity in the participating countries adequately protected from potential adverse effects of living modified organisms	GET	439,121.00	700,000.00
		Total Project Cost($)	**878,242.00**	**1,400,000.00**

B. Project description summary

Project Objective

The project is to strengthen institutional biosecurity frameworks in the management of invasive alien species and living modified organisms through a coordinated risk analysis measures in line with the Convention of Biological Diversity, Cartagena Protocol, its Supplementary Protocol and relevant Invasive Alien Species regulations in Moldova.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing ($)
Component 1: Effective Biosecurity Legislative, Policy, Regulatory and Institutional Frameworks	Technical Assistance	Outcome 1: An integrated and harmonized policy and regulatory framework for Bioresource Management in place	Output 1.1: National policy for integrated bioresource management ensuring biosecurity for IAS and LMOs developed with special attention to gender participation as part of the new NBSAP 2030 in line with the GBF Output 1.2: Subsidiary regulation (law) on both IAS and LMOs developed, existing legislation is strengthened for more effective biosecurity and regulations on Liability and Redress.	GET	140,014.00	300,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing ($)
Component 2: Integration of biosecurity into Biological resource management	Technical Assistance	Outcome 2: 2a. Institutional systems for decision making in an integrated biosecurity framework enhanced and strengthened 2b. Capacity in place to support implementation of policy, regulatory and institutional framework for effective biosecurity	Output 2.1: National capacities (with specific attention to gender equality) in risk analysis frameworks, detection and identification for monitoring and management for LMOs IAS strengthened with equipment, defined guidelines and manuals. Output 2.2 National institutional arrangements for LMO and IAS decision-making (authorization) check points, emergency responses, guidance and manuals strengthened/developed with special attention to gender equality	GET	384,214.00	200,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing ($)
Component 3: A unified system for Knowledge management, Public awareness, Education, Communication on biosecurity	Technical Assistance	Outcome 3: An integrated mechanism for knowledge management, public awareness, education and information sharing on IAS and LMOs established and implemented.	Output 3.1 Unified Portal for Information Sharing in line with the CBD?s Integrated approach on Clearing Houses set up with the requisite national database and registers for IAS and LMOs, including GIS mapping and spatial planning resources Output 3.2 Awareness programs, training and educational curricula on LMOs and IAS with special attention to gender equality developed and implemented.	GET	225,772.00	480,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing ($)
Component 4: Establishment of Monitoring and Evaluation measures for project delivery	Technical Assistance	Outcome 4: Effective project coordination and delivery, meeting measurable outputs and indicators	Output 4.1 Systems and structures, technical support including Project Steering Committee for project management, accountability and monitoring of impacts established with active participation of vulnerable groups Output 4.2 Continuous monitoring including gender considerations, Progress reports and Terminal Evaluations undertaken, Lessons Learnt and Best Practices prepared and disseminated	GET	50,000.00	220,000.00
			Sub Total ($)		**800,000.00**	**1,200,000.00**

Project Management Cost (PMC)		
GET	78,242.00	200,000.00
Sub Total($)	**78,242.00**	**200,000.00**
Total Project Cost($)	**878,242.00**	**1,400,000.00**

Please provide justification

To strengthen institutional biosecurity frameworks in the management of invasive alien species and living modified organisms through a coordinated risk analysis measure in line with Cartagena Protocol, its Supplementary Protocol and relevant Invasive Alien Species regulations in Moldova.

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Environment	In-kind	Recurrent expenditures	1,400,000.00
			Total Co-Financing($)	**1,400,000.00**

Describe how any "Investment Mobilized" was identified

Not Applicable

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNEP	GET	Moldova	Biodiversity	BD STAR Allocation	878,242	83,433	961,675.00
				Total Grant Resources($)	**878,242.00**	**83,433.00**	**961,675.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

44,793

PPG Agency Fee ($)

4,255

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNEP	GET	Moldova	Biodiversity	BD STAR Allocation	44,793	4,255	**49,048.00**
				Total Project Costs($)	**44,793.00**	**4,255.00**	**49,048.00**

Core Indicators

Indicator 3 Area of land and ecosystems under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural lands under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.2 Area of forest and forest land under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.3 Area of natural grass and woodland under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.4 Area of wetlands (including estuaries, mangroves) under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
60000.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
60,000.00			

Indicator 4.2 Area of landscapes under third-party certification incorporating biodiversity considerations

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.4 Area of High Conservation Value or other forest loss avoided

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.5 Terrestrial OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted
Core Indicator Worksheet_Moldova Biosecurity PIF_CEO Approval	
Core Indicator Worksheet_Moldova_ Biosecurity PIF	

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	700	700		
Male	500	500		
Total	1200	1200	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

At CEO Approval stage, the number of direct beneficiaries from the GEF investment would be total 1200 persons, disaggregated by gender as co-beneficiaries including about 700 women and 500 men. The total number of persons involved in this phase represents the staff of central environmental public authority and its subdivisions, local public authorities of selected communities, academia and universities, dedicated NGOs, students, media etc. The proportion of women in the Ministry of Environment is 75.5%, in the Environment Agency ? 52.4%, forestry Agency Moldisilva ? 46.6%. The proposed project interventions will contribute cumulatively to further development of biodiversity policy and institutional frameworks for the implementation of the Cartagena Protocol on Biosafety and its Nagoya ? Kuala Lumpur Supplementary Protocol on Liability and Redress and address direct drivers to protect habitats and species through the prevention, control and management of Invasive Alien Species under BD 3-8 and BD 2-6. The project interventions will ensure that tools and capacity are developed to support science-based decision making in the sustainable use of biodiversity through modern biotechnology and management of Invasive Alien Species through a coordinated Risk Analysis based approach to management of biological organisms. The results and deliverables will contribute to the new Post 2020 Global Biodiversity Framework especially Target 6 on Invasive Alien Species and Target 17 on Biosafety by safeguarding biodiversity, managing genetic resources and related benefits through sound science risk assessment, pre- and post- approval monitoring measures and engagement with the end users of genetic resources. The project will also contribute to Target 20 on strengthening capacity-building and development, access to and transfer of technology as well as Target 21 on ensuring best available data, strengthening communication, awareness-raising, education, monitoring, research and knowledge management; and, by ensuring prior informed consent or advanced inform agreements in the handling of biological introductions, inclusion and transparency in decision making with clearly defined roles for indigenous and local communities in accordance with Art. 8j of the CBD. Biodiversity is an ?asset? that makes critical contributions to sustainable development as indicated in plans and activities under the aegis of the Convention on Biological Diversity (CBD) and the Cartagena Protocol on Biosafety (CPB). This is reflected in the CBD?s Strategic Plan for Biodiversity, 2011-2020, and the Aichi Biodiversity Targets as well as the GEF-7 biodiversity focal area strategy and was reaffirmed at the thirteenth meeting of the

Conference of the Parties of the CBD (CBD/COP 13) with the adoption of the ?Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-being?, that recognizes that the management of this asset requires full engagement of all government ministries, and most critically, from the agriculture, fisheries, forestry, and tourism sectors. Attaining the targets required to support the implementation of the CPB requires the implementation of a package of actions typically including legal and policy frameworks, technical measures for risk assessment and risk management, liability and redress, monitoring and detection of LMOs, enforcement, and public and stakeholder engagement that are coherent across government ministries and across sectors.

Part II. Project Justification

1a. Project Description

Background and context

Overall Development context

Republic of Moldova is located in southeastern Europe, between Romania and Ukraine, with access to the Black Sea through a 200 m section located at the confluence of the Prut River with the Danube River in the extreme south of the country. The territory of the Republic of Moldova is composed of two main natural areas: forest steppe and steppe. The forest steppe area is located in the northern and central parts of the country and is a hilly plain with alternating plains and plateaus. The steppe area is located in the south and South-East of the country. Agricultural and urban ecosystems comprise almost 85% of Moldova?s territory, while natural and semi-natural ecosystems ? about 15%. Major portions of natural and semi-natural ecosystems have a high degree of degradation. The main natural ecosystems of Moldova are: (i) the forest (11.7% of the country?s territory according to FAO), (ii) the steppe (1.9% of the country?s area, located in 2 areas in the North and South) (iii) aquatic areas (2.85% of the country?s surface), (iv) rocky or petrified habitats (0.68% of the country?s territory). The International Free Port Giurgiulesti fluvial/maritime is located at this confluence, which serves directly as entry/exit in / from the Republic of Moldova. Most of the territory is a moderate hilly plateau, intersected by many springs and rivers, it is part of the Moldavian Plateau, with an average altitude of 200 m and a maximum of 250m, divided into the Baltic steppe and the middle Prut valley. Black soils, rich in humus, and temperate climate have contributed greatly to the development of the agricultural sector throughout the history of the land. The territory was heavily deforested for agriculture in the 19th and 20th centuries, and today the Republic of Moldova has one of the smallest forest-covered areas among European countries, of 11.4% (0.38 million hectares). The territory of the Republic of Moldova has diverse landscape, made by the variety of natural factors (geological, orographic, climatic, edaphic, hydrographic, etc.). Depending on the action of climatic factors, landscapes, specialization of agricultural production and administrative delimitation of the territory of the Republic of Moldova are defined **three agro-climatic zones**: North, Center and South. Republic of Moldova is located in an area with a temperate continental climate favorable to the agricultural sector, with annual summary solar radiation of about 110 kkal/cm2 and a sum of active temperatures, above 10?C for the Center area and the South. The negative climatic peculiarities are the dry periods, mainly in summer with lack of rain for a long period of time, excessive temperatures, low humidity and hot winds. The most important natural resources in Moldova are soils, water resources, forests and mineral ores. Soils are also the main natural wealth of the country, contributing to high agricultural productivity[1][1]. The **soil cover** includes three zonal types: brown soils, gray soils spread in hilly regions and chernozems formed in steppe conditions on lands with lower altitudes. The main type of soil is chernozem, which occupies 70% of the land area and is relatively suitable for irrigation[2][2]. The total area of farmed land as at January 1, 2019 is 3,384.7 thousand ha, of

which agricultural land ? 2496.4.0 thousand ha, with arable land ? 1838.5 thousand ha, in the sector of multiannual plantations with 286.6 thousand ha of which: orchards ? 131.2 thousand ha, vineyards ? 133.1. For pastoral use, there are 339.1 thousand ha for hayfields ? 2 thousand ha, for fallow grounds ? 30.2 thousand ha[3][3].

The country has a very low level of **forest cover**. Moldova is one of the smallest countries in the Danube River Basin. The total area of the State Natural Protected Areas (km2) is 5.8% of the total territory of the country. The majority of the natural vegetation comprises of forest ecosystems. Meadow ecosystems, with rich genetic and species diversity, continue to be used for livestock grazing, and occupy about 10% of the country. Moldova is rich in species, and agro-forest biodiversity is dominant.

Agriculture is one of the main sectors of the national economy, responsible for about 15.5% of GDP and employing a third of the country?s population. The agriculture sector in Moldova is highly vulnerable to land degradation as well as climate change and variability, leading to serious problems of production loss and threats to food security. Land degradation induced economic losses are estimated at 251million USD annually. Agricultural productivity in Moldova is very low. Current land use and soil management practices in areas with steep slopes have up to 20-30% losses in soil fertility from torrential rains and annual losses of nutrients caused by erosion that far exceed replenishment by fertilizers.

Data from Moldovan National Bureau of Statistics indicates that the **overall agricultural production** (commercial agriculture, subsistence and household agriculture) in 2022 is estimated at 70.2% as compared in 2021. The decrease in the overall agricultural production was due to the decrease in vegetable production by 36.8% and in animal production - by 2.6%.[4][4] In 2022, **vegetable production** constituted 72% (a drop from 80% in 2021) of the total agricultural production, **animal production** went higher to 28% compared to 20% in 2021. The 2022 harvest in Moldova decreased in the volume of cereals and legumes by 63.1% compared to 2021. At the same time, the harvest of vegetables increased - by 10.3% and grapes - by 7.6%. It is noted that most of agriculture production in Moldova is households and peasant (farmer) based, 95.8% of the total volume of berry crops, 92.1% - of potatoes, 82.8% - of vegetables, 65.4% - of grapes, 62.4% - of fruits, nuts and apples and 55 .7% - of corn for grain were produced by households and peasant (farmer) households. In 2022 compared to 2021, it was found that the milk production decreased by 10.3% and the production (growth) of animals (in live weight) - by 2.4% in households of all categories. However, egg production increased by 5.9% but there was a decrease in the number of animals of all species in households of all categories (except cattle).

Agricultural production in the Republic of Moldova has always been the backbone of its economy and its fertile lands are recognized globally. The black soils (chernozems) in Moldova are among the most fertile soils in the world. Arable land constitutes about 74% of the total area of agricultural land, with an area of 3,384.7 thousand ha, the highest percentage in Europe.

Moldova has a **population** of 2.615 million (2022), out of whom 52.3% women and 47.7% men, most of them living in the rural areas (57.7% in 2022). Analysis of the distribution according to socio-economic groups of population shows that the highest poverty rate is inherent for farmers (33%) and

agricultural workers (39%), in contrast with non-agricultural workers (9%). The main cause of rural poverty is high vulnerability of the agricultural sector to land degradation and the increased frequency of extreme weather and climate events which directly affect small holder farmers and agricultural workers whose income is 40-70% weather depended on and comes from agriculture.

In Moldova, **women** have been affected more severely by the COVID 19 pandemic than men, due to the already persisting gender inequalities recorded before the COVID 19 outbreak. The existing gender norms and stereotypes concerning women?s and men?s roles in the society led to women bearing a disproportionate burden of performing domestic activities, caring for children and supporting them with online learning, while continuing to perform their work responsibilities, which unfortunately in many cases became an unsafe space due to increased risk and exposure to all forms of gender-based violence. On average, women reported an increase in time spent on at least three household chores ? 3.2 activities per woman, compared to 2.3 activities per man.

According to 2012 data, the population of Moldova affected by multidimensional **poverty** was 0.9 percentage points[5][5], implying that people may live just above income poverty line and are experiencing multiple deprivations in key human development areas such as health, education, overall living standard. Based on the above statistics, an affirmative gender action plan is proposed as an integral part of this project.

Environmental and adaptation context

Moldova has a **temperate continental climate** and the topography of the country is dominated by a moderately hilly plateau with forest steppe ecosystems located in the north and central areas of the country and arid steppe in the south and southeast. The country straddles **three main European eco-regions**: the Central-European mixed forests, the Pontic steppe, and the East European forest steppe. Many plant and animal species typical for each of these regions are at the limit of their natural range in Moldova. It is estimated that 15% of the country remains under some form of natural vegetation cover, much of which is however in a degraded state. The majority of the remaining natural vegetation cover in Moldova comprises forest habitats (11.7% of the country), predominantly located in the central region of the country. Steppe habitats (1.9% of the country) tend to occur in the north and the south of the country, while wetland habitats (2.8% of the country) are commonly associated with the aquatic systems of the Prut and Nistru (Dniester) rivers. ?Rocky habitats? (limestone rocks) cover 0.68% of the country. The country has a rich biota relative to its size, especially considering that the highest elevation reaches only 430 meters. The agriculture and urban ecosystems cover almost 85% of the territory while natural and semi-natural ecosystems cover a modest 15% of which extended areas are subject to degradation.

Ecosystems. As to their origin and the way they are managed, Moldovan ecosystems are grouped into natural (forests, steppe, grasslands, water and swamp), agricultural and urban.[6][6] The Republic of Moldova is characterized by a high degree of employment of natural ecosystems (about 2/3 of the land is used for agricultural needs). The surface of the natural steppe and meadow ecosystems are reduced and strongly deteriorated. Only forests offer sustainable habitats for most of the biodiversity objects.

Forest ecosystems cover 365 thousand ha (11.7% of the country?s territory), being dominated by hardwood species (97.8%), while coniferous species are limited (2.2%). The main trees which compose the woods in the Northern area of Moldova are pedunculate oak (*Quercus robur*) and cheery tree (*Cerasus avium*). In the woods in the centre of Moldova the main trees are beech (*Fagus sylvatica*), evergreen oak (*Quercus petraea*) and pedunculate oak (*Quercus robur*). In the Southern area of the country there are forest communities composed of downy oak (*Quercus pubescens*) and pedunculate oak (*Quercus robur*). In the meadows of the river basin of the Nistru and Prut and on the upstream of certain smaller rivers there are sectors with meadow forest communities (riverside coppices) composed of white poplar (Populus alba) and willow (Salix alba). About 1,140 species of vascular plants (which is more than 50% of the total plant species of Moldova) are present on land covered with forests. Forests are populated with 172 species of terrestrial vertebrates (47.8% of their total number) and numerous non-vertebrates (whose diversity is still little researched). The largest part of fauna diversity is there in the forest ecosystems of the Central Codri, favoured by compact areas of woods which serve as habitats and shelter.

Steppe ecosystems were considerably reduced as a result of extended agriculture, occupying currently about 65 thousand ha (1.92% of the country?s territory). The preserved sectors can be grouped into pratosteppes, steppes and sub-dessert steppes: a) Pratosteppes are located in the lower part of the slopes with varying exposure from the Balti and Bugeac steppe, characterized by a higher productivity compared to other types of steppe ecosystems. The main edifying plants are festuca (*Festuca valesiaca*), bridal veil (*Stipa capillata*), narrow-leaved meadow grass (*Poa angustifolia*) and smooth brome grass (Bromopsis inermis) b) Edifying plants and dominants of the plant cover of the steppes are fallow poaceae, such as festuca (Festuca valesiaca), feather grass (*Stipa lessingiana*), bridal veil (*Stipa capillata*). A special role in the steppe flora is played by the shrubs: besser (*Caragana mollis, Caragana frutex*), almond (*Amygdalus nana*), scalloped spirea (*Spirea crenata*); semi-shrubs: thyme (*Thymus marschallianus*), wall germander (*Teucrium chamaedrys, T. polium*). Very rarely one can see the European souslik (*Spermophilus citellus*) and the steppe polecat (*Mustela eversmanni*) ? species included in the Red Book. c) Sub-desert steppes cover small areas in the Southern part of Moldova, on the South-Western slopes, on the superficial sandy-clayey soils. Edifying plants are: King Ranch bluestem (*Bothriochloa ischaemum*), artemisia (*Artemisia austriaca*), wall germander (*Teucrium chamaedrys, Teucrium polium*).

Water ecosystems. The water resources of the Republic of Moldova are composed of 3,621 rivers and small rivers with a length of over 16 thousand kilometers, 4,126 natural lakes and artificial basins with the total area of 40.9 thousand ha, located and built along the river and in the riverbeds. The most important water arteries are river Nistru and stream Prut, with the length of the watercourse on the territory of the Republic of Moldova of 660 kilometers and respectively 695 kilometers (the total basins? surface ? 19.1 thousand square kilometers), which are cross-border water basins.

Paludous ecosystems can be found only in the meadows of the river Nistru and stream Prut where fragments of herbaceous vegetation, which covers 101.4 thousand ha (about 3% of the country?s territory) have been preserved. The biodiversity of these ecosystems is quite extensive, both at the specific level as well as at cenotic level. About 724 species of plants form the meadow pastures, of which ruderal plants ? 131 species, crops and adventive plants ? 8 species each. About 189 plant species are

considered rare and endangered. In the paludous ecosystems an increase in the number of ruderal asteraceae was noted, which contributes to diminishing the specific diversity and the feed value of the pastures. Of the 146 types existing in these ecosystems, the largest specific diversity is characteristic to the following Poa, Alopecurus, Glyceria, Carex, Medicago and Trifolium. In the biotypes of the paludous ecosystems, 88 species of terrestrial vertebrate animals were identified (23.2% of the total number of vertebrate animals in the country). Currently, these ecosystems are no longer populated by the tawny eagle (*Aquila rapax*), little bustard (*Tetrax tetrax*), demoiselle crane (*Anthropoides virgo*), while some species, such as great bustard (*Otis tarda*), black-winged pratincole (*Glareola praticola*), pallid harrier (*Circus macrourus*) stopped nesting here. A considerable decrease in the numbers of meadow species ? cork crake (*Crex crex*), spotted crake *(Porzana porzana*), small corn crake (*P. pusila*), grey corn crake (*P. parva*), several species of limicole and the Northern harrier (*Circus cyaneus*).

Agricultural ecosystems. Agricultural land stretches on about 2,506.2 thousand ha (74%) of the total area, of which: arable land ? 1,821.7 thousand ha and perennial plantations ? 302.8 thousand ha. About 40% of the agricultural land is covered by agricultural sectors with an area of up to 10 hectares, farms with the area of about 10-200 ha cover 40% of the land, the rest being agricultural associations with plots bigger than 200 ha. In the past, to extend the agricultural areas (including for grazing), sectors with steppe vegetation were fallowed and forests were cut. At present, most of **pastures** are the property of the local public authorities and are poorly managed (mainly due to unapproved and abusive grazing). Many pastures are located on rocky slopes with limited productivity, while the herbaceous carpet of the other pastures is considerably destroyed because of over grazing. The capacity of the pastures is limited, with the best case scenario calculations, of 0.2-0.3 conditional head of livestock per hectare. Pastures suffer a lot of degradation, especially due to man-made activities (intensive and round the year grazing), and to some extent water deficit in the soil. Lengthy maintenance of sheep folds in the same place further results in degradation (excess of manure), leading to soil compaction and water eutrophication. A specific characteristic of the agricultural landscapes is the presence of protection stripes, which are shelter zones for many species of plants and animals. Protection stripes improve the conditions for growing agricultural plants, enhance the ecological and biological capacity of the land and regulate the balance between useful and harmful organisms. The reality is that many of the protection strips were destroyed in the last decades and needs to be restored under the current initiative to enlarge afforested areas and prepare programs for their improvement.

Bio-Geographic zones. Biodiversity in the Republic of Moldova is determined by its geographic position at the crossroad of **three bio-geographic zones**: a) Central-European: represented by the Central Moldovan Plateau (maximal height 430 m) with the largest forests in the country (Codru woods), determined the richness of its flora and fauna, with elements from different regions, where important spontaneous plants? and wild animals? communities are preserved b) Eurasian: represented by forest steppes? and steppes? regions c) Mediterranean: represented by fragments of xerophyte forest steppe in the South of the country. Several species of plants and animals in Moldova live at the extremes of their natural habitats thus increasing their vulnerability due climate change and anthropogenic factors. As an agricultural country, the biodiversity of crop plants and livestock is especially important for the country?s economy. The transformation of natural ecosystems by the man led to their fragmentation, the isolation and decrease of populations, and the extinction of several indigenous species. The freed ecological niches are occupied by exotic species.

Flora. The flora of the Republic of Moldova includes 5,568 species of plants (of which 2,044 species of superior plants and 3,524 species of inferior plants), with a series of relict tertiary and quaternary species, while several very rare species are the sub-endemic element. There are 1,842 species of vascular plants and about 4,600 species of inferior plants and fungi. These include 13 relict species, in the 3rd Red Book (2015) there are 208 plant and fungal species and 4 species at the limit of natural spread. The diversity of plant species is particularly high in forests (over 850 species), meadows (about 650 species) and steppe (over 600 species). There are over 30 species of **ligneous plants** are important sources of existence for the rural population, about 200 species of medicinal plants, while about 700 species of plants from spontaneous flora are fodder plants that serve as feed for wild animals and the livestock. **Fungi:** Natural ecosystems creates conditions for 1,357 species of fungi, including 557 species of macromycetes which populate the forest ecosystems. Only 70 species of the total number of fungi are edible.

Fauna. There are about 16,540 animal species (474 vertebrates and over 16,000 invertebrates) in Moldova. These include 55 Ponto-Caspian relic species (of which 10% are endemic to the Black Sea Basin) and 219 species in the 3rd Red Book (2015). Many animal species have disappeared completely in Moldova over the last centuries. Although the greatest diversity of vertebrates is recorded in forests (172 species), 153 (89%) of these species are found in forests associated with meadows. Riverside corridors and wetlands are particularly important for migratory birds. The Republic of Moldova borders the Balkan region and forms a transition zone between the elements of the continental Asian steppe fauna and the European forest steppe. There are 474 species of vertebrate (75 species of mammals, 281 species of birds, 14 species of reptiles, 14 species of amphibians and 90 species of fish), other species being invertebrates species (mainly insects). The commonest native species of mammals are the long-eared bat (*Plecotus auritus*), serotine (*Eptesicus serotinus*), common hedgehog (*Erinaceus europaeus*), European mole (*Talpa europaea*), common shrew (*Sorex araneus*), Eurasian noctule (*Nyctalus noctula*), Eurasian red squirrel (*Sciurus vulgaris*), common hare (*Lepus europaeus*), European suslik (*Citellus citellus*), spotted suslik (*Citellus suslicus*), house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), common wood mouse (*Apodemus sylvaticus*), yellow-necked field mouse (*Apodemus flavicollis*), red-backed vole (*Clethrionomys glareolus*), common field vole (*Microtus arvalis*), red fox (*Vulpes vulpes*), Eurasian deer (*Capreolus capreolus*), wild boar (*Sus scrofa*), Eurasian badger (*Meles meles*), stone marten (*Martes foina*), European polecat (*Mustela putorius*), and the least weasel (*Mustela nivalis*).

Genetic diversity. Genetic diversity of the species (sub-species, genotypes, varieties, hybrids, races and stems) is extremely important to maintain the ecological balance in the ecosystems. Total of 2,445 varieties and **crop plants?** hybrids are included in the Registry of crop varieties of the Republic of Moldova. The Centre for vegetal genetic resources of Moldova (at the Institute of Genetics, Plant Physiology and Plant Protection) created active collections of various agricultural crops (wheat, triticale, corn, chickpeas, beans, tomatoes, etc.) and introduces new species of plants with the potential to be used in food, pharmaceutical industry, etc. The **genetic fund of livestock** includes races of bovines, goats, rabbits, chicken, turkey, geese, ducks, and fish, created in the country or imported from other states. Genetic microbial resources are used in various branches of national economy: food industry (dairy, bakery), wine-making industry, pharmaceutics, etc. Precious microbial stems are stored in the collections of research institutes or production associations. The national collection of **non-pathogen microorganisms** maintained by the Microbiology Institute, deposits 28 microorganisms? stems from different taxonomic groups, isolated from various environments, which are characterized by a valuable

biochemical potential, being considered prospective biotechnological objects. The basis of **forestry seeds** includes arboretums as sources of seeds, formed from the most productive and stable natural arboretums, seed plantations, geographic cultures, etc. The total area of the forest seeds fund is about 2,414.9 ha.

Ex-situ conservation. The Botanical Garden (Institute) Alexandru Ciubotaru provides with the Ex-situ biodiversity conservation and keep a collection of plant genetic fund of about 11 thousand species, of which: tropical and subtropical plants ? 2,517, ornamental flower plans ? 1,150, ligneous plants ? 2,000, non-traditional feed plants ? 350, medicinal plants ? 300, aromatic plants ? 350. During the last years, the plant genetic fund of the Botanical Garden (Institute) was supplemented with 1,456 species, including: ligneous plants ? 170, flower plants ? 601, tropical and subtropical plants ? 439, medicinal and aromatic plants ? 148, feed plants ? 98. The Herbarium of the Botanical Garden (Institute) and universities counts about 320 thousand samples of plants from various floristic regions. Zoological collections of the Republic of Moldova include about 182 species of birds and 4,700 species of insects; collections of fossil plants ? about 270 species, of fossil animals ? 500 species (1,500 specimen).

Forest biodiversity. In Moldova?s forestland, as many as 28 types of forest ecosystems (or forest formations) were identified, some of them being as biologically as economically the most important for the country, such as formations of pedunculate oak, sessile oak, pubescent oak, beech, flooded forest, black locust and many varieties of all these and other species. The ?forest oak with cherry? type is widespread in the north of the country and covers an area of 11600 ha. It is characterized by mono-dominant stands of pedunculate pak (*Quercus robur*) with high presence of wild cherry (*Prunus avium*). Its floristic composition includes about 350 species of vascu?lar plants, with 10 rare species. This type of ecosystem is currently under high influence of dry condi?tions, and its natural regeneration is very week. The type of ?sessile oak and pedunculate oak with beech? forest in the central Moldova covers about 160000 ha. Floristic diversity of these ecosystems is the richest in the country and includes over a thousand species of vascular plants. 17 species of plants are included in the Red Book of Moldova, such as: purple toothwort (*Dentaria glandulosa*), annual honesty (*Lunaria annua*), spindletree (*Euonymus nana*), elegant crown vetch (*Coronilla elegans*), forest peony (*Paeonia peregrina*), bird cherry tree (*Padus avium*), service tree (*Sorbus domestica*), sword-leaved helleborine (*Cephalanthera longifolia*), lady?s-slipper orchid, (*Cypripedium calceolus*) etc. The highest diversity of vascular plants is found in the nature reserves Codrii (with 945 species) and ?Plaiul Fagului? (with 720 species). Ecosystems of pubescent oak are present in the south of the country and cover about 7000 ha. Their floristic diversity comprises circa 400 species of vascular plants, some included in the Red Book of Moldova, such as: angelescu cornflower (*Centaurea angelescui*), greater pasque flower (*Pulsatilla grandis*), wild pear (*Pyrus elaeagnifolia*), and others (*Gymnospermium odessanum*), etc.

The azonal forest ecosystems of willow, poplar and pedunculate oak (which are flooded forest type) of the lower Prut river basin cover an area of 15000 ha. Their floristic diversity comprises about 400 spe?cies of vascular plants, including rare species in Moldova, such as: black alder (*Alnus glutinosa*), white alder (*Alnus incana*), forest grape vine (*Vitis sylvestris*), snake?s head (*Fritillaria meleagris*), southern adderstongue (*Ophioglossum vulgatum*) etc. Circa 1140 species of vascular plants are recorded in the forestland and forest-steppe areas of the country, which represents over 60% of all plant species in Moldova (i.e. 1832 species of vascular plants). The plant communities within the ecosystems determine

what animal communities exist within those sys?tems. Forest ecosystems of Moldova are inhabited by 172 species of terrestrial vertebrates (47.8% of the total species of Moldova), of these 47 species are mammals, birds - 106, reptiles - 9, and amphib?ians ? 10 species. Diversity of invertebrates is even higher, including more than 9000 species with a number of species listed in the Red Book data of Moldova. Forest ecosystems of the Central Codri are defined by a high compactness index, which creates conditions for the most diverse flora and fauna in the country.

However, forest biodiversity is increasingly threatened worldwide as a result of deforestation, fragmentation, climate change and other stressors. Natural forest biodiversity of Moldova is under huge pressure from various human activities. Improper forest management over the last century has caused a decrease in forest genetic resources to Moldovan forests. The decline of the three native oak formations (*Quercus robur, Q. petraea, Q. pubescens*) in Moldova is heavily accompanied with the introduction of other non-native species. Both human activity (plant harvesting, mushrooms collection, forest management activities, pollution etc.) and the decline in available food sources (gophers, other small rodents) are continuing to adversely affect the large species of prey birds, such as the large spotted eagle (*Aquila clanga*), lesser spotted eagle (*Aquila pomarina*), saker falcon (*Falco cherrug*) etc.

Protected Areas (PAs) and Ecological networks. According to the Law on the **State Natural Protected Areas Fund**, the total area of the State Natural Protected Areas Fund constitutes 210,695.87 ha (2,106.96 km2), or 5,8% of the total territory of the country. The State Natural Protected Area Fund involve a total number of 307 protected areas, including: 2 National parks, Biosphere reserve, 5 Scientific reserves, Nature monuments, Nature reserves, Landscape reserves, Natural Recourse reserve, Wetlands of international importance (Ramsar), Multifunctional management areas, Landscape architecture monuments, Dendrological and zoological gardens. The Government of Moldova recognizes that it will not be able to set aside large enough areas in a Protected Area System (PAs) to conserve all species, ecosystems and ecological processes. Thus, as part of its response to addressing the threats to biodiversity, the Government has committed to establish a National Ecological Network (NEN) which will eventually cover 11,113 km2 (~33% of the country?s territory). The NEN emphasizes the importance of a landscape level approach as a mechanism to conserve ecological processes and patterns. The NEN comprises two component parts: (i) a Protected Area System (PAS) which function as ?core conservation areas? for the NEN; and (ii) different categories of productive areas (corridors, restoration areas and buffer zones) under conservation-friendly management regimes. The establishment and effective management of a system of protected areas is thus a cornerstone of the implementation of the NEN. The NEN provides for the designation of 207,002 ha of protected areas. A total number of 61 sites, 60 species and 30 habitats of the Moldovan National Emerald Network of natural areas of special protection have been adopted by the Standing Committee of the Bern Convention and at present are in the process of national approval, considering to be as part of the Pan-European Ecological Network and an extension of the Natura-2000 Network, and constitute about of 8.0% of the territory of Moldova. The special conservation measures assume the development of biosecurity measures, conservation of genetic resources and land use planning as part of an integrative management.

Extension of Protected Areas. In 2006, three Ramsar wetland areas of international importance have been included in the Law on the State Natural Protected Areas Fund, including Prutul de Jos lakes, Nistru de Jos and Unguri-Holo?ni?a, and constitute area of 94,705.5 ha (947,06 km2), which increased the total

area of the protected natural areas by 4.65%. In 2013, the Orhei National Park has been established with the area of 33,792.09 ha (337.92 km2), that lead to the extension of the total surface of protected natural areas, up to189385.9 ha, which constituted 5.61% of the territory of the country. In 2018, the Biosphere Reserve ?Prutul de Jos? was founded by Law no. 132 of 13.07.2018 for the purpose of preservation of terrestrial and /or aquatic geographic areas with elements and physical-geographic formations of national and international importance, including indigenous plant and animal species specific to this territory. The total area of the Biosphere Reserve ?Prutul de Jos? is 14,771.04 ha, or 147.71 km2, including 824 ha, or 8.24 km2 of forestry land. The Nistru de Jos National Park has been established in 2022, with the total area is 61,883.99 ha. The total area of the natural areas protected by the State in 2022 achieved 210,695.87 ha (2,106.96 km2), or 5,8% of total territory of the country.

Ecosystem services values.

The value of ecosystem services in tourism, forestry, agriculture, fishing, water supply, climate change and disaster mitigation are estimated at just under $ 21,986 million in 2011. In 2011, the quantified value of ecosystem services (taking only few sectors into consideration) equated to some 41% of GDP. Both public sectors and private sectors benefited from ecosystem services values. For example, for eco-tourism sector, 13% of the value was earned by the national budget, while 78% (4.6 mills USD) was earned by private enterprises. In agriculture sector, only 11% of the benefits were earned by the budget (425 mill USD) while the private sector earned 86%. The income, consumption, spending, employment and cost-savings generated by ecosystem services have wide-ranging knock-on impacts on the economy. For example, only eco-tourism sector generates total income, investment and spending in the tourist sector of $ 7.9, including capital investment in excess of $ 1.4 million, as well as some 1400 full-time job equivalents. Eco-touristic visitors are, for example, willing to contribute almost $ 0.6 million a year more than they are currently being charged as entry fees. Another example is from agriculture: due to under usage of pastures (under the carrying capacity) there is an untapped potential of $ 127.7 mills. Increased public investment and policy action is required to capture these potential revenue streams.

Legal and Institutional Context

The Government of Moldova has prioritized the conservation and sustainable use of biodiversity, the reduction of land degradation and the protection of its freshwater sources as part of their national environmental programmes and plans. Moldova is a Party to the Convention on Biological Diversity (CBD), ratified in 1995; Ramsar Convention, ratified in 2000; CITES in 2001; Convention on European Treaty for Conservation of Nature (Bern Convention) in 1994. Moldova has also ratified the Cartagena Protocol on Biosafety (2002), the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress (2011), the Nagoya Protocol (2016) and became a member of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2012). The Association Agreement between the EU and Republic of Moldova (Art 368) highlights the importance of biodiversity and acknowledges its sustainable use as a key element for the achievement of sustainable development. The Environmental Strategy and Action Plan 2014-2023 provides an overall policy framework for extending the protected areas and ensuring their sustainable management (envisaged increase from 5.8 to 8% coverage)

highlighting the need of increasing protection status of key biodiversity areas in order to reduce negative anthropic impact.

Moldova has taken important steps towards building its national capacities for biodiversity conservation, biosafety and control of Invasive Alien Species (IAS) and Living Modified Organisms (LMOs) to support the implementation of three objectives of the Convention on Biological Diversity. The new National Development Strategy ?European Moldova? 2030 (NDS) was approved recently (2022). The NDS is the contribution of the Republic of Moldova to the achievement of the 2030 Sustainable Development Agenda, adopted by the member countries of the United Nations in September 2015. Biodiversity has been given consideration in a range of political documents of the country. Among them are the following relevant policies: National Environmental Protection Strategy 2014-2023 (NEPS), (2014), Republic of Moldova?s Biodiversity Strategy and Action Plan for 2015-2020 (NBSAP) (2015), National Action Plan for the Implementation of UNCCD (2015), National Program on establishment of Ecological Network for 2011-2018 (2011), National Strategy for Sustainable Development of Forestry Fund (2011), Moldova?s Climate Change Adaptation Strategy by 2020 and its Action Plan (2014), and the State Program on Forest Fund Areas Regeneration and Afforestation for 2003-2020 (2003). The Government recently approved the National Forest Extension and Rehabilitation Program 2023-2032 and its Action Plan 2030 (February 2023). Also under development currently are a number of new political documents in the field of environmental protection by the Ministry of Environment and are expected to be finalized and approved in 2023. Among them are a new Environmental Strategy 2030, an updated National Adaptation Strategy (Program) to Climate Change 2030, a new Strategy (Program) on Biological Diversity 2030 with the support of the UNEP/GEF ?GEF Enabling Activity: GBF- Early Action Project?.

National policy

National Biodiversity Strategy and Action Plan for 2015-2020 (NBSAP)

The National Biodiversity Strategy and Action Plan for 2015-2020 (NBSAP 2020) was developed in accordance with the Global Aichi Biodiversity Targets, aligned to the CBD Strategic Plan for Biological Diversity 2011-2020, Strategic Plan for the Implementation of the Cartagena Protocol on Biosafety for 2011-2020, and the Strategic Plan of the European Union for CBD until 2020. With the support of the GEF/UNEP Enabling activity project ?Global Biodiversity Framework-Early Action Support Project-Moldova? (2023), Moldova plans to develop a new national NBSAP 2030, in line with the Global Biodiversity Framework Post 2020 global targets.

The NBSAP 2020 considers biosafety (LMOs) and IAS as priorities in the field of biodiversity conservation. Under the Specific objectives C., it is to implement measures to diminish the negative impact of invasive species and implement measures to stop threats to biodiversity by 2020. It was planned to conduct impact studies for exogenous invasive species; develop an Action Plan on invasive species in accordance with the requirements of Bern Convention; develop an Action Plan to combat American maple *(Acer negundo*); develop guidelines on good practices to combat invasive species; train (private, public) landowners on the impact of invasive species.

Under the Specific objective B is to reduce the pressure on biodiversity to ensure sustainable development, the direct action is planned to Implement biological safety measure, specifically, to implement the National Framework on Biological Safety in accordance with the provisions of the Cartagena Protocol; establish a training and advisory center for biosafety; develop procedures and strengthen capacities to assess risks/risk management as part of the genetically modified organisms authorization process; and develop the liability and redress mechanism for biosafety.

However, the expected results under the NBSAP 2020, the planned actions have not been fully achieved due to the government changes, institutional reforms and limited financial resources. A number of actions is to be transferred to the new NBSAP 2030.

National Forest Extension and Rehabilitation Program 2023-2032 and its Action Plan 2030 (February, 2023) (NFERP)

The NFERP has targeted increasing forest plantation by at least 150,000 hectares in the next ten years, both on new lands and on heavily degraded forest lands which will increase forest cover up to 15% of the territory of the country. It is envisaged that the project would provide tools and procedures in risk assessment and risk management will be applied under this project. *Figure 1.*

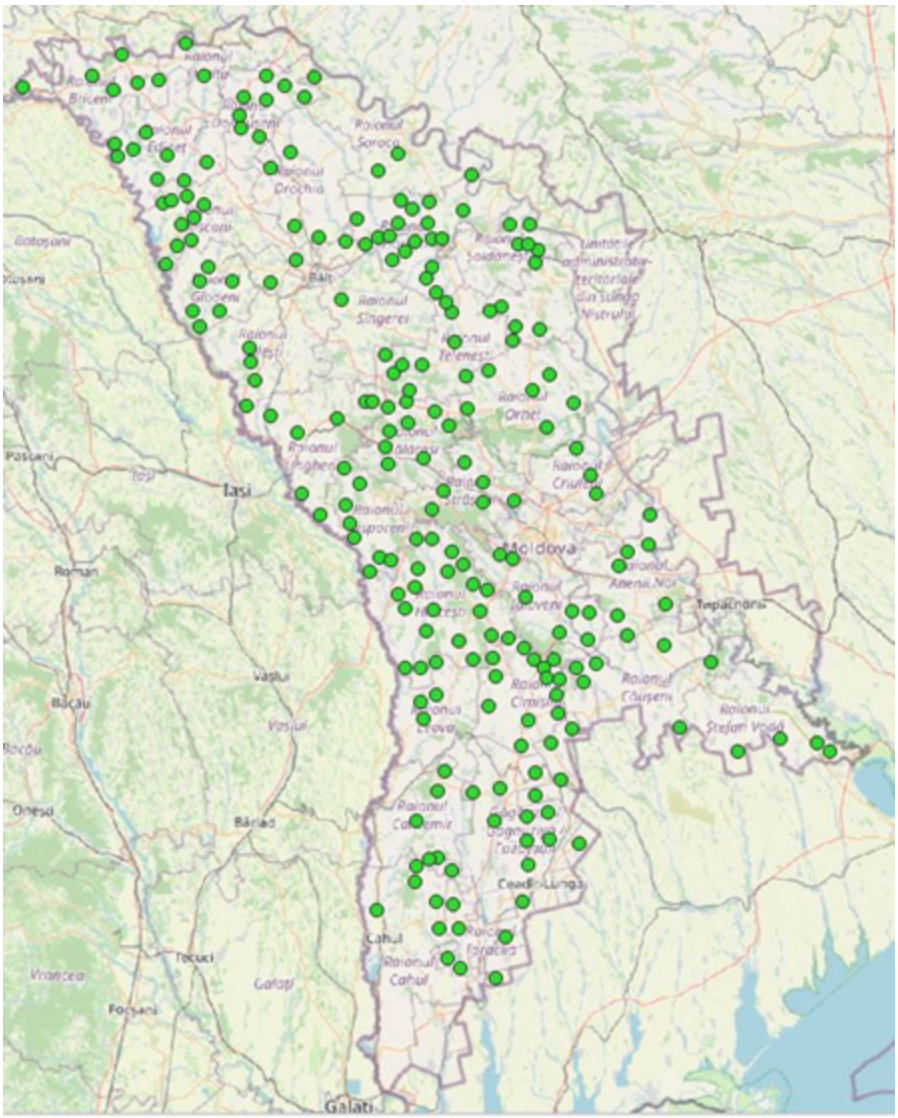


Figure 1. *Map of targeted areas of the forest plantation and rehabilitation according to the National Forest Extension and Rehabilitation Program (NFER), where the biosecurity risk assessment and risk management procedures will be applied from the tools and procedures as a result of the project*

Sixth National Report of the Republic of Moldova

The Sixth National Report of the Republic of Moldova to the Convention on Biological Diversity (2019), supported by the Global VI NR project managed by the UNEP/GEF project (2018-2019), has provided an assessment of efficiency of national policy and administrative measures, good practices in order to meeting the Aichi Biodiversity Targets and the Sustainable Development Goals (SDG). The Fourth National Report to the CPB, supported by the UNEP/GEF project (2019), provided the

assessment of national initiatives in line with the biosafety priorities. A Thematic Report on Alien and Invasive Species to the CBD (2002) reviewed the status of IAS in Moldova.

A number of legislative initiatives has been undertaken to ensure national biosafety framework for IAS and LMOs, among them:

Regulation in the field of IAS

LAW on plant kingdom No. 239/2007. By its Article 19, the Law stipulates measures to regulate the spread and limit poisonous plants, quarantine, containing narcotic substances species wild flora etc. The Law also prohibits the deliberate introduction of alien species into the environment, in cases when it adversely affect species of wild fauna and flora. Article 20 stipulates that the introduction, acclimatization, hybridization and selection plant species shall be permitted only in base of scientific opinion and authorized by the competent environmental authorities.

Law on animal kingdom Nr. 439/1995. By its Article 11, the Law stipulates measures to ensure the protection of the animal kingdom, through its point h) limiting the removal of animals from the natural environment and the acclimatization of new species.

The Regulation on Combating and Prevention spreading the ambrosia weeds (*Ambrosia artemisiifolia*) and the Action Plan to combat and prevent the spread of weeds of ambrosia (*Ambrosia artemisiifolia*) for the years 2019-2024 (2018). The Regulation establishes rules and responsibilities for the actors responsible for land management (landowners, public roads, railways, watercourses, lakes, irrigation systems and fishponds) in order to mitigate the hazards caused by the mentioned weed on human health and to ensure a healthy living environment. The Ministry of Health, Labor and Social Protection, Ministry of Agriculture, Regional Development and Environment, National Agency for Food Safety, in collaboration with the local public authorities, are responsible bodies to ensure monitoring and control over spreading of the Ambrosia weed. In order to implement the requirements of the Regulation, the draft provides for the approval of an Action Plan with the concrete setting of the measures, the deadlines and the executors[7][7].

By Government Decision no. 356 of 31.05.2012, the List of harmful organisms, plants, plant products and other objects whose introduction and distribution in the Republic of Moldova is prohibited and the List of harmful organisms whose introduction and distribution in the Republic of Moldova is prohibited in the case where they are present on certain plants or plant products was approved.

Regulation in the field of LMOs.

Law on biological safety (2001). The law regulates all intended uses of GMOs and derived products including contained use, intentional introduction into the environment (field trials, cultivation) and placing on the market (including import of GMOs). The provisions not only apply to commercial purposes but also to research. The law specifies amongst others the authorization procedures for the various types of uses and the involvement of the public. The law on biological safety contains provisions on labelling, which is required when a GMO or its products are placed on the market. Those are to be

marked with the words ?The product contains genetically modified organisms?. Labelling thresholds are 0.3% of the total weight of the product for seeds and 1% for other products.

Regulation on the authorization of activities related to obtaining, testing, use and commercialization genetically modified organisms. This regulation contains detailed procedures and requirements for the authorization process of contained use, deliberate release, placing on the market of GMOs or import/export activities. It includes information to be provided by the notifier, e.g. information on genetic modification, the genetically modified plant and potential environmental impacts. In Annex 5, specifications for the environmental risk assessment are laid down, amongst others, general principles, methods and elements to be considered.

Regulation on the National Commission for Biological Safety. The responsibilities and tasks of the National Commission for Biological Safety, an interdepartmental body, are clearly provided. In addition, the members are listed and procedures relevant for the functioning of the Commission defined. Its duties include the examination of notifications, providing scientific and technical expertise, evaluating risk assessments and providing a scientific opinion for decision making in the authorization process. It consists of 13 members from the Central environment authority, the Moldovan Academy of Sciences, other scientific institutions, central authorities for economy, agriculture / food industry, health as well as NGOs.

New Law on regulation and control of GMOs (2022). Areas of the application of the law: a) the deliberate release into the environment of genetically modified organisms, for purposes other than marketing; b) placing genetically modified organisms on the market, as products or components of other products; c) transboundary movement of genetically modified organisms, as products itself or components of other products. The Law partially transposes Directive 2001/18/EC as well as Directive (EU) 2015/412 and Commission Directive (EU) 2018/350, both amending Directive 2001/18/EC. Directive 2001/18/EC regulates the deliberate release into the environment of GMOs (field trials, cultivation) as well as the placing on the market of GMOs and GMO-products. The main aim is to ensure the protection of human health and the environment. In addition, special regulation exists for GM food and feed (Regulation (EC) No 1829/2003) than include amongst others specific labelling requirements. GMOs or GM products that are not regulated by Regulation (EC) No 1829/2003 would for example be GM-trees or GM-insects not intended as food or feed. The law is provided with specific rules for activities with genetically modified organisms, which may generate still unknown risks for human health and the environment, and are based on some basic principles of environmental law applicable to this field, such as: the precautionary principle, the principle of ecological risk assessment following the import of GMOs, the principle of public information and participation in decision-making by the competent authority and a series of specific principles, such as: the principle of monitoring the long-term effects of the interaction of GMOs with the environment, the principle of compliance with labeling and traceability requirements, in all the stages of placing GMOs on the market, etc. Thus, taking into account the signing of the Association Agreement between the Republic of Moldova and the EU and the obligation to transpose Directive 2001/18/EC on the deliberate dissemination in the environment of genetically modified organisms and the shortcomings of the regulations regarding activities with genetically modified organisms, identified in the process of implementing Law 755/2001 on biological security, which creates barriers in the authorization process of activities with genetically modified organisms and for adequate monitoring and

prevents effective cross-border surveillance, Law no. 152/2022 on the regulation and control of genetically modified organisms. This law clarifies the roles and responsibilities of the bodies in the decision-making process for GMOs to be authorized in Moldova. A newly established Environment Agency within MoE will, in collaboration with ANSA, be responsible for authorizing GMOs based on scientific opinions issued by the National Biosafety Commission. The law includes special provisions for the environmental risk assessment to be conducted, labelling, traceability, confidential information, socio-economic considerations, monitoring and reporting, as well as emergency and liability measures and public participation. This law comes into force in 2024.

In a cost-effective manner, the project intends to harmonized policy and regulatory framework for effective bioresource management.

Institutional Setting for IAS and LMOs

Ministry of the Environment (MoE) is the authority to promote the national policy, legislation and regulations in the field of environmental protection, including biodiversity conservation, biosecurity and biosafety. According to the new law on regulation and control of GMOs (2022), the MoE is responsible for elaborating and submitting to the Government the requirements of restricting or prohibiting genetically modified organism, based on reasons, such as those related to environmental policy objectives, land use, socioeconomic impact etc. The MoE coordinates all sectors and actors involved in decision-making regarding genetically modified organisms and ensures public information sharing and participation.

Ministry of Agriculture and Food Industry (MAFI) is the authority with powers to control and promote all normative acts in the field of introduction and use of intended genetically modified products for use as food or animal feed as well as food products or ingredients produced from genetically modified organisms.

The Environment Agency (EA) of the MoE is the administrative authority for the implementation of policy and the normative framework in the field of environmental protection, including biodiversity and biosafety. The Agency performs the functions established by this Regulation in the following fields of activity, among others, the protection and regulation of the use of the flora and fauna, of aquatic biological resources; conservation of biodiversity and management of natural areas protected by the state and biosecurity.

According to the new law on regulation and control of GMOs (2022), the EA has the duty to control genetically modified organisms and: a) ensure the implementation of the national legislation regarding the GMOs; b) participate in the drafting of regulatory normative acts related to genetically modified organisms; c) ensure authorization procedures of the use of genetically modified organisms; d) ensures the issuance, renewal, suspension, withdrawal or revocation authorizations according; e) maintenance of the Register in electronic format regarding the notifications submitted, the authorizations issued according to chapters III and IV and those renewed, suspended or withdrawn; g) keep the Register of genetically modified organisms; h) informs the authorities, the public about the issuance, renewal, the suspension or withdrawal of authorizations, as well as about possible accidents; i) approve by order the list of institutions and experts accepted for developing the ecological risk assessment; j) exercise duties

of the Secretariat of the National Biological Security Commission; k) determine response measures and ensure the application of the measures recovery in the event of an accident or exceptional situations during activities with genetically modified organisms, including transboundary movement; l) ensures monitoring of the use of genetically modified organisms, including for the purpose of research and development.

Environmental Protection Inspectorate (EPI) of the MoE. is mandated to: a) ensure the control of the activities regulated by this law which involves the dissemination of genetically modified organisms in the environment; b) assesses the damage and calculates the damage caused to the environment, according to an instruction approved by the Ministry of the Environment, in case of accidents that involves an intentional/unintentional release into the environment of living organisms genetically modified during their use and identifies the natural person or legal entity that caused the damage; c) provides the database in electronic format regarding its own activity and transmits information and reports on the results of controls and inspections, to the Environment Agency and the Ministry of the Environment; d) collaborates with the Environment Agency, the Ministry of the Environment and with the control bodies of neighboring states, including in emergency situations with cross-border impact; e) ascertains and examines cases of violation of the legislation on illegal and unintentional dissemination activities in the natural environment a genetically modified organisms.

Moldsilva Agency (Forestry) (MA) of the MoE is the governmental body in duty to provide management of the National Forestry Fund, including its conservation, recreational function and ecosystem services.

National Agency for Food Safety (NAFS) of the MAFI. The agency's mission is to ensure the implementation of state policies in the fields aimed at guaranteeing the safety of food and the quality of food products, including ethyl alcohol, alcohol production, wine products and beer, maintaining a system of public measures aimed at ensuring animal health and protection plants, the harmlessness of food products and raw materials, as well as consumer protection in the food sector. The Agency performs the functions established by this Regulation in the following areas: sanitary-veterinary and animal breeding; phytosanitary and plant protection; food safety and quality; consumer protection in the food field etc.

NAFS ensures, according to the new Law on GMOs, monitoring and certification of seeds, food feed. According to the new law on regulation and control of GMOs (2022) its duties include a) state supervision and control of the presence of GMOs in food, feed and seeds, to the stage of import, production, processing, processing, transportation, distribution, their marketing and use; b) carry out controls on the use of genetically modified organisms as foodstuffs and animal feed containing or consisting of genetically modified organisms; c) ensures the control of the traceability of food products and food for animals, produced from/or containing ingredients produced from organisms genetically modified; d) coordinates actions in case of emergency situations, caused by identification of genetically modified organisms in agro-food products, seeds, planting material and animal feed and focal point function national in the case of alerts received from the Rapid Alert System for Food and feed for animals; e) take samples for laboratory investigations for the purpose of confirmation or denying the presence of genetically modified organisms; f) ensures the operation of an accredited laboratory based on the standard SM EN ISO/IEC 17025:2018 for the detection and identification of organisms genetically modified or genetically modified products; g) ensures the supervision and control of the labeling of food products, feed and seed containing or consisting of organisms genetically modified. h) transmits

information on the results of controls to the Agency Environment, the Ministry of the Environment and the Ministry of Agriculture and Food Industry and informs the public about the market situation regarding food products and feed containing or consisting of genetically modified organisms.

National Biosafety Commission under the MoE is an interdepartmental body, without legal personality, with a consultative role of undertaking the following: a) examines the notifications in terms of ecological risk effects on human health and the environment, risk management, intervention measures in case of emergency, of the monitoring plan, etc., methods of detection and identification of genetically modified organisms for the first request for environmental release or placing on the market of an organism genetically modified or of a combination of genetically modified organisms itself or component/s of a genetically modified product in the territory Republic of Moldova; b) issues an evaluation report within the term established by the described procedure in chapter III. The evaluation report and the minutes of the meetings send to the Environment Agency, on paper and in electronic format; c) coordinates the list of institutions and experts accepted for undertaking environmental risk assessment; d) collaborate with the Environment Agency, the Ministry of the Environment and the control bodies to establish the necessary measures in the event of major risks or for the application of the safeguard clause; e) requests information from the notifier and the authorities involved in the execution of this law; f) collaborate with the Ministry of the Environment and the Environment Agency in the process to develop the normative framework related to this law.

The Commission is established from 13 members specialized in the fields regulated by this law. Members of the Biosafety Commission represents the following institutions: a) Institute of Genetics, Physiology and Plant Protection; b) Institute of Ecology and Geography; c) Institute of Microbiology and Biotechnology; d) Institute of Zoology; e) State Agrarian University of Moldova; f) State University of Moldova; g) Technical University of Moldova; h) "Nicolae Testemi?anu" State University of Medicine and Pharmacy; i) Ministry of Health; j) Ministry of Agriculture and Food Industry; k) National Agency for Food Safety; l) Ministry of the Environment; m) environmental NGO.

Institute of Zoology of the State University of Moldova has the mandate to develop the national Cadastre of animal species in Moldova, as well as the Institute of Botany (Botanical Garden) Alexandru Ciubotaru of the State University of Moldova is to develop and maintain the national Cadastre of plant species in Moldova. Institute of Genetics, Physiology and Plant Protection of the State University of Moldova ensures maintenance of Gene bank of plant species, including agricultural varieties and hybrids, as well as biotechnological research. Institute of Biotechnologies in Animal Breeding and Veterinary Medicine is carrying out the research project in animal biotechnology and veterinary.

It is noted that there is no specific institutional responsible for monitoring, management and decision measures for IAS yet. The project proposes to institutionalize, enhanced and strengthened systems for decision making in an integrated biosecurity framework. Further the project intends to build capacity to support implementation of policy, regulatory and institutional framework.

Current context with the IAS and LMOs in Moldova

The Biosecurity Project of Moldova seeks to have a harmonized approach to building institutional frameworks with the capacity to detect, eradicate, control and effectively manage introduced organisms

(IAS and LMOs) that could pose a threat to biodiversity. The rationale behind managing IAS and LMOs under one framework is the fact that the introduction of any new species in any ecosystem poses a potential risk, it is thus important to examine the impact of the organism through risk assessment of the species itself and of its introductory pathway(s). Although details of risk assessment and risk management may differ, the processes for IAS and LMO risk assessment have more commonalities than differences. Thus, implementing a harmonized approach can optimize the use of human and institutional resources which are always limited, especially in developing countries.

Although limited capacity in areas such as traditional and molecular diagnostics/identification, risk analysis, inspection methods and integrated approaches to the management of biological invasions exists in Moldova, its limitation and insufficiency limits the implementation of an integrated cross-sectoral risk-based approach to biosecurity. A similar skill set is required to assess the risk and environmental impact posed by LMOs and other introduced species. However, a useful start in the building of systematic biosecurity capacity by the proposed project will constitute essential resources that can be used to roll out training to wider constituents.

Invasive Alien Species (IAS)

The Invasive Alien Species (IAS) in Moldova represent an important challenge for biodiversity conservation. The invasive species cause a strong negative impact on the biodiversity of the Republic of Moldova. The invasion of synanthropic species in the degraded natural ecosystems hinders the processes of restoring the natural biocenoses and affects their functionality. The absence of rivals and the presence of free ecological niches create preconditions for the emergence of alien (foreign) species and the numerical growth of some native species, which by their excessive development may become invasive. Unsustainable management of natural ecosystems has led to their fragmentation, to a considerable reduction of the number and even extinction of some species.

Currently, invasive alien species are a major ecological issue and severe threat to domestic natural biologic resources management, which have a significant economic impact. Certain allogeneic species are introduced for commercial, ornamental, aesthetic or biological control purpose, while others are introduced unintentionally (contaminants, illegal trade). Some allogeneic species are widely used in forestry, for instance the acacia (*Robinia pseudoacacia*) and in households. Others pose a threat to the domestic biodiversity by polluting the genetic resources, substituting valuable species, thereby causing considerable damage to the national economy (pests in agriculture and forestry). The recent invasion of the Ambrosia weed in Moldova is a case in point which is having an economic impact on agriculture, forestry and also human health.

There is a significant number of invasive alien species of plants and animals present in Moldova, estimated at **114 plant species[8][8] and 149 animal species**[9][9]**.** About 130 species of invasive animal species damage agricultural crops, while 15 species damage forests. Many non-native species of animals were introduced deliberately, (raccoon dog, muskrat, dappled deer, pheasant, etc.). Over the years, it has been observed that the raccoon dog and the muskrat have become invasive species and the dappled deer

proved to be dangerous for maintaining the native species of common deer. There are about 149 species of invasive animal species detected in Moldova, of which about 130 species provide significant damage to agricultural crops, while 15 species damage to the forests. Many alien animal species have been introduced deliberately in Moldova. Since the 1950s several species have acclimatized including the raccoon dog (*Nyctereutes procyonoides*), the muskrat *(Ondatra zibethicus*), the sika deer (*Cervus nippon*), and the pheasant (*Phasianus colchicus).* Several invasive species like the Colorado potato beetle, the phylloxera, etc. have been introduced unintentionally. Others spread naturally namely the golden jackal (*Canis aureus*), the ring-necked dove (*Streptopelia capicola*), the black woodpecker (*Dryocopus martius)* and the Syrian woodpecker (*Dendrocopus syriacus*)[10][10]. Invasive anthropic species of animals are as follows: common vole (*Microtus arvalis*), Norway brown rat (*Rattus norvegicus*), house mouse *(Mus musculus*), as well as several tens of species of insects ? main pests of agricultural and forestry crops. Alien invasive species of insects are the Colorado beetle (*Leptinotarsa decemlineata*), fall webworm (*Hyphantria cunea*), the Mediterranean fruit fly *(Ceratitis capitata*), the San-Jose scale (*Quadraspidiotus perniciosus*)[11][11].

Many of the invasive species have naturalized in the Republic of Moldova, becoming part of the artificial and partially natural phytocenoses, and they are spreading further, for example, *Grindelia squarrosa, Ambrosia artimisiifolia, Xanthium albinum, Abutilon theophrasti, Mirabilis nyctaginea.* Most of the adventive species are of the American origin and have found favourable conditions for development in Moldova[12][12]. The **weeds** with aggressive nature constitute **114 species**, of which 11 - quarantine species (*Arceuthobium spp. (noneuropeen population), Acroptilon repens D.C., Ambrosia psilostachia D.C.., Cuscuta approximata Bob. , Cuscuta europaea L., Cuscuta Lehmanniana bge, Cuscuta monogyna Vahl., Iva axilaris Push., Solanum elaeagnifolium Cav., Solanum rostratum Dun., Solanum triflorum Nutt., Striga sp*.). The representatives of these species damage mostly natural ecosystems of degraded pastures and agricultural ecosystems[13][13].

In the last 20 years, **23 new invasive insect species** have been reported from the Republic of Moldova, 22 being harmful and one useful. Revealed species belong to 7 orders, 15 families and 21 genera. Most part of the invasive insect species were recorded from the order Lepidoptera (8 species), followed by the orders Hemiptera (5) and Coleoptera (4). From the orders Hymenoptera and Heteroptera only 2 species were recorded, and the orders Orthoptera and Diptera were represented by one species each. Most of the newly registered invasive insect species on the territory of the Republic of Moldova require strict monitoring systems, in order to avoid the negative effects on the forest and agricultural ecosystems or agri-food warehouses, which could have a negative impact on the country?s economy.[14][14] During the last 18 years 25 species of new invasive insect species (pests) have been registered as being invasive in the Republic of Moldova and have been found to be dangerous to native flora and urban green spaces, among are: *Aproceros leucopoda* ? black elm wasp, *Cameraria ohridella* ? mothchestnut miner, *Corythucha arcuata* ? oak tiger, *C. ciliata* ? sycamore bug, *Cydalima perspectalis* ? pest of buxus, *Obolodiplosis robiniae* ? gallic mosquito of acacia leaves, *Phyllonorycter issikii* ? the variegated linden

mining moth, *Phyllonoryctersycamores* ? the spotted sycamore mining moth, *Halyomorpha halys* ? the marbled bug, oligophagous, phytophagous, *Metcalfa pruinosa* ? Cicada mellifera, generalist phytophagous, which consumes 66 plant species[15][15].

Invasive bird species in the territory of Moldova, which occupies a unique geographical position, the transcontinental migration routes of wild birds pass, which connect territories stretching from Finland to the Urals in the north and from South Africa to Asia Minor in the south. The migration of birds through the territory of Moldova takes place both in a broad front and according to directed lines. From the number of the 280 species of birds registered in Moldova, about 190 of species pass through its territory during the spring and autumn migration; they represent almost all the contemporary orders, but the majority are the representatives of the order Passeriformes (38%), Anseriformes (15%), Charadriiformes (14%). According to the research investigations, 75 species were identified during their spring migration in the wetlands of the Lower Prut, of which the most abundant species are the aquatic ones: mallard - *Anas plathyrhynchos* (6500 specimens), coot ? *Fulica atra* (2500), chestnut-headed duck - *Aythya ferina* (1800), mottled duck - *Anas strepera* (1700), mallard - *Anas acuta* (750).

A high degree of danger for the aquatic ecosystems of the Republic of Moldova are the naturalized allogeneic fish species: the murgoiul-puddle, the sun-perch (sorets), the silvery caras and the Amur-guvid. The silvery caras is native to the Amur basin, currently it is a cosmopolitan species. The successful naturalization of the silver carp in the water basins of the entire European territory serves as proof of the wide ecological valence and of a colossal adaptive potential. The second invasive alien species, naturalized in Moldova waters, economically depreciated, with negative impact on biodiversity and functionality of aquatic ecosystems in the Republic of Moldova is considered sorets (sun-perch) *? Lepomis gibbosus (Linnaeus, 1758)*, native to North America, in the upper basin of the Mississippi River. Moreover, the extremely large abundance of the species has caused negative consequences on the state of the populations of other native species of fish such as: liner, perch, bream, etc., devouring their ponts, offspring and characteristic fodder sources, thus affecting their herd condition, and the growth rate.[16][16] It is however noted that there is no comprehensive inventory of invasive plant species developed in Moldova.

Living Modified Organisms (LMOs)

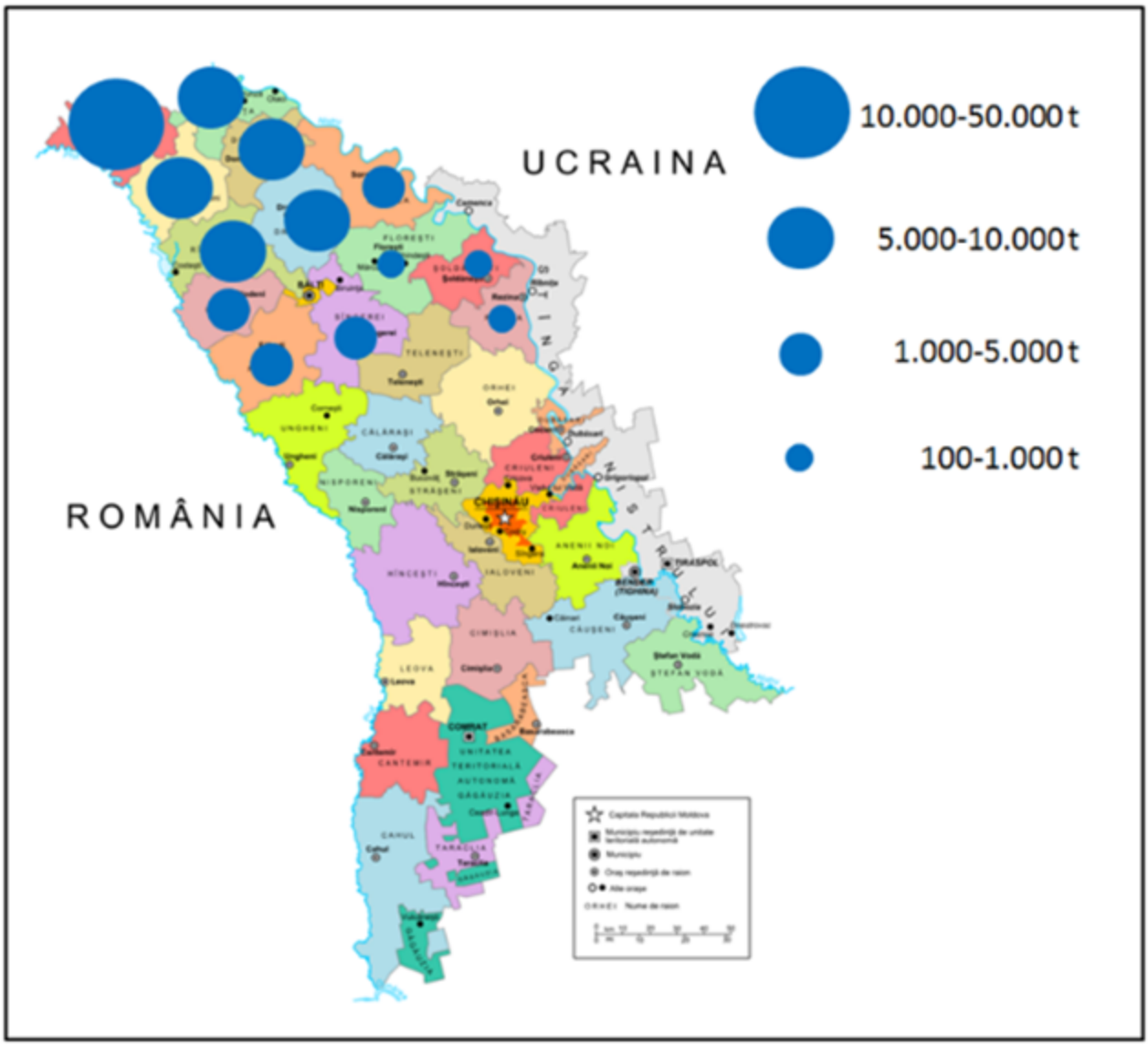
The possibility of illegal transboundary movement of living modified organisms in Moldova is also highly expected as has been proven in both soybeans and corn products in the agricultural sector. Since products derived from modern biotechnology have been in the international market for at least 10 years, it is likely that these might have entered in Moldova undetected and without risk assessment. Their impact on biodiversity and the environment in Moldova has not assessed. For example, the area of soybean cultivation, at present in Moldova, is approximately 60 000 ha and expected to increase to approximately 100,000 ha in the country. The establishment of an efficient and effective biosecurity system in line with

international standards is recognized as crucial for the management of potential adverse effects of LMOs on sustainable development of biological resources and human health.

Soybean has been cultivated in the Republic of Moldova since the 1980s. Due to the increasing demand of high-quality protein in Europe, the soybean production and the average area under soy has increased significantly in the last decades. Soy has become one of the most important crops in Moldova. In 2019 about 26,574 ha had been cultivated with soybeans yielding approximately 48,529 tons. Soy is mainly grown in the northern part of Moldova, where 98 % of Moldova?s total soybean growing area is located (*Fig. 2)*. The regions around Briceni, Edinet and R??cani are known as areas with the highest soybean production. According to Gorobivscaia & Croitoru (2016) [17][17]soybean cultivation remained at a fairly constant level from mid-2000 till 2016.

Only very limited information about GM-soy cultivation in Moldova is available. According to Gorobivscaia & Croitoru (2016) 24 operators out of 246 produced GM-soy despite the fact that no GM-soy has been authorized for cultivation in Moldova to date. However, the quantities produced by these operators were between 10 and 100 MT of soy.

Imports of soybean meal in 2017-2019 is represented in the *Table 1*.


UCRAINA
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CHIŞINĂU
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BENDER (TIGHINA)
COMRAT
CAHUL
CAHUL
UNITATEA TERITORIALĂ AUTONOMĂ GĂGĂUZIA
Capitala Republicii Moldova
Municipiu-reşedinţă de unitate teritorială autonomă
Municipiu
Oraş-reşedinţă de raion
Alte oraşe
ORAŞUL Numele de raion

Figure 2: *Soybean production areas in Moldova (2019). Size of circles indicating annual gross harvest in tons. Production areas below 100 t not shown.* ***[18]***[18]

Additionally, Moldova is importing significant amounts of soy products, mainly soy meal/soy cake. Table 1 indicates the amount of soymeal imported for the time period 2017-2019 (for 2019 only data from the first five months are available) and the countries of origin. As a significant quantity is imported from Ukraine, Brazil and Argentina which can be assumed to contains GM-soy. These soymeal imports may be relevant as a strict separation of GM-soy transport logistics from those dedicated for non-GM Donau Soja products are essential to prevent potential contamination during storage and transport of non-GM soybeans.

Table 1: *Imports of soybean meal in the years 2017, 2018 and 2019 (first five months)*
Source: ANSA, modified.

Year	Quantity (Tons)	Countries of origin
2017	24.969	Romania
	1.972	Ukraine
2018	21.027	Romania
	10.701	Ukraine
	2.738	Brazil
2019 (first 5 months)	931	Brazil
	3.191	Ukraine
	11.617	Romania
	24	Argentina

GMO authorizations. Three GM soybean lines were approved for import for food and feed use for poultry companies in 2015. According to the Biosafety Clearing House (BCH) those were MON 89788, MON-87701 and MON-40-3-2. The permission for the import was initially limited for a period of six months, but prolonged for the period 2015-2020 (pers. communication). At present, 18 local private

importer?s companies and local farmer breeders have received authorizations for import of soybean meal obtained from genetically modified soybeans ("VSG Bussines Grup" S.R.L., "Alionexagro" S.R.L., S.C. "Vadcom Prim" S.R.L., S.R.L. "AGROREAL" COM, "AVICOLA MOLDOVA" S.R.L., S.R.L. "FORTRADE" ", S.C. "ROM-Cris" S.R.L., "Safmadora-Grup" S.R.L., S.A. "M?rcule?ti-Combi", S.R.L. "Bioline-Product", „NEOLACTA,' SRL, S.R.L. ?TRANSGRAR?, ?.M. Porco Bello S.R.L., S.C.?DS&CO"S,R.L., G.?. Zmeu Tudor Vladimir, S.R.L. ?SumAgro?, S.R.L. ?Floreni?, S.C. ?OLSEG?). The amount of soybean meal imported by the latter in 2018 was 18,230.05 t. The soybean meal is imported from Ukraine and Romania. Countries of origin of them being Argentina and Brazil. The following GM varieties of soybean meal are authorized and imported in Moldova: MON 40-3-2(MON 40-3-2-6); DP-305423 (DP-305423-1); MON 87701 ? MON 89788 (MON 87701-2 x MON 89788-1); MON A02704-12(ASC-GMOO5-3); MON 5547-127 (ASC-GMOO6-4); FG- 72 (MST-FG72-2); MON 87705 (MON 87705 -6); MON 89788 (89788-1); MON 87701(87701-2); MON 87708(87708-9); MON 87769(87769-7); MON 87705xMON 89788 (MON 87705-6 x MON 89788-1); MON 87708 x MON 89788 (MON 87708-9xMON 89788-1); DP-305423x40-3-2 (DP-305423-1 x MON 40-3-2-6); DAS 81419-2xDAS 44406-6; DAS 44406-6 ; FG-72xA5547-127 (MST ?FG072-2xACS ?GM006-4); DAS-68416-4; MON 87708xMON 89788xA5547-127(MON 87708-9xMON 89788-1xACS-GM006-4); SYNT0H2(SYN-000H2-5); MON 87751xMON 87701xMON 87708xMON 89788 (MON 87751-7xMON 87701-2x MON 87708-9xMON 89788-1); DAS-81419-2; MON 87751-7.

To provide the national livestock sector with soybean meal, approximately 52.0 thousand tons of meal are needed annually.

However, taking into account that the area cultivated with soybeans in the country is 30-33.0 thousand hectares, with an average productivity of about 1.3 tons/ha, the total volume of the raw soybean that can be produced in Moldova is limited to only 45 thousand tons thus creating the need to import soybean meal.

GMO detection and identification. Analytical tests carried out in 2013 on 4 soybean samples from the regions F?le?ti, Briceni, ?tefan Vod? and H?nce?ti provided no clear evidence for presence of GM-soy in Moldova. Additionally, a testing round carried out by MAFI (Ministry of Agriculture and Food Industry) in 2015 on 15 samples did not give positive results for the tested samples[19][19]. Tests conducted by the Molecular Biological Laboratory of Public Institution ?Central Phytosanitary Laboratory? on various agricultural products including soybeans demonstrated the presence of genetically modified material mainly in soybean products. In 2018, 6 out of 14 soybean samples tested positive (*Table 2*). However, the seed material tested in 2019 showed conformity according to Moldovan Law 755/2001 (? 0,3%). Although no GM-soy is currently authorized for cultivation in Moldova, the most recent analytical results together with the information from farmers clearly indicate that currently GM-soy is grown in Moldova.

Table 2: *Results of GMO testing of various agricultural products carried out in 2018 and 2019 by the Molecular Biological Laboratory of Public Institution ?Central Phytosanitary Laboratory?. Conformity according to Moldovan Public Law 755/2001; Conform - no limit exceeded by 1% genetically modified was found; Non-conform - the limit exceeded by 1% genetically modified for the product, 0.3% for the*

seeds was detected. Soybean related samples in bold. Source: Donau Soja 2020 pers. comm. based on data from the National Agency of Food Safety, modified

Year	Product name	Total tested samples	Requested by economical agent	Monitored by National Agency of Food Safety
2018	Soybeans	14 samples	1 sample (conform)	7 samples (conform) 6 samples (non-conform)
	Canned corn	7 samples	7 samples (conform)	
	Corn beans	1 sample	1 sample (conform)	
	Soy sauce	5 samples		5 samples (conform)
	Soybean meal	18 samples	11 samples (conform) 2 samples (non-conform)	2 samples (conform) 3 samples (non-conform)
2019	Corn seed material	11 samples	1 sample (conform)	10 samples (conform)
	Soya seed material	2 samples		2 samples (conform)
	Soybean meal	7 samples		7 samples (conform)
	Rape	1 sample	1 sample (conform)	

Table 2 shows the results of the GMO analysis. Samples that have been tested positive at screening and were likely to be above 0.1% GM were then subjected to quantitative analysis. A total number of 30 samples was analyzed. The results of the GMO analysis draw a rather critical situation. Although the majority of samples were tested negative or showed very low levels of GMO, 30% of the samples showed significant amounts of GMO. The main trait detected was MON40-3-2 (RoundupReady? Soy). For some samples even very high amounts of MON40-3-2 were detected. Especially, the samples with a very high GM content up to 100% clearly indicates that in this case GM soybeans have been planted on the fields. Taking into account that 5 out of 30 samples indicate cultivation of GM soy, this situation must be considered as critical for a non-GM production of soybeans. For the samples with GM content in the range of 0.1% - 1% a contamination of seed material can be assumed as the samples were collected from the storage facility of individual farmers which makes a cross contamination from harvest of other farmers unlikely.

The P.I "Central Phytosanitary Laboratory" was founded by the National Food Safety Agency (NFSA). The laboratory was founded in accordance with the RM Government Decision No. 1209/2018 of 05.12.2018 regarding the approval of the Statute of the Public Institution "Central Phytosanitary Laboratory".

The laboratory has the mission of coordinating and organizing the activities aimed at ensuring the implementation of public policies in the fields of competence established by its Statute. Among its functions as a national reference laboratory and as an accredited SM EN ISO/IEC 17025:2018 standard laboratory is to ensure regular testing of seeds and biological materials for the following agricultural varieties to identify the presence of GMOs on > that 0.3%: soybean, maize, rape, wheat, rice, alfalfa, cotton, flaxseed, fenugreek seeds, sweet pepper, plum tree, potato, beans, tomato, sugar beet, sugar cane, papaya, apple.

Illegal or unauthorized cultivation or transboundary movement of GMOs. Even though there is yet to be developed an implementing (secondary) legislation to cover illegal or unauthorized cultivation or transboundary movement of GMOs in Moldova, a survey has revealed some GMO contamination in the country. The survey indicated that most of the samples showed very high GM content whereas there is no information on the planted soybean variety available. Of the 30 soybean samples tested for GMOs, nine samples showed GMO contents above 0.1%. Five of those show a very high content up to 100% indicating the planting of GM soy. Four of the samples showed a GM content in the range of 0.1-1%. The main trait detected was Roundup Ready soybean MON40-3-2.

Global and Regional significance

The earth?s biological resources are vital for maintaining and sustaining food security, economic development and health. The recognition of the importance of biological diversity as a global asset of tremendous importance for the present and the future is undisputable. The sustainable development goals, hold the promise of a fresh start for the planet and set out that global food production must increase by 70% by 2050. At global level, there is recognition that modern technologies can contribute to achieving this objective. Considering increased food insecurity, growing population, climate change and socio-economic stresses, products of modern biotechnology particularly LMOs in agriculture are considered an attractive source of effective innovations (Roberts, 2018)[20]20. In 2019, the 24th year of commercialization of biotech crops, over 190.4 million hectares across 29 countries, were under GM crops in 2019[21]21.

Threats, Root causes and barrier analysis -

Threats and their immediate root causes

There are several **critical threats in** Moldova **caused by IAS/LMOs** that the project will address and each of them has a number of underlying factors discussed below. Climate change is likely to exacerbate

the spread of IAS and intensify their impacts on biodiversity and the economy in Moldova. Because of its pervasiveness and potential effect on fundamental biological processes, climate change will interact with other existing stressors to affect the distribution, spread, abundance, and impact of invasive species.

Threats to biodiversity from Invasive Alien Species (IAS). Moldova?s unique biodiversity evolved in the absence of ground-dwelling mammals and other functional groups found in continents thus rendering it extremely vulnerable to IAS, which constitute the greatest threat to the country?s biodiversity. Moldova hosts one of the most endangered island floras in the world, with ninety four percent of the country?s endemic plants classified as threatened. Invasive species are a major threat to Europe's indigenous biodiversity. Invasive species of mammals have a negative impact on the aboriginal fauna, including economic (hunting) interest, substituting and completing in the trophic chains the predators with a lower ecological valence. For example, Jackal (*Canis aureus*)**,** is originally from India, it penetrated through Iran and Turkey into Europe, especially Greece, Bulgaria and Albania, then to Romania, and to Moldova. The species presents an invasive danger and has a negative impact on the aboriginal fauna, including of economic (hunting) interest, substituting and completing in the trophic chains the predators with a lower ecological valence.

Impact of IAS on ecotourism, agriculture production, land productivity, health, communities, and the economy. Agricultural production and tourism play a crucial role in economic development in Moldova. IAS, habitat destruction and land degradation reduces biodiversity, productivity of the land and provision of other ecosystem services, and are likely affect the health of the population, sugar, and tourism industries negatively. As example, Traveling or Asian grasshopper **-** *Locusta migratoria L.***,** attacking different species of spontaneous and cultivated grasses (thymophtics, pirul, corn, barley, wheat, etc.). This species is considered the most dangerous for **agriculture**, since the damage caused can go as far as the complete destruction of the crop. An outbreak of traveling grasshopper larvae can destroy, in a few hours, tens of hectares of grain. Besides cereals, the traveling grasshopper attacks the leguminous plants (alfalfa, clover, beans, etc.), in case of large invasions, the grasshopper can also attack different species of shrubs and trees. Alien species have been introduced through trade; intentionally (legally and illegally imported products) or unintentionally (e.g. as byproducts, parasites and pathogens of traded products, hitchhikers and stowaways in vessels, vehicles, or containers that deliver products or services). Ambrosia, the species *Ambrosia artemisiifolia*, has a wide distribution in European countries, including the Republic of Moldova. The pollen of this plant is considered a very aggressive allergen with a negative impact on the health of the population.

Possible adverse impact (threats) of Living Modified Organisms (LMOs) to biodiversity, natural ecosystems

The Republic of Moldova is predominantly an agricultural country. Agriculture play an important role in the Moldovan economy as it engages 36.1% of the population. Throughout its history, agriculture in the Republic of Moldova has been the main source of population subsistence. For centuries, the role of agriculture was for food supply. Its primary production role has expanded to be multifunctional and interdependent. The sector in Moldova is highly vulnerable to land degradation as well as climate change and variability, leading to serious problems of production loss and threats to food security. The agricultural sector is a national development priority, having a vital role in poverty reduction, food security and sustainable development of the country. An analysis of the distribution according to socio-

economic groups of population shows that the highest poverty rate is inherent for farmers (33%) and agricultural workers (39%), in contrast with non-agricultural workers (9%). The main cause of rural poverty is high vulnerability of the agricultural sector to land degradation and the increased frequency of extreme weather and climate events which directly affect small holder farmers and agricultural workers whose income is 40-70% weather depended on and comes from agriculture.

Modern agriculture is developing in relation to the environment, and it also has an important ecological and social role. The agricultural sector is always at the top of the agenda of the government of the Republic of Moldova which develops, creates and implements policies, programmes and strategies for the development of this strategically important sector for the sustainable development of the country. The objectives of these actions are meant to increase the competitiveness of the agro-food sector, with a focus on the following key directions: extensive restructuring and modernization; improving the quality of life and working conditions in rural areas; creating synergy between agro-food activities and the natural environment; modernizing the agri-food chain to comply with European Union (EU) food safety and quality requirements; facilitating farmers? access to capital, inputs and outputs markets; practicing animal husbandry in organic farming systems; and supporting environmentally friendly production technologies, ecological products, biodiversity, etc. In 2020, vegetable production had a 64 percent share of total agricultural production, while animal production had a 36 percent share.

As a Party to the Cartagena Protocol on Biosafety and its Supplementary Protocol on Liability and Redress, Moldova recognizes the great potential benefits that LMOs resulting from modern biotechnology could bring to the country in terms of the promotion of human well-being, particularly in meeting critical needs for food security such as enhanced food production; agriculture in terms of increased crop yields and reduction in the use of pesticide; and, health care (preventing diseases with modified vaccines); as well as promotion of technology transfer as in Art. 16 paragraph 1 of the Convention on Biological Diversity. However, given the information regarding potential risks that LMOs could pose to biodiversity or human health such as unintended harm to other organisms; unintended transfer of genes across organisms; allergens in foods and antibiotic resistance, Moldova seeks to control, minimize and prevent potential adverse effects of LMOs through risks assessment and risk management measures.

With the advancement of agricultural biotechnology, many genetically modified crops have been developed and commercialized to meet the needs of the world's population, but biosafety concerns still linger and need to be prevented or minimize in adopting the commercialization of genetically modified crops. Risk assessment identifies the potential hazards and negative effects of genetically modified crops or derived product on non-target organisms and the environment and therefore has become a major tool in the decision-making process and post permit monitoring activities. Risk management issues remain particularly important in the use of genetically modified crops to minimize the negative effect of GMOs. In order to minimize or prevent the risk of the development of resistant harmful organisms, it becomes necessary to develop and apply different techniques, which deepen the understanding of the organisms. It is intended that the project will tap the research base resource of the following institutions to optimize the application of risk assessment techniques. Institutions in the fields of education, research and innovation such as Institute of Chemistry, Institute of Ecology and Geography, Institute of Zoology, Institute of Physiology and Sanocreatology, Institute of Genetics, Physiology and Protection of Plants, the National Botanical Garden (Institute) "Alexandru Ciubotaru", the Institute of Microbiology and Biotechnology), which now are integrated with the SUM and MTU, as well as the institutes of agricultural such as the Research Institute for Field Crops

"Selec?ia", the Institute of Phytotechnics "Porumbeni", Institute of Pedology, Agrochemistry and Protection i.e. of Soil "Nicolae Dimo", the Scientific-Practical Institute of Horticulture and Food Technologies, the Institute of Biotechnologies in Animal Breeding and Veterinary Medicine.

Barriers

Moldova has identified in its Sixth National report to the CBD a number of ongoing national capacity building initiatives which need to be coordinated in a coherent manner to enhance the effective implementation of the CBD and its implementing Protocols at the national level. There is also the need to develop specific biosecurity rules and procedures specific to Moldova. Also identified as mitigating against Moldova?s fulfillment of meeting its CBD international obligations are limited resources, lack of experience, inadequate national expertise and lack of infrastructure.

In order to build a robust IAS/LMOs management system, there is need to overcome legislative and institutional barriers such as: unclear division of responsibilities, inter alia, low levels of interdepartmental cooperation; budgetary constraints; limited operational, regulatory and management skills; inadequate enforcement and compliance capability. Public awareness of the significance and value of biodiversity is limited. This lack of awareness has resulted in the low public pressure and limited political support to expand and strengthen the IAS/LMOs management system in Moldova.

The biodiversity targets and indicators of the newly adopted Global Biodiversity Framework post 2020 provides a renewed global impetus at large and in particular national actions. The biosecurity and sustainable management of biological resources represents key challenges that need to be addressed to achieve the overall goal of halting loss of biodiversity by 2030. In Moldova, a number of barriers have been identified that mitigate against a robust and cost-effective biosecurity system for the management of IAS and LMOs in line with the international requirements and approaches. It is envisaged that a harmonized and coordinated approach, anchored on the risk analysis approach, is needed to build the needed human resource, institutional and regulatory capacity for the development of the regulatory frameworks across sectors for biosafety and prevention and control of invasive alien species.

The following barriers have been identified to currently impede the development of the biosecurity system in the conservation of biodiversity:

Fragmented policy, and regulatory regimes for effective management system on LMOs and control of IAS

Moldova has ratified the major UN environmental treaties and in the process of harmonizing its legislation with the main EU Directives. Although the national legislation has been designed to meet Moldova?s international commitments, thereare key legal inadequacies with significant impact on protected areas management and permitting system over natural resource use. To build an adequate management of IAS/LMOs, there is a need to overcome some of these secondary legislation and legal constraints and institutional barriers. Furthermore, there is a need to ensure an efficient biosecurity

system in line with international requirements and standards with the necessary legal and institutional capacities for preventing adverse effects on biodiversity and human health.

In the Republic of Moldova, there is data fragmented among relevant Ministries and also very limited policy and legal provisions/instruments developed for an efficient management of Invasive Alien Species (IAS) and Living Modified Organisms (LMOs) that could minimize their adverse effects on conservation and sustainable use of biological resources, taking into consideration human health. Although some capacity was built for biosafety framework for LMOs, there are still very limited legal provisions that can ensure monitoring and management of IAS. The existent laws that provide legal approach for conservation of biodiversity, do not clearly stipulate the duties and responsibilities of the various departments/agencies, as well as no clear provisions for mechanisms for decision making, monitoring and management of IAS.

There is a need to build institutional capacities for the integration of Biosecurity in biological resource management. There is a need to update and harmonize the policy and regulatory regimes for effective management system on LMOs and control of IAS via updated political policy document and improved legal framework in line with the targets of the GBF post 2020. A National Biosecurity Framework (NBSF) would conceptualize an integrated legal and operational mechanisms based on a cross-sectorial and multi-stakeholder?s approach for both types of novel organisms as part of the new NBSAP 2030. This NBSF would advise national government to develop a common approach and joint procedures for decision-making, monitoring and management system to prevent an unintentional or illegal transboundary movement and possible invasion of IAS and LMOs to natural and agro-ecosystems. This project aims to optimize the efforts for the management of organisms including IAS/LMOs as novel organisms through building of integrated institutional capacities for a robust biosecurity framework in Moldova. The framework will ensure institutional arrangements for efficient and clear decision-making responsibilities among the governmental departments and academia. Currently the National Biosafety Commission among whose duties and responsibilities include the provision of scientific decision-making processes based on risk assessment of LMOs will integrate also decision making for IAS. The National Environment Agency, (NEA) established in 2018 is limited in capacities and competencies to ensure an efficient integrated biosecurity decision-making process for IAS and LMOs and post-decision operational mechanisms for monitoring and management of IAS and LMOs. It is envisaged that NEA will lead in the integration and cost-effective processes for managing LMOs and IAS.

The principles guiding Nagoya Kuala Lumpur Supplementary Protocol (NKSP) are yet to be developed and implemented in Moldova. Moldova is in the process of developing regulations on Invasive Alien Species in accordance with the CBD and Bern Convention provisions and the Regulation (EU) 1143/2014 in order to consolidate the enforcement capacities (guidelines and manuals) within Moldova. The project intends to operationalize the NKSP in Moldova. There is the need to develop specific guidelines and manuals to implement liability and redress procedures in line the Nagoya Kuala Lumpur Supplementary Protocol.

Insufficient capacities to prevent, control, eradicate or manage IAS/LMOs effectively

An overarching law has been enacted on the regulation and control of GMOs (2022). The law contains clauses and provisions that establish duties and responsibilities for the main governmental authorities and academia involved in biosafety of GMOs. There is a specific legal requirements for decision-making, risk assessment, identification and detection, as well as traceability and labelling, safeguarding and liability, BCH and public information/participation etc. However, the law only comes into force in 2024 when the enforcement system would have been developed and approved. In order to operationalize the law successfully, there is the need to develop implementing legislation and build the human resource in areas such as risk assessment and risk management (RA&RM), preparing of RA&RM dossiers based on available scientific publications and reports, as well as build experience of other risk evaluators/research centres. There is also the need to develop the Risk Analysis frameworks with clearly defined guidelines and manuals to support monitoring and detection of LMOs and IAS.

The identified gaps in the sixth National Report indicate the need for specialized training for scientific personnel in order to enforce the national reference laboratory for detection of LMOs. The Laboratory for monitoring of food products that developed capacities for LMOs detection has been established in 2016 within the Food Safety Agency. It was accredited to the ISO 1725. National capacities for both IAS and LMOs detection and identification for monitoring and management would be strengthened.

The establishment of the National Environmental Agency (NEA) in June 2018 presents an opportunity to coordinate measures envisaged in the project. There is limited capacities to establish a monitoring and surveillance system for IAS and LMOs under the NEA and research institutions. The successful completion and implementation of the project will bring the following positive environmental benefits: reduction/mitigation of biodiversity losses, safeguarding the potential risks of introduction and unintentional transboundary movement of LMOs and better access of local community to the ecosystem services etc. national arrangements for IAS decision-making (authorization) check points, emergency responses, guidance and manuals would be developed. A Liability and Redress frameworks would be established with clearly defined guidelines and manuals developed to support management, prevention and combat of illegal and unintentional release LMOs and IAS into environment.

Limited and insufficient Knowledge management, Public awareness, Education, Communication on IAS and LMOs

The limited level of awareness has resulted in the low public pressure and limited political support to expand and strengthen the IAS/LMOs management system in Moldova. Public awareness of the significance and value of biodiversity is very low in Moldova. In Moldova, there are several research institutions that provide valuable information and analysis on biodiversity including IAS and LMOs. For example, the Institute of Botany (Botanical Garden), Institute of Zoology, Institute of Microbiology, Institute of Genetics, Physiology and Plant protection, and the State University of Moldova produce varied reports on biodiversity but without a central repository for easy access and

sharing. There is no specific mechanism for IAS data gathering, storage and access in place for decision-making.

Among the mechanisms and specific procedures that would be critically developed to facilitate decision making are: an inventory of the IAS plant, animal species and microorganisms; a National Register for IAS, to develop specific operational guidelines and manuals for decision making, detection and identification, check points, custom control, risk assessment and risk management, liability and mitigation of their impact on environment. National database and Registers for IAS and LMOs, including GIS mapping and spatial planning resources are to be developed.

There is a curricula developed for LMOs and Biosafety for MSc degree students in the Faculty of Biology and GeoSciences of the State Moldovan University. At the same time, no special educational courses are available for university studies, no specific manuals or scientific monography published. There is no available online portal for Information Sharing in line with the CBD?s integrated approach on Clearing houses set up yet, no information available on webpages of the Environmental agency or research institutions. An integrated mechanism for knowledge management, public awareness, education and information sharing on IAS and LMOs has not been established and implemented yet. There is no awareness program set up on management of traditional knowledge and genetic resources and management of organisms. A sharpened focus and increased awareness and political backup are needed to address the introduction of IAS and LMOs that may affect deliberately or unintentionally the ecosystems services which are the basis of many political priorities under Moldova?s EU accession agenda.

An awareness strategy for biosecurity communication and participation would be developed to help the different target groups of the populations, such as vulnerable people, farmers, local communities, women and youth. Moldova is a Party to the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus convention). A respective relevant legal framework has been adopted and in place to ensure public information and access to decision making in the field of environmental protection and health care. Local communities are important groups of population in Moldova that would be involved in the project activities on public awareness, biosecurity communication and participation and potential material/technology transfer and product development activities. Farmers and local communities will be involved in demonstration activities on good farming practices, as base for biosecurity measures. Women and youth will be proactively engaged in the decision-making processes, monitoring and control activities, as well as in information and communication networking. NGOs and local communities will play a partnership/collaborative role in sensitization, education and will be associated with most activities especially the development and dissemination of communication tools.

The background information to the barriers in the above paragraphs makes it imperative for Moldova to formulate a project that has a goal of adequately managing, conserving and protecting its biodiversity in a cost-effective manner. In achieving this goal, a project has been formulated with a comprehensive theory of

change that covers pathways that transition Moldova into managing IAS and LMOs in a sustainable sound manner within the post- 2020 Global Biodiversity Framework.

Having analysed the barriers critically and their specific gaps, the theory of change was developed to strengthen institutional biosecurity frameworks in the management of invasive alien species and living modified organisms anchored in a coordinated risk analysis measure in line with Cartagena Protocol, its Supplementary Protocol and relevant Invasive Alien Species regulations in Moldova.

Component 1. Effective Biosecurity Legislative, Policy, Regulatory and Institutional Frameworks

Component 2. Integration of biosecurity into Biological resource management

Component 3. A unified system for Knowledge management, Public awareness, Education and Communication on biosecurity

The baseline scenario and associated baseline projects

The Government of Moldova has in the past taken some concrete steps and has some ongoing interventions, which shows firm acknowledgement of the importance of biosecurity framework for the adequate management, conservation and protection of its biodiversity. Moldova?s commitment to safeguard its biodiversity and sustainable use of its biodiversity led to its ratification of the Convention on Biodiversity (CBD) in October 1995, Cartagena Protocol on Biosafety (CPB), September 2003, Nagoya Protocol on Access to Genetic Resources and Benefit Sharing, November 2016 and the Kuala Lumpur Supplementary Protocol on Liability and Redress, October 2018, Bern Convention on the Conservation of European Wildlife and Natural Habitats (1997) among others.

Moldova has to a limited extent developed its national capacities for biodiversity conservation, biosafety and control of Invasive Alien Species (IAS) and Living Modified Organisms (LMOs) to support the implementation of three objectives of the Convention on Biological Diversity. These measures include the development of its National Environmental Protection Strategy 2014-2023 (NEPS), (2014), The Republic of Moldova?s Biodiversity Strategy and Action Plan for 2015-2020 (NBSAP) (2015), National Action Plan for the Implementation of UNCCD (2015), National Program on establishment of Ecological Network for 2011-2018 (2011), as well as the National Strategy for Sustainable Development of Forestry Fund (2011), The Republic of Moldova?s Climate Change Adaptation Strategy by 2020 and the Action Plan for its implementation (2014), and the State Program on Forest Fund Areas Regeneration and Afforestation for 2003-2020 (2003).

The National Environmental Strategy for 2014-2023 aims at establishing basic principles and priorities of the environmental governance, ground the necessary reform in the field of environment and further

align the national legislation with the EU Directives. The Strategy has eight specific objectives and it is covered by several budgetary sub-programmes e.g. (i) Policies and Environmental management; (ii) Ecological security etc. In its latest National Biodiversity Strategy and Action Plan for 2015-2020 (NBSAP), Moldova aligned its national strategy and actions to the CBD Strategic Plan for Biological Diversity 2011-2020, the Strategic Plan for the Implementation of the Cartagena Protocol on Biosafety for 2011-2020, the Strategic Plan of the European Union for CBD until 2020 as well as the global Aichi Biodiversity Targets. With the support of the GEF/UNEP Enabling activity project ?Global Biodiversity Framework-Early Action Support Project-Moldova? (2023), Moldova plans to update the national NBSAP in line with the Post-2020 Global Biodiversity Framework targets.

The Sixth National Report of the Republic of Moldova to the Convention on Biological Diversity (2019), supported by the Global VI NR project managed by the UNEP/GEF project (2018-2019), has provided an assessment of efficiency of national policy and administrative measures, good practices in order to meeting the Aichi Biodiversity Targets and the Sustainable Development Goals (SDG). The Fourth National Report to the CPB, supported by the UNEP/GEF project (2019), provided with the assessment of national initiatives in line with the biosafety priorities. A Thematic Report on Alien and Invasive Species to the CBD (2002) reviewed the status of IAS in Moldova.

A number of legislative initiatives has been undertaken to ensure national biosafety framework for LMOs and IAS (ref. the chapter IAS/LMOs regulation and institutional settings up)

The current project builds on earlier initiatives in the field of biosafety, e.g. the UNEP-GEF Project ?Development of the National Biosafety Framework (NBF) for the Republic of Moldova? (2002-2004). The follow up UNEP-GEF project ?Support for the Implementation of the draft National Biosafety Framework for the Republic of Moldova? (2006-2009) that assisted Moldova to strengthen the existing institutional and technical structures and infrastructure in accordance with the Cartagena Protocol which resulted in the establishment of general framework for biosafety in the country. In addition, Moldova has also implemented the UNEP-GEF project ?Capacity Building for Effective Participation in the BCH? (BCHI and II) (2004, 2006) by establishing the national node for the BCH system. The baseline information and key lessons from this project is useful to guide the design of this project. The proposed project is in line with decision BS VII/5 para 5 ?Encourages Parties to explore the possibility of incorporating biosafety activities into multi-focal-area projects, including the proposed "integrated approach pilots", as well as projects to be developed under the other biodiversity focal area programs? and supports mainstreaming into related ecosystem management practices and ecological farming. The NORAD Norway project: "CEE Regional Biosafety Course on Integrated risk assessment of LMOs under the Cartagena Protocol on Biosafety" (2015) supported to strengthen the capacity for decision makers and risk evaluators in the region. The CBD project "Capacity-building to promote integrated implementation of the Cartagena Protocol on Biosafety and the Convention on Biological Diversity at the national level" (2016) was undertaken to study and revise national (NBSAP and sectorial) policy related to Biodiversity and Biosafety to mainstreaming biosafety at national level. A National Forest Extension and Rehabilitation Program 2023-2032 with a total budget of 739, 2 million EUR has been developed and approved in 2023. It aims to reforest about 145,000 ha, mostly of degraded lands, and increase the territory covered with forest vegetation up to 15% of the country territory. Environmental

Impact Assessment procedures, including Biosecurity assessment will be applied and developed with the support of the project.

A number of successful previous and on-going interventions in the field of relevance are listed below:

? The GEF/UNDP project ?Conservation and sustainable management of wetlands with focus on high-nature value areas in the Prut River basin? (2023-2026). In a synergistic manner, the project will benefit from the tools and processes in risk assessment and management of the proposed project. This project is based on an integrated river basin management approach that ensures the continuity of wetland ecosystem services sustaining livelihoods in the Prut river basin at approximately 20,803 ha of high value wetlands in the Lower Prut Biosphere Reserve, the Royal Forest Nature Reserve and surrounding floodplain.

? ADA/DanubeSoja project ?Developing Sustainable and Inclusive Value Chains for Non-GMO Soya from Moldova, Serbia, Bosnia-Herzegovina and Ukraine?, 2017-2024. (? 4.499.150). The aim of the strategic partnership is to build sustainable and inclusive value chains (local, regional and international) for non-GMO soy and organic soy in Bosnia and Herzegovina, Serbia, Moldova and Ukraine by 2021. The following activities are planned for the systematic development of the soybean markets in the 4 countries: Consulting services and training offers for actors along the value chain for improved soybean cultivation and processing, establishment of the Danube Soya Standard, promotion of organic soybean cultivation, market development, Trade facilitation and improvement of the legal framework and quality systems as well as promoting the introduction of EU standards for agriculture. The first on-site structures of Donau Soja were set up as part of the inception phase.

? Austrian Development Agency ADA/GCF project ?Climate Change Adaptation Nature-Based solutions in semi-arid ecosystems to increase rural resilience in Moldova (2023-2027) The project aims at enhancing CC resilience through EbA solutions such as afforestation of forests, shelterbelts and riparian buffer strips and restoration of steppe, wetland and forest ecosystems. Key elements are institutional and technical capacity building of governmental agencies and knowledge transfer on climate resilient management within the public and private sector.

? ADA project ?Enhancing Climate Resilience in Lower Prut Biosphere Reserve? (2020-2023) with a total budget of 1 million EUR from the Austrian Development Agency (ADA), the project is implemented by EcoContact (NGO), aiming at supporting sustainable management and resilience of the wetland ecosystems in the Lower Prut Biosphere Reserve considering climate change impacts and increasing local livelihoods and their adaptation capacities. Furthermore, the GEF project will build on the results of Climate Change Vulnerability Assessment developed by EcoContact/ADA project in designing its strategy. Given the fact that both projects are targeting Lower Prut Biosphere Reserve communities, both projects will capitalize on the opportunities for synergic such as: joint capacity

building and awareness activities on the importance of the wetland ecosystems services for adaptation to climate change.

? WB project ?Competitive Agriculture in Moldova (MC-P)?, Phase II (2021-2023), with a total budget of 1.5 million USD, it is implemented by the Ministry of Environment (including its agencies: Moldsilva and ICAS) and the World Bank, aiming at the rehabilitation of 2200 ha of forest belts for the protection of agricultural fields in the center and the north regions and generation of GHG emission reductions estimated at kt 43 CO2eq.

? UNDP/GCF project ?NAP2 Advancing Moldova?s National Climate Change Adaptation Planning? (2020-2024), GCF grant of 2.1 million USD implemented by UNDP and FAO is aiming at reducing climate change related risks by strengthening institutional and technical capacities that support integrated climate change adaptation planning and programming, expands and deepens the national approach in climate change adaptation planning at different levels, strengthening synergies both vertically, at different levels of governance, and horizontally between the sectors affected by climate change (UNDP), with particular focus on agriculture sector (FAO) to improve integration of agriculture development and responsiveness to a changing climate while improving food security. The GEF project will coordinate its work with the FAO activities, in view of sharing knowledge and experience.

? WB/UNDP/EC ?EU4Environment? 2019-2023 is a regional project funded by the European Union (EU contribution 19.5 million EUR) aiming at supporting environmental governance in the targeted countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine). It supports environment-related activities, unlocking green growth potential and setting better mechanisms to manage environmental risks and impacts. The GEF project will work with the EU 4 Environment project in Moldova on the necessary amendments to the National Environmental Fund Regulation. The Eu4Environment is currently working on enhancing national system of ecosystem services and facilitation the Establishment of the Emerald Network.

? ADA/UNDP project ?Promotion of climate change and disaster risk reduction in the water and civil protection sectors for enhanced rural resilience? Project 2018-2021, with a total budget of 1 million EUR, is aiming at supporting the implementation of climate smart water management solutions for agriculture, flood management and fire prevention and expansion of community based rescue/firefighting teams in rural communities in Moldova with the purpose of reducing exposure and vulnerability of the rural communities to climate change and disasters. The GEF project will build on the knowledge generated by the technical manuals developed and training seminars and drills implemented under this project, the knowledge generated in preventing and fighting fire and flood hazards.

? Austrian Development Agency (ADA) project ?Support the creation of the Lower Dniester National Park? is aimed to improve the biodiversity conservation measures and to increase the local population's interest in specific development opportunities in the area. (2018-2021).

? UNDP/GEF project "Improving Coverage and Management Effectiveness of the Protected Area System ? an Action plan for rationalization, consolidation and expansion of the Protected Area system in Moldova? have been developed.

? EU/UNDP project "Clima-East Moldova: Climate change mitigation and ecosystem-based adaptation in Orhei National Park" - a natural resource management model in the pastures and forests areas in order to help increase ecosystems? capacity to seize carbon under pending climate risks, while at the same time retaining biodiversity and economic values was developed.

? Joint Operational Programme Romania-Ukraine-Republic of Moldova project "Consolidation of the nature protected areas? network for biodiversity protection and sustainable development in the Danube Delta and Lower Prut River region? PAN Nature". Tangible outputs were prepared on the ?biosphere reserve? status for the protected natural area selected in the Lower Prut area and to develop an updated Management Objectives for biodiversity conservation.

? UNDP/GEF project "Mainstreaming biodiversity conservation into Moldova?s territorial planning policies and land use practices" - modifications to land and forest legislation and related regulations and standards for mainstreaming biodiversity at national and local levels were developed. A monitoring system to track change in biodiversity-important areas was established to take adaptive measures to reduce impacts.

? EC/CoE "Joint Programme on the Emerald Network?, (2009-2011, 2013-2015) has contributed to the identification of vulnerable species and habitats in accordance with the Bern Convention/CBD, and designation of Emerald sites of natural protected areas to be included in the Emerald Network and part of Pan-European Ecological Network and Natura-2000.

? NORAD project "Development of the National Ecological Network of Moldova as part of the Pan-European Ecological Network, with emphasis on transboundary cooperation? - the National Ecological Network has been established by special law to contribute for biodiversity restoration in Moldova.

? EU/TACIS project ?Sustainable Integrated Land Use of the Eurasian Steppes? has contributed to increasing of sustainable land use in steppe and forest steppe ecosystems and mainstreamed the biodiversity concerns into rural land use policy and practice at local level.

Moldova in recent years has implemented activities to improve the **gender equality** and empowerment. The accession Moldova to the Agenda 2030 and the adoption of SDG goals, including SDG 5 Gender equality, 2015. Law No. 121/2012 on Ensuring Equality. The existent policy framework in the field of gender covered through the Law No. 5/2006 on Equality of Opportunities for Men and Women. The Strategy for ensuring equality between women and men in the Republic of Moldova for the years 2017-

2021 and of the Action Plan (GD Nr 259/2017). In this regard, a number of programmes/projects has been implemented in Moldova during the last period that contributed to increasing role of women and ensuring their equality in society. Among them:

? Sweden Development Agency/UNDP project ?Sustainable and resilient communities through women empowerment? project (2020-2023), funded by the, with a total budget: 2.28 million USD, aims at building inclusive and resilient communities and create an enabling environment for women?s economic and social empowerment through (i) sustainable climate resilient and environmentally sound livelihoods, local capacities and knowledge on environment, climate change and gender (ii) capacitated NGOs to support local authorities and women associations and local women in the field of resilience to climate change (iii) supporting women and women headed households to implement climate resilience projects and practices (iv) supporting climate resilience local business models. The GEF project will build on gender sensitive assessments, and will use the training manuals developed and knowledge and experience generated by this project in promoting women empowerment measures at local level.

? WAGE program on Reducing Barriers to Women?s Economic Empowerment in Moldova, 2021;

? UNICEF-EVA project ?Strengthened gender action in Cahul and Ungheni districts?, 2020;

? Council of Europe project ?Awareness-raising activities on the Istanbul Convention in the Republic of Moldova?, 2020-2021;

? European Union/Council of Europe joint programme Partnership for Good Governance, and its regional project ?Strengthening access to justice for victims of discrimination, hate speech and hate crimes in the Eastern Partnership, 2021 contributed to develop a CoE Action Plan for the Republic of Moldova for 2021-2024, approved by the Council of Ministers;

? UNDP project ?Sustainable and resilient development through women empowerment?, 2021-2023.

Moldova also experiences continued loss of biological resources as a result of **unsustainable exploitation of natural resources and inefficient agriculture** due to the possible adverse effects caused by IAS and LMOs to the natural ecosystems and agricultural production. A contributory factor to the loss of biological resources is the non-existence or incoherent legislation that prioritizes conservation and sustainable management. Further to the existence of inadequate regulatory framework is also the existence of weak public authorities to adequately management LMOs/IAS. Among the weaknesses of these institutions are unclear division of responsibilities; low levels of cooperation; inadequate staffing; budgetary constraints; limited operational and management skills; inadequate enforcement and compliance capability. The capacity to develop detailed strategic and operational plans to ensure the cost-effective deployment of institutional and human resources is particularly weak in the local authorities.

Capacity will need to be strengthened within all responsible bodies for LMOs/IAS management at the level of the Central Public Authorities (CPA), Environmental Agency (EA) and Local Public Authorities (LPA) management institutions and their subordinated bodies, farmers and environmental specialists as well as general public. Public awareness of the significance and value of biodiversity is very low. This lack of awareness means that there is little public pressure and limited political support to expand and strengthen the LMOs/IAS management system in Moldova.

PROPOSED ALTERNATIVE SCENARIO

The alternative scenario provided by this GEF project will enhance global biodiversity benefits, as well as multiple national and local co-benefits, arising from the sustainable, accessible, and innovative use of biodiversity in Moldovan ecosystems. The difference between the baseline and the project scenarios lies in the quality and speed of proliferation of advanced conservation approaches into biodiversity management system in Moldova. Currently specific policies and instruments for integrative management of LMOs/IAS are missing, thus the baseline course of action will see most of the country in 2020 with outdated evidence, monitoring and decision-making system, without any account of biodiversity degradation.

In a sustainable perspective it will not be possible to establish an integrated management system for IAS and LMOs in the country, without the project support. The baseline scenario, therefore, will see the continuation of biodiversity and ecosystem degradation in the country. With a US$ 1 million investment, the GEF project brings policies, and the biodiversity innovative integrated technologies, approaches and instruments to develop an efficient management system reach the conservation goals.

The project will support introduction and implementation of national measures to minimize introduction of undesirable organisms - quarantine and border controls on invasive live species, commodities, packaging and other vectors, which have a direct interface with the multilateral trading system and the need to be consistent with applicable rules and disciplines adopted within the WTO framework. At the same time, the existent national policy framework and policy instruments are not well developed. The European Strategy on invasive alien species could serve as guidance for developing the national policy in this field. One of the first steps would be designation of the national authority, to coordinate the activity of different agencies, to prepare a national strategy and to develop efficient financial mechanisms in this field. Further, action has to be taken to inventory and monitor the alien species and to prepare an information system and specialists in this domain. Strengthening of the quarantine authorities, empowered to take real measures against the dispersion of invasive species, would be considered. In order to implement efficient management measures, it is necessary to initiate interventions to support updating and re-actualizing the inventory of invasive species in conformity with the IUCN requirements for creating prerequisites to reduce the impact of invasive species on the biological diversity, as well as ensure food security. It is also important to develop infrastructure capacity for monitoring of invasive species, to improve coordination and concerted actions between governmental agencies and other stakeholders for efficient prevention of their penetration to the natural ecosystems and mitigating possible impact to biodiversity.

There is a discussion among farmers whether economic benefits should play a role to increase compliance and whether a cost-benefit analysis would be helpful. Economic benefits for those producing non-GM soy would need to be increased, e.g. with a subsidy system and certification. On the other hand, it was noted, that compliance with existing legislation is not to be ensured via subsidies. Also a cost-benefit analysis is not about analyzing the costs of compliance vs. the costs of non-compliance. In the future GM-soy might be authorized for cultivation in Moldova. This would mean, that separate production chains for GMO and non-GM products are needed, respective regulations and recommendations e.g. for coexistence measures are in place and control measures are fully implemented. At the moment there are no plans to authorize GMOs for cultivation. In that case amongst others coexistence measures would need to be in place. However, for the development of such measures adequate information and understanding is needed, e.g. on the GMOs, agricultural management, or contamination sources.

It was highlighted that a clear legislative and control system is a prerequisite for the development of biosecurity and rules to control GMOs. It would also need intense collaboration among stakeholders. It was noted, that due to the fact that GMOs are currently cultivated illegally in Moldova much work is needed to create awareness in the society and on enforcement of current legislation. Government, parliament and civil society are mostly in favor of a non-GM policy. Although consumer surveys have their limitations, information regarding food products and the use of GMOs is a very important topic. Labelling needs to be based on clear, rules and transparent standards. The increased demand for local and/or organic products was highlighted. In order to improve implementation of the regulatory framework effective monitoring, testing and control of seed, soybean and soy products is of utmost importance, including border control, implementation and effective enforcement of existing legislation (as well as the new law on GMOs after entering into force) is seen as crucial. Illegal cultivation, import of GM seed as well as seed contamination need to be tackled. If capacity development for the implementation of a clear and effective control system is necessary e.g. regarding laboratory detection, it is advisable to start respective activities soon. Some rules, procedures or guidelines that would need to be adjusted or developed with the support of the project. In addition, improved cooperation and co-ordination among competent authorities and involved government bodies is seen as crucial. Strengthening of laboratory capacities to detect GMOs is also of outmost importance.

To **address these barriers**, the project has two interlinked objectives of developing an efficient framework for integrated management of biological resources to ensure an enabling framework for detection and efficient management of LMOs/IAS based on scientific risk assessment and mechanisms for liability and redress for LMOs to biodiversity and natural ecosystems. This will be done through support in the development of national clear and transparent legally binding framework, as well as institutional framework for implementation of international agreements and support strengthening of the relevant capacities. The project will seek to increase public awareness and enhance understanding of integrated management system for biological resources, to be widely and easily perceived by a range of stakeholders and efficiently applied in practice.

Figure 3 (below) depicts the formulated Theory of Change, followed by a basic narrative in both text/listing and tabulated forms which offers the proposed alternative scenario with pathways leading to the three components that can result in the strengthening institutional biosecurity frameworks in the management of invasive alien species and living modified organisms through a coordinated risk analysis measure in line

with Cartagena Protocol, its Supplementary Protocol and relevant Invasive Alien Species regulations in Moldova.

It is also envisaged that a harmonized and coordinated approach to building human, institutional and regulatory capacity would be the cost-effective approach for developing regulatory frameworks across sectors for biosecurity, prevention and control of IAS and LMOs, and systems for value added biodiversity management anchored on the risk analysis approach.

Project Objective

The **goal of the project** is to ensure that Moldova transitions into a sustainable sound management of IAS and LMO The overarching focus is to integrate IAS/LMOs management into the policies, programmes and day-to-day management practices of the relevant institutions in a coordinated manner. Taking on board a wide range of stakeholders (including men, women and youth), who fully understand the costs and benefits of minimizing the impact of IAS/LMOs on the biodiversity, and, are willing to collectively shoulder the shared responsibilities for its implementation. This will provide a comprehensive system of managing risks, controlling IAS/LMOs, and restoring ecosystems degraded by IAS/LMOs.

National inter-sectoral, multi-stakeholder institutional framework for biosecurity will have appropriate staff and funding from the Government to ensure its effective functioning.

Alien species are introduced through trade; intentionally (legally and illegally imported products) or unintentionally (e.g. as by-products, parasites and pathogens of traded products, hitchhikers and stowaways in vessels, vehicles, or containers that deliver products or services). The project will support introduction and implementation of national measures to minimize unwanted introductions - quarantine and border controls on live species, commodities, packaging and other vectors.

The training provided to stakeholders, risk management measures and the ecosystem restoration measures introduced are robust enough to cater for the fact that the invasiveness of many species is simply unknown, such that if new IAS emerge, the measures are adequate to mitigate its spread.

Theory of Change

The **Theory of Change (TOC)** *(Fig.3)* identifies three impact pathways: the first creates the policy and institutional frameworks needed for effective prevention, control, and management of IAS/LMOs to secure ecosystem goods and services currently under pressure from IAS/LMOs. It builds the right enabling environments (policies, institutional coordination) for prevention, control, and management IAS/LMOs. The project interventions are to reduce threats, barriers and negative effects of IAS and

LMOs on biodiversity and to facilitate an enabling environment that provides for effective biodiversity resources protection and management that ensures the continuity of ecosystem services sustaining livelihoods.

The proposed interventions are sequenced in an order to include adaptive management strategies encompassing integrated and participatory approaches to wetland management, financing and restoration, included in specific impact pathways, reinforced consistently through learning and awareness raising, considered necessary for removing existing barriers. Assumptions and drivers of change have been identified and contextualized.

The alternative interventions proposed **under Component 1** of the project will include strengthening/enhancing policy and regulation regime for IAS and LMOs, including enforcement regulation on risk assessment, detection and identification, control and liability and redress, aligned to the post-2020 Global Biodiversity Framework and with the new EU Biodiversity Strategy 2030.

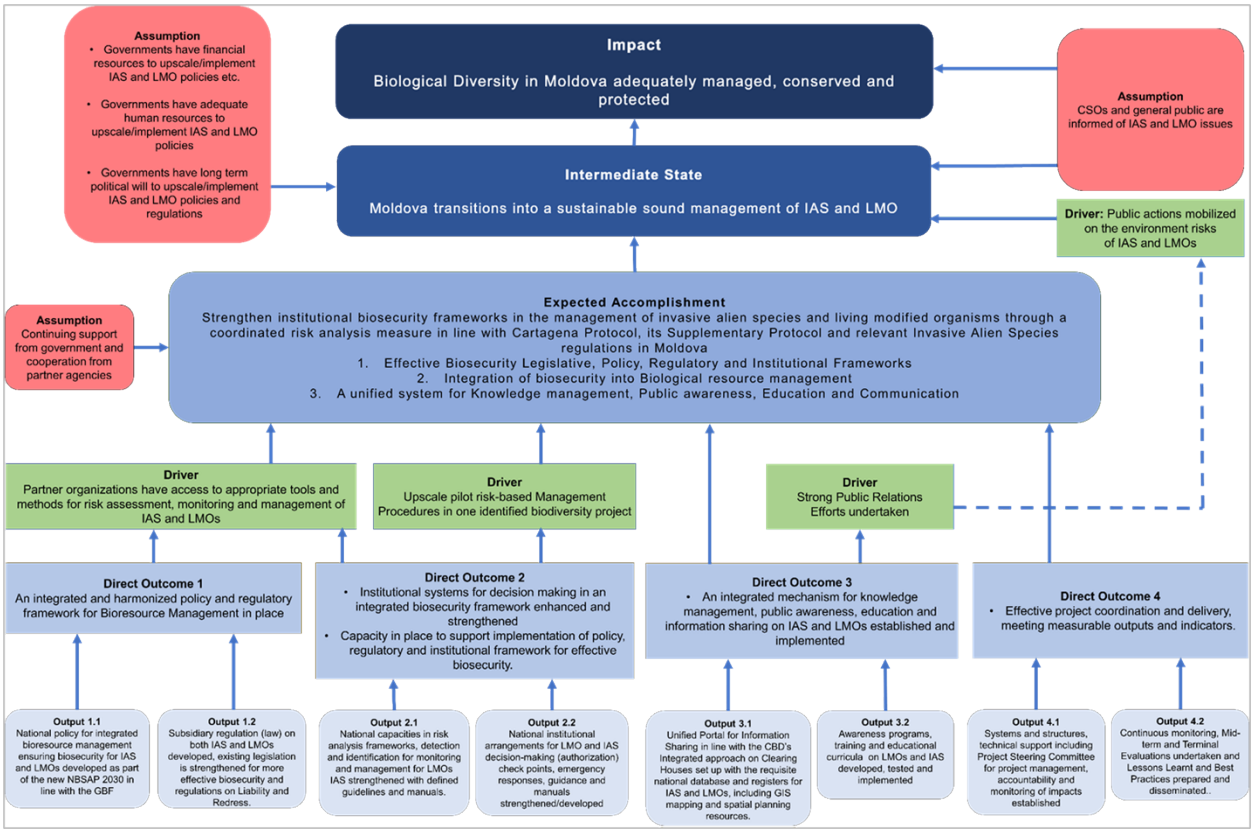
Under Component 2, Integration of biosecurity into biological resource management, institutional systems for decision making in an integrated biosecurity framework will be enhanced and strengthened. Capacity will be developed to drive the integrated process to support implementation of policy, regulatory and institutional framework for effective biosecurity of LMOs and IAS. Laboratory and inspection capacities for detection and identification of IAS and LMOs will be improved with specific equipment and materials, relevant trainings, development of manuals and protocols. The system for risk assessment and risk management established and in place, risk assessors skilled and trained. Biosecurity risk assessment is component part of the Environmental Impact assessment procedures. Check-points for IAS established and tested. Measures for emergency measures, liability and redress developed, manuals developed and published.

Tools and procedures in risk assessment and risk management will be applied under projects such as National Forest Extension and Rehabilitation Program 2023-2032 and its Action Plan 2030 (February, 2023) (NFERP) in a collaborative and cooperative manner.

Under Component 3, a unified system for Knowledge management, Public awareness, Education and Communication on biosecurity will be developed to provide for the adequate level of technical knowledge deemed critical to achieving the outcomes as follows: (i) decision makers are to acknowledge the need to prioritize sustainable bioresource management based on biosecurity principles and mechanisms; (ii) local communities, farmers, private business will increase their awareness on biosecurity for IAS and LMOs, including monitoring and control, risk assessment procedures, information sharing, use of the Biosafety clearing house portal, (iii) local businesses are responsible and knowledgeable on authorization of IAS and LMOs in accordance with the laws and regulations; (iv) academia will revise and investigate the list of IAS and the MoE will approve it in line with the international requirements; (v) educational curricula for IAS and LMOs will be developed and implemented in the educational process. In addition, there would be adequate monitoring and evaluation and gender sensitive results and knowledge products to support project implementation. wetland

protected areas. There would be a conscious drive to ensure gender equality in all the actions and activities as determined by the gender action plan of the project and national gender policy obligations.

Figure 3: Theory of Change



Project Components and Expected Outcomes

The **Theory of Change** includes several key assumptions that will be monitored throughout the project. It is expected that political will exists to approve and implement the legal and regulatory amendments produced by the project, expected to lead to adequate IAS and LMOs? management. It is assumed that there is government interest to actively promote biodiversity conservation and protection. Overall, it is expected that the project partners stay committed and provide the necessary declared co-financing.

Risks that may hamper the project development are mostly associated with: the unavailability of the expected co-financing for biosecurity measures and potential limitations of the Implementing Partner?s capacity to adhere to UNEP/GEF standards. In addition, the project may be affected by the government?s volatility and frequent changes of cabinet that may trigger a change of government priorities. Conflicting sectoral interests (e.g., environment vs oil industry), limited capacity to effectively enforce environmental regulations at local level, a perceived lowered importance of the environment field within the mandate of the Ministry of Environment can significantly affect the project outcomes.

Project Development Objective: To strengthen institutional biosecurity frameworks in the management of invasive alien species and living modified organisms through a coordinated risk analysis

measure in line with Cartagena Protocol, its Supplementary Protocol and relevant Invasive Alien Species regulations in Moldova

Expected Outcomes:

1. An integrated and harmonized policy and regulatory framework for Bioresource Management in place
2. a. Institutional systems for decision making in an integrated biosecurity framework enhanced and strengthened
   b. Capacity in place to support implementation of policy, regulatory and institutional framework for effective biosecurity
3. An integrated mechanism for knowledge management, public awareness, education and information sharing on IAS and LMOs established and implemented
4. Effective project coordination and delivery, meeting measurable outputs and indicators.

Project Components and Expected Outcomes:

Component 1. **Effective Biosecurity Legislative, Policy, Regulatory and Institutional Frameworks**

Outcome 1: An integrated and harmonized policy and regulatory framework for Bioresource Management in place

Output 1.1

National policy for integrated bioresource management ensuring biosecurity for IAS and LMOs developed as part of the new NBSAP 2030 in line with the GBF

Planned Activities

All fragmented policies regarding IAS and LMOs will be review for the development of an encompassing national policy and strategy through a multi-sectoral approach and consultative process with key stakeholders that will allow Moldova to advance sustainable management of its biological resources. The biosecurity cross-sectoral policy will be included in the updated NBSAP 2030, with a collaborative approach to enable the surveillance of IAS and control of LMOs, involving all relevant actors and the necessary operations established. The development of the national policy and strategy is aimed at ensuring that biosecurity implementation in Moldova takes into account the current national policy and institutional framework, regional initiatives and global biosecurity practices. The action plans will take into consideration national budget arrangements and set up timelines; stakeholder roles and responsibilities in order to support the implementation of the action plans.

At this strategic level, the project will ensure that biosecurity considerations are mainstreamed into the national development strategy and relevant legislations, including those applying to: plant health, animal health; the protection of wildlife; food safety; environmental protection and integrate the biosecurity issues in the national gender policy of Moldova.

In achieving the above output, the following specific activities will be undertaken:

1.1.1 One-day workshop to develop National policy for integrated bioresource management ensuring biosecurity for IAS and LMOs developed as part of the new NBSAP 2030 in line with the GBF through a consultative process with key stakeholders with key stakeholders, reinforce lobbying mechanisms via meetings targeting key decision makers (government officials and parliamentarians)

1.1.2 Undertake review of biosafety framework with a focus on best practices in key areas related to risk assessment, risk management, detection, liability and redress etc.

1.1.3 Undertake stocktaking assessment and prepare a baseline report on status of implementation of key provisions of CPB taking into account the GBF targets

1.1.4 Prepare biosecurity policy provisions in line with the GBF to be included in the updated NBSAP 2030

1.1.5 One day Training workshop on Integration of Gender as per the Gender Action Plan/biosecurity policy

Output 1.2:

Subsidiary regulation (law) on both IAS and LMOs developed, existing legislation is strengthened for more effective biosecurity and regulations on Liability and Redress.

Planned Activities

The activities under this output will include a review and update of the existing and fragmented legislation to reflect current global evolutions, innovations and developments in the implementation of the Cartagena Protocol on Biosafety, COP-MOP decisions; and, the Supplementary Protocol on Liability and Redress (SPLR) with a special subsidiary legislation to provide legal certainty in the management of IAS and LMOs guided by risk analysis approach in the sustainable use of biological resources.

A special subsidiary legislation will be developed to the existing Biosafety law to provide rules and procedures in the field of Liability and Redress relating to LMOs. A subsidiary legislation *on LMOs microorganisms will be developed to provide for the specific rules of LMOs handling in contained use conditions, according to the Cartagena Protocol on Biosafety. Specific guidelines and manuals on risk assessment and risk management for IAS and LMOs, detection and identification of IAS and LMOs, Liability and Redress will be developed in line with the new Law on regulation and control of LMOs and to ensure an effective decision-making process. All the laws and regulations will be formulated to be in harmony with existing laws and regulations.*

A new law on Invasive Alien Species will be developed in line with the international rules and good practices.

In achieving the above output, the following specific activities will be undertaken:

1.2.1 Develop a draft new law on IAS as part of the overall biosecurity regulation, in line with the GBF, that would include clear roles and responsibilities of main actors, risk assessment based decision making, check-points, National register of IAS, monitoring and control, early detection and risk management and emergency measures for eradication and liability and redress.

1.2.2. Develop a draft new law on GM microorganisms and contained use in line with the CPB, based on risk assessment procedures and precautionary principle.

1.2.3 Develop a draft new law on Liability and redress in line with the Law on GMOs and the Nagoya-Kuala Lumpur Supplementary Protocol

1.2.4 One day Meeting to develop Subsidiary regulations (laws) on both IAS and LMOs, to strengthen existing legislation for more effective biosecurity and regulations on Liability and Redress to reflect current global evolutions and developments in the implementation of the CBD, Cartagena Protocol on Biosafety, COP and COP-MOP Decisions

1.2.5 One day Training on Integration of Gender as per the Gender Action Plan/biosecurity regulation

Component 2. Integration of biosecurity into Biological resource management

Outcome 2: a) Institutional systems for decision making in an integrated biosecurity framework enhanced and strengthened.
b) Capacity in place to support implementation of policy, regulatory and institutional framework for effective biosecurity.

Output 2.1

National capacities in risk analysis frameworks, detection and identification for monitoring and management for LMOs IAS strengthened with defined guidelines and manuals.

Planned Activities

Government agencies with operational scientific capability to manage major pathways (including monitoring, risk analysis, laboratory detection, emergency response) of IAS and LMO introduction would be identified and strengthened. National capacities for DNA Bar-Coding detection of genetic resources and IAS, bank of genetic resources and scientific collections would be enhanced to develop in-country research capability on IAS and LMOs. This activity is intended to strengthen the institutional capacity of national laboratories in LMO detection, diagnostics and monitoring. The target participants to benefit from this training will be laboratory technicians in the stakeholder institutions. The equipment to procured for designated national institutions are summarized in Table 3:

Table 3. Laboratory equipment for detection and identification of LMOs&IAS to be procured

Equipment	Cost	Designated Institution (Responsible Entity)	Envisaged Roles
Fluorescent Quantitative PCR Machine MSLPCR04 + kit	USD 34,000	Molecular Biology laboratory, National Safe Food Agency (ANSA), Ministry of Agriculture and Food Industry	Detection and identification of LMOs used in agriculture and food/feed Development of testing Protocols
Fluorescent Quantitative PCR Machine MSLPCR04 + kit	USD 33,000	National Authority for Meteorology and Environmental Monitoring, Ministry of Environment	Detection and identification of LMOs/IAS in the Environment Monitoring of LMOs and Invasive Alien Species using Real Time PCR Testing Methodologies
Fluorescent Quantitative PCR Machine MSLPCR04 + kit	USD 33,000	State University of Moldova with the affiliated research institutes - Institute of Botany, Institute of Zoology	Detection and identification of IAS plants and animals Development of Real Time PCR based Protocols and Testing Methodologies
Total	**USD 100,000**		

There is a need for capacity development in areas such as traditional and molecular diagnostics/identification, risk analysis, inspection methods and integrated approaches to the management of biological invasions in Moldova for the implementation of an integrated cross-sectoral risk-based approach to biosecurity.

The project will identify, coordinate and strengthen (i) capacities and skills for risk assessment and risk management, including socio-economic assessment of LMOs in line with the Cartagena Protocol and the Convention on Biological Diversity. This would be achieved through regulatory and procedural reforms, improved infrastructure and training; (ii) inventory, surveillance and monitoring system would be improved for efficiency to prevent possible environmental impact derived from novel organisms, including gene flow assessment to prevent loss of biodiversity, including traditional crops diversity; (iii) capacities of designated reference laboratory for detection and identification of IAS and modified organisms to ensure monitoring and decision making.

Researchers and laboratory personnel will be trained to improve their skills to measure potential adverse risks on biological diversity and human health, based on risk assessment of IAS species of animals (wild and domestic). Detection laboratory will be enhanced with relevant Real Time-Polymerase Chain Reaction (RT-PCR) equipment to provide detection and identification of species to ensure monitoring and surveillance system, registering of potential invasion of IAS and LMOs, research investigation. Border personnel would be trained as part of the surveillance system and laboratory personnel will be

trained in the application of risk assessment tools, detection, and identification of all new biological introductions as part of monitoring and safeguarding biodiversity.

Additionally, formal or informal partnerships will be facilitated to assist in risk-based management of LMOs and IAS across all landscapes. Collaboration and partnerships will be established with on-going national activities such as the National Forest Extension and Rehabilitation Program 2023-2032 and its Action Plan 2030 to use project tools such as Risk assessment and management, knowledge management, public participation etc.

In achieving the above output, the following specific activities will be undertaken:

2.1.1 Development of technical tools (guidelines/manuals) for strengthening risk assessment and risk management (RARM) and decision making particularly conduct of confined field trials, environmental risk assessment, monitoring etc.

2.1.2 Five-day National training workshop on risk assessment and risk management, emergency measures including practical RA & RM real cases where available inviting external experts) to train target groups of research people, team of authorized national RARM experts, decision makers etc.

2.1.3 Five-day National training on LMO&IAS detection, diagnostics and monitoring, inviting external experts) to train target groups of research people, team of authorized national RARM experts, decision makers etc.

2.1.4 One day Training workshop on Integration of Gender as per the Gender Action Plan/biosecurity policy

Output 2.2

National institutional arrangements for LMO and IAS decision-making (authorization) check points, emergency responses, guidance and manuals strengthened/developed.

Planned Activities

Decision making role of relevant institutions will coordinate in a cost-effective manner with clearly defined roles and responsibilities. The national arrangements for IAS decision making, including checkpoints, emergency responses and liability and redress frameworks for both IAS and LMOs defined and strengthened with guidelines developed for their effective application. All relevant stakeholders at central, local level, NGOs, private business, women, minorities, media etc. would be involved and be part of decision-making process and operational measures.

Cost recovery options for LMO and IAS management will be investigated in all sectors so that financial sustainability is addressed across all aspects of the project thus internalizing externalities and providing finance for LMO and IAS management operations.

In achieving the above output, the following specific activities will be undertaken:

2.2.1 Develop Manual for IAS and LMO detection, and other supporting tools based on best practices for early detection, monitoring and surveillance to strengthening management and prevention response

2.2.2 Develop Guidance on National institutional arrangements for LMO and IAS decision-making (authorization) check points, emergency responses, guidance and manuals.

2.2.3 Develop guidelines on check-points, emergency responses for IAS and LMOs, procedures for liability and redress

2.2.4 One-day Meeting to National institutional arrangements for LMO and IAS decision-making (authorization) check points, emergency responses

Component 3. A unified system for Knowledge management, Public awareness, Education and Communication on biosecurity

Outcome 3: An integrated mechanism for knowledge management, public awareness, education and information sharing on IAS and LMOs established and implemented.

Output 3.1

Unified Portal for Information Sharing in line with the CBD?s integrated approach on Clearing Houses would be operational enhanced with the requisite national database and registers for IAS and LMOs, including GIS mapping and spatial planning resources.

Planned Activities

The National Biodiversity Clearing House Mechanism (CHM) would be updated in response to the Unified Platform for information sharing under the CBD to cover information sharing obligations under the Clearing Houses in line with COP Decision 14/25. National database and Registers for IAS and LMOs, including GIS mapping and spatial planning resources would be developed.

There will be a review, update and preparation of strategies for an effective national biosecurity information exchange system, establishing synergy among information hubs such as the International Phytosanitary Portal, the CHM, and national BCH and ABSCH. To ensure an effective easy to access one-stop shop through which to obtain relevant information, the establishment of this unified portal will be done through a participatory monitoring network and modern ICT. A National Biosecurity Information System will be operationalized to monitor and advise the population on risk-based management of species, pathways and ecosystems based on agreed protocols.

Additional scientific research and revision of list of IAS will be undertaken, electronic databases developed as part of the unified portal.

In achieving the above output, the following specific activities will be undertaken:

3.1.1 Develop a Unified Portal for Information Sharing in line with the CBD?s Integrated approach on Clearing Houses to be set up with the requisite national database and registers for IAS and LMOs

3.1.2 GIS Mapping development for IAS and LMOs including spatial planning resources.

3.1.3 Revise the list of Invasive species, its distributions in Moldova and the vulnerability of different natural ecosystems to different biological invaders in the light of climate change.

3.1.4 One day workshop to Unified Portal for Information Sharing in line with the CBD?s Integrated approach on Clearing Houses set up with the requisite national database and registers for IAS and LMOs, including GIS mapping and spatial planning resources.

3.1.5 One-day Training workshop on Integration of Gender as per the Gender Action Plan

Output 3.2

Awareness programs, training and educational curricula on LMOs and IAS developed, tested and implemented.

Planned Activities

There will be awareness raised among key stakeholder groups on risks, impacts and management of IAS and LMOs. Short term training program developed on specific biosecurity issues such as: risk assessment and management of IAS and LMOs, detection, identification and early detection, emergency measures, liability and redress, public participation with the aim of improving the skills and professional ability risk assessors, regulators, laboratory personnel, BCH technical personnel, civil society etc.

National, external experts and advisers will be invited to advise the national team by organizing training workshops/meetings for target groups.

Awareness Program will be instituted in the management of traditional knowledge and genetic resources and management of biological introductions both as an information platform, and also for educating the public on the need for conservation and sustainable use of biodiversity.

Short term training and educational curricula will be developed with a focus on biosecurity and safeguards and mainstreamed in higher education institutions on conservation of genetic resources.

Local communities will benefit from a system of better and timely information, on LMO and IAS issues. Communication and preventive methods would be improved among stakeholders and beneficiaries e.g. policy-makers, decision-makers, operational staff and laboratory personnel, academia, community people, vulnerable people, farmers, private business, students and young people, national minorities, and migrant people, etc.

The project will ensure equity among both women and men on the economic benefits of biodiversity. Both men and women will be involved in the design, implementation and decision-making processes and the

most vulnerable, especially women, will be empowered through establishing a consultative mechanisms, awareness and access to information.

Project stakeholders also include rural households, farmers, private business, rural advisory services, scientific institutes, private business, producer groups/associations, local and international NGOs.

In achieving the above output, the following specific activities will be undertaken:

3.2.1 Developing strategy for information sharing and knowledge management

3.2.2 Develop National Database and Register for IAS and LMOs, including GIS mapping and spatial planning resources

3.2.3 Develop Awareness programs, training and educational curricula on LMOs and IAS

3.2.4 Monitor progress in implementation of the project Gender Action Plan

3.2.5 Four one-day Meetings on Awareness programs, training strategy on LMOs and IAS on communication and awareness raising activities with various stakeholders from government, academia, local public administration women and NGOs, private business local communities etc., in four local communities of the North, Central and South development regions.

3.2.6 One-day Meetings to prepare strategies for mainstreaming biosecurity capacity into the national educational systems and curricula development

3.2.7 One ?day Training workshop on Integration of Gender as per the Gender Action Plan/awareness and education

Component 4. Establishment of a Monitoring and Evaluation measures for project delivery

Outcome 4: Effective project coordination and delivery, meeting measurable outputs and indicators.

Output 4.1
Systems and structures, technical support including Project Advisory Committee for project management, accountability and monitoring of impacts established.

Planned Activities

Develop and implement a comprehensive Project Monitoring and Evaluation (M&E) Framework aimed at ensuring integration and coordinated efforts by national partners towards effective national

coordination. Adaptively manage the project, mitigate risks and incorporate best practices and lessons learnt.

In achieving the above output, the following specific activities will be undertaken:

4.1.1 Consultative meeting with various stakeholders from government. Academia, local public administration, local communities, NGOs, private business, women, media on M & E related issues etc.

4.1.2 Develop and implement a comprehensive Project Monitoring and Evaluation (M&E) Framework aimed towards ensuring integration and coordinated efforts by partner countries towards regional harmonization

Output 4.2

Continuous monitoring including gender considerations, Progress reports and Terminal Evaluations undertaken, Lessons Learnt and Best Practices prepared and disseminated.

Planned Activities

A Mid Term and Terminal Evaluation will be carried out which would provide lessons and best practices which be used to institutionalize the established systems for continuity beyond the Project.

In achieving the above output, the following specific activities will be undertaken:

4.2.1 Adaptively manage the project, mitigate risks and incorporate best practices and lessons learnt

4.2.2 Carry out Progress and Terminal Evaluation and institutionalize the established systems for continuity beyond the Project

The proposed project activities as per the workplan along with key deliverables, benchmarks and timelines is placed as **Annex L1 and L2**.

Project alignment with GEF focal area and Impact Program strategies

The project belongs to the Biodiversity Focal Area and fits within the GEF 7 Biodiversity strategy program under objective 3: ?Further biodiversity policy and institutional frameworks? under item H-Implement the CPB. The project would assist in building national capacity to implement the CPB in participating countries by increasing institutional effectiveness through capacity building for personnel to be able to perform the assigned tasks. The interventions under the project will generate results which can be repurposed to support risk profiling and management, testing, emergency responses and enforcement measures in biodiversity conservation and protection.

The project will complement and reinforce the ongoing national capacity building initiatives to fulfil commitments under CBD and CPB as it relates to the three objectives of the CBD in the primary focus of sustainable utilization of biodiversity by integrating international experience, expertise and best practices into the current management of biological resources in Moldova.

Furthermore, the project is aligned with GEF-7 Biodiversity Strategy in the context of mainstreaming biodiversity across sectors as well as landscapes and seascapes, focusing on sustainably managing biodiversity in productive landscapes and seascapes and ensuring that any impact caused by productive sectors on biodiversity is avoided, or substantially reduced or minimized; supporting the complete and effective implementation of the Cartagena Protocol and its Nagoya Kuala-Lumpur Supplementary Protocol especially in the transboundary movements and engagements involving biological diversity. Such practices generate global environmental benefits while creating local and national socio-economic benefits.

Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing.

Without GEF contribution, there would be prolong and postponement of the implementation of a robust biosecurity framework to ensure the effective control of LMO and IAS in Moldova. This will further endanger an already vulnerable ecosystem in a rapidly expanding adoption of transgenic crops without systematic risk and impact assessment and IAS, safety management and tracking/monitoring systems. This will also lead to persistence of many of the already existing problems which include *inter alia*

1) gaps in biosafety frameworks and related IAS legislation,
2) insufficient capacity for administrative procedures,
3) inadequate laboratory tools/methodologies and guidelines for LMOs/IAS risk assessment, risk management, detection, identification and enforcement
4) insufficient training of personnel and lack of corresponding experts,
5) Lack of access to updated and latest information.

Proposed GEF involvement in the context of this proposed project would contribute towards the successful implementation of participating countries NBFs to fulfil their obligations as Parties to the CPB, and to meet their national needs and priorities for sustainable development. The involvement of GEF would also help to act as a catalyst to enlist financial and political support from the Governments, thus promoting sustainability of the outcomes of the project.

Incremental cost is estimated as the difference in scenarios between the ?baseline? or ?what would happen without GEF intervention? and an ?alternative? (where series of additional activities will be

carried out to contribute to global environmental benefit). The activities to be carried out by this project proposal will result in the ?alternative? scenario, the cost of which will be borne through the GEF funds.

Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

Global environmental benefits and adaptation benefits would include *inter alia*:

? Contributing to the conservation and sustainable use of the rich and unique genetic resources in Moldova through pursuing a synergistic approach to implementing the CPB to the CBD;

? Minimizing the potential risk of LMOs/IAS to wild relatives and cultivated varieties in Moldova and ensure identity preservation;

? Implementing biosafety actions on a greater scale to avoid further biodiversity loss and to contribute to the overall global agricultural development;

? Building biosafety capacity of Moldova and ensuring e?ective implementation of biosafety laws and regulations across the region;

? Mainstreaming biosafety across sectors and ensure policy coherence in Moldova;

? Enhance the capabilities of the target countries to comply with their international biosafety obligations and commitments, thereby improving each country?s contribution to global conservation efforts.

Using genetic techniques to harness genetic diversity in Moldova and to deal with climate change and land degradation as well as other abiotic and biotic stresses (e.g. drought resistant, salt tolerant varieties or, alternative crops, and improved agricultural practices).

Innovation and Sustainability

The project design and formulation acknowledge and actively incorporates the issues of scale, proximity and interconnectedness of environmental systems, and utilises a cross-cutting approach to provide one-stop solutions for sustainable development. The project promotes the innovative and integrated management approaches and procedures based on the latest scientific evidence, knowledge and methods in the field of biosecurity and a risk analysis/environmental safeguards approach to natural resource management. The risk assessment/management and capacity building will involve the latest knowledge provided by the Guidelines and the Roadmap on Risk Assessment, developed by the AHTEG under the CPB. National capacities for DNA Bar-Coding Detection of genetic resources and IAS, bank of genetic resources and scientific collections would be enhanced to develop in-country research capability on IAS. The innovative training modules for risk assessment will be used to raise professional capacities of risk evaluators. The CHM and BCH portals and training modules and case studies will be used to develop human resources and support decision making and public information and participation. The Geographical Informational System (GIS) maps of Ecological Networks (EN) will be used for ecosystem management planning. The project, while addressing urgent and immediate domestic issues related to biosecurity, will take full consideration of the improving use of natural resources with an impact on improved livelihoods in rural areas of Moldova. Taking into account the

complexity of biosecurity issues, the project will use an integrated, thematic and cross-sectoral approaches, within the framework of sustainable development at the national and local levels, having positive impact on conservation of biodiversity and landscapes and ensuring food security in Moldova. The mechanisms and processes established during this project will ensure sustainability of the outcomes with follow-up activities by the government.

The key innovativeness is the integrated approach to the implementation of the Convention and its Cartagena Protocol. The emphasis, therefore, will be on improving upon existing structures in multiple sectors to integrate IAS and LMO considerations rather than on creating new structures from scratch. Breaking down silos and embedding biosecurity considerations in sectoral decision-making can help to move IAS and LMOs from the margins to the mainstream for improved efficiency, effectiveness and sustainability. Cost recovery options for IAS and LMO management will be investigated in all sectors so that economic sustainability is addressed across all aspects of the project thus internalising externalities and providing finance for IAS and LMO management operations. This approach of systematic reinforcement and inter-sectoral coordination is perceived as a possible model for developing countries with relatively diversified economies and significant fragmented IAS and LMO management capacity. The emphasis on national biosecurity measures through this project will help to sustain the biodiversity gains leveraged by the project. The tools and capacities attained will be sustained through a coordinated and multi sectoral approaches on natural resource management. The lessons learned and capacities built will be scaled up and replicated through collaboration within the Central and Eastern Europe region.

A. Political and financial terms

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Integration of biosecurity issues into national strategic documents ensures that framework will continue to be taken into account in decision making as a part of environmental protection and scientific and technical development even after the project ends. Agreed policies stand a good chance to guarantee sustainability of biosecurity financing on a regular basis from Moldovan national budget. The project would assist politicians to better understand the issues of biosecurity as a cross sectorial issue to allow budget planning and activities for future. This approach would lead to better cooperation between relevant governmental institutions so as not to allow isolation that could lead to overlapping and gaps in the implementation of CPB and in general the CBD.

Conducting active fund-raising capacity in the partner institutions as well as effective partnerships with other stakeholders and donors, are expected to boost financial sustainability.

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B. Institutional, legal and operational terms

In Moldova, strengthening biosecurity with clearly defined roles and responsibilities guarantees institutional sustainability. Institutional arrangements once established would be sustained well beyond

the life of the project. Organizing capacity-building workshops and courses for officers and experts, with the aim to improve competence, share information and experience and follow recent scientific development contribute to operational sustainability. Furthermore, in order to guarantee sustainability, more than one person will be trained per institution, and written guidelines and Standard Operating Procedures (SOPs) will be developed to enable new personnel to get acquainted with biosafety issues.

Replicability and scaling up

The project will establish an online knowledge-sharing mechanism for the replication of cooperative and national experiences. Methodologies and tools developed by the project will be designed for easy transfer and trained technical personnel will be available in Moldova through a roster of experts. The lessons learnt under this project during project preparation and implementation could be used in other proposed national projects in biodiversity.

The project will facilitate direct replication by applying the following approaches:

1) demonstrate new ideas and practices in each of all project components,

2) identify and disseminate lessons learned and best practices to project partner institutions and authorities,

3) enable stakeholders to access information regarding biosecurity issues and connected procedures and processes, and

4) train experts and other individuals to expand the project main approaches to other sphere of activities (at national level).

Scaling up occurs when lessons and experience are integrated into major program or policy priorities and funding criteria. Scaling-up activities will represent: Lessons learnt and experience gained under the project will be shared and demonstrated in a way that strengthens organizational and stakeholders? capacities and contributes to the development of supportive policy, strategies, program and fiscal incentives

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1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

GEOGRAPHIC COORDINATES: 45°27' - 45°27' Nord (350 km), 26°39' - 30°05' Est.

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities Yes

If none of the above, please explain why:

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Stakeholder engagement is an important element in realizing a successful biosecurity project in Moldova, that involve several sectors, including environment, agriculture, health, science and technology, rural development, industry, trade, as well as community-based organizations, consumer associations, NGOs, etc. In the project formulation, special emphasis has been placed on successful stakeholder engagement and involvement throughout the preparation and execution of the project via direct consultations and participation in project activities.

The main objective of stakeholder engagement is to ensure that the participating organizations will proactively consider the needs of key stakeholders. Active engagement of concerned stakeholders through the project activities will foster necessary confidence and implementation of the updated NBSAP in line with the GBF post 2020.

Consultation with key stakeholders will be continuous and will start as early as project inception. A multi-stakeholder?s consultation throughout the implementation of project activities will ensure effective and participatory implementation of the key elements of biosecurity regulatory framework through dissemination of project outcomes.

Strengthening viable partnership and inter-sectorial stakeholders? engagement during project activities will promote consensus and support from civil society, local communities, farmers, rural people and private sector by harnessing the knowledge, experience and capabilities of affected and interested individuals and groups. The project activities and stakeholder engagement has been designed in line with the GEF policy on Gender Mainstreaming and taking also in account national socio-economic priorities of Moldova.

STAKEHOLDER ENGAGEMENT PLAN				
Stakeholder	**Role/Intervention**	**Types of involvement for meaningful consultation/input**	**Timelines for engagement**	**Remarks**

Parliamentarians, policies decision makers	Participation in review and approval of policy and regulatory instruments ensuring national long-term financing for biosecurity activities for sustainability.	a. Advocate prioritization and promotion of regulatory instruments at relevant levels. b. Draft, review and validate instruments for effective implementation of regulatory framework. c. Involvement in strengthening the decision-making processes for regulation of IAS&LMOs. d. Continuous consultations during project life and thereafter.	On-going involvement throughout the project period, with special engagement in the first 2 years.	*Challenges:* Lengthy procedures for review and adoption of regulatory instruments. *Alternate approach:* Prioritization of biosecurity issues

Governmental ministries/departments and Executing Agencies *[eg. environment, agriculture, science and technology, health, finance, trade]*	a. National environmental mandated government institution shall be the lead project implementer and coordinator for the project. b. Other government institutions/agencies mandated to implement biosecurity shall advise on the project design, participate in activities relevant to implementation of biosecurity administration and regulatory functions and also development of guidance and trainings for Risk Assessment and Risk Management, detection and monitoring, prevention, and liability and redress based on Standard Operational Procedures for compliance and enforcement at national level. c. Specific role in coordination of decision making and participation process.	a. Involved in project design, development of activities and inter-ministerial coordination at national and local authority levels. b. Advocate for sharing of experiences and cooperation with relevant sectors and stakeholders. c. Engagement on committees /expert and working groups for developing guidance and manuals and procedures for effective implementation of biosecurity regulatory framework including preparing resource materials for public awareness and sensitization. d. Involvement in decision making process of handling applications for regulation of IAS&LMOs. e. Ensure active participation of varied stakeholders and incorporation of relevant inputs both in decision making process	Involvement throughout the project period.	*Challenges:* National level challenges include governance issues, frequent changes in workplace, limited knowledge and prioritization of biosecurity issues. *Alternate approach:* Increased number of officials within each ministry/department with longer tenure besides broader representations by various government institutions/agencies. Establishment of information systems for transparent and reliable biosecurity resources. Inclusion of biosecurity issues in other stakeholder engagement meetings/fora?s in multiple sectors viz., agriculture, health, food security, science and technology, trade, etc.

		and the project activities. f. Involvement as resource persons/experts for trainings through Train the Trainer approach for broader national level training. g. Participation in different training to further build capacities.		

Academia [e.g. universities and research institutions]	a. Advise on the design and participate in project activities relevant to science-based issues such as biosecurity research for IAS, risk assessment and management for IAS&LMOs to support decision making by regulator. b. Participate in developing monitoring and detection tools, training manuals and outreach materials and conduct trainings. c. Participate to enable laboratory analytical functions to support regulatory agencies.	a. Involvement in consultations for project design and development of activities for coordination at national and regional level. b. Ensure use of online tools for enhancing information and experiences sharing including enhancing collaboration in policy making and being up to date with latest developments. c. Engagement on technical committees /experts/ working groups to review and update/develop guidance, procedures and manuals aligned with relevant scientific principles and information. d. Development of outreach materials for different stakeholder target groups. e. Provision of relevant inputs both for scientific based decision-making process and the project activities.	Involvement throughout the project period.	*Challenges:* Limited trained personnel from relevant research institution?s/universities working with IAS&LMOs. *Alternate approach:* Trainings to enhance capacities.

		f. Ensure strengthening of monitoring and enforcement mechanism system through developing appropriate SOPs for IAS&LMO detection. g. Involvement as resource persons and participants for undergoing relevant training in key thematic areas of biosecurity for national capacity building. h. Involvement in curricula development and educational capacity building and human resource development in the targeted area of IAS&LMOs biosecurity.		

Civil Society groups, non-governmental organisations (NGOs), community based organizations, media	Advise on the design and participate in activities relevant to consumer related issues and public engagement.	a. Participation in awareness raising meetings and training. b. Involvement in community and targeted outreach engagements for awareness and sensitization. c. Receiving outreach material designed for the different target groups. d. Involvement in the use of online relevant resources to create awareness.	Involvement throughout the project period.	*Challenges:* Need for relevant and reliable information on biotechnology and biosafety. Lack of knowledge about existing databases of IAS and approved LMOs and useful resources. *Alternate approach:* Inclusion of biosafety issues in various stakeholder engagement platforms. Biosafety sensitization to facilitate informed decision making.

Relevant Private Sector **including industries, traders, importers and exporters.**	a. Main applicants of technologies and also consumers b. Advise on product related issues and feedback on operation ability at ground level on implementation and enforcement of the regulatory system.	a. Provision of feedback for identification of gaps in implementing the regulatory framework and its enforcement mechanisms. b. Involvement in consultations and targeted outreach engagements. c. Involvement in awareness raising meetings, trainings and building capacities. d. Engagement in information sharing of best experiences and lesson learnt from project activities.	Involvement throughout the project period.	*Challenges* Stakeholder groups inclination and interest for ensuring safety and enforcing regulations. *Alternate approach:* Enhance public awareness, education and participation through outreach material. Seek inputs for further identify the needs and capacity requirements for strengthening the biosecurity management and monitoring systems.

Customs and border control officials	Custom and border monitoring and contribution to decision making	a. Engagement in providing feedback for identification of gaps in implementing the regulatory framework for enforcement. b. Involvement in training and targeted outreach engagements. c. Engagement in information sharing and identification of gaps through lesson learnt from project activities. d. Receiving outreach material designed for the different target groups. e. Involvement in the use of online useful resources to strengthen enforcement system.	Involvement throughout the project period.	*Challenges:* Limited knowledge and prioritization of biosecurity issues. Lack of trained personnel to detect IAS and LMOs. *Alternate approach:* Make aware of useful online resources for information sharing. Trainings on identification, sampling and detection of IAS and LMOs. Seek inputs for further identifying the needs and capacity requirements for strengthening the biosecurity monitoring and enforcement systems.

Local Communities and vulnerable target groups of rural population, including women	Sharing knowledge and assist in monitoring and management of biological resources.	a. Involvement in consultations. b. Involvement in sensitizing and creating better understanding of the potential impacts of the regulations on their operations and take up feedback. c. Receiving outreach material designed for the different target groups. d. Involvement in various public awareness training and promote sharing of feedback.	Involvement throughout the project period.	Seek inputs for further identifying the needs and capacity requirements for strengthening the biosecurity monitoring and enforcement systems.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

A series of consultations with the key stakeholders have been held on the objectives and main activities of the project proposal. The project concept note and the PIF has been discussed at a meeting organized by the Division on Biodiversity Policy of the Ministry of Environment (ME). During the PIF preparation phase, specific updated information has been collected by the local experts from the ?Moldsilva? Agency (Forestry) (MA), Environmental Agency (EA), National Agency for Food Security (NAFS), as well as a number of focused scientific research institutes in the field of botany, zoology, genetics, microbiology, ecology, crop sciences etc., based on their scientific and thematic reports. The educational sector has been contacted as well and provided with specific information on the current and future policies and educational programs in the related area of topics. The draft concept note and the PIF were shared via emails to the main mentioned stakeholders, including the National Biosafety Commission, National Farmers Federation, IFAD, ACSA (agriculture extension services), SGS Moldova

consultancy services, local public administration of selected raions (Cahul, Orhei, Soroca), NGOs (EcoContact, Biotica, Eco-Tiras, Ecospectru, Centru Consultanta ecologica Cahul, etc.), and updates were incorporated in the final version based to the comments and suggestions received (*Table 5.)*.

Table 5. *The main stakeholders of the project.*

Stakeholders	Legislative mandate and functions relevant to the project	Role for the project
Ministry of Environment (MoE)	The Ministry is responsible for the development of legislation, action plans, norms and standards in the environment, agriculture and regional development. The Directorate of policies in the area of biodiversity of MoE has the basic mission of developing and promoting the state policy in the sphere of reasonable use of natural resources, conservation of biodiversity, state protected natural areas, forest stock, hunting stock and biological security, within the limits of its competence and conditions provided by the environment legislation in force, by the Regulations of the Ministry and Regulations of the Directorate The Minister of Environment is the Chair of the Steering Committee of all the Projects implemented by ONEPI.	The Ministry is the Project Implementing Partner. The Directorate of Biodiversity Policies hosts the GEF OFP office and FP for the CBD Convention and its Protocols: Cartagena Protocol on Biosafety, Nagoya Protocol on Access to genetic resources and benefit sharing (ABS), as well as the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress Leading role in the Project Steering Committee, policy development and development of regulatory instruments and institutional capacities and the technical execution of the project activities The Ministry will provide leadership to the project management team that will be hosted by the ONEPI and will act as the liaison with government authorities from different sector players and ensure that the project cooperates with other relevant projects and initiatives. The Ministry will provide political and institutional supervision for the overall project activities on behalf of the Government of Moldova. The Ministry will design/enforce policy measures in support of project endeavors and ensure parallel co-financing aimed at improving IAS/LMOs financing and sustainable management

National Office for the Environmental Projects Implementation? (NOEPI)	As per the GD 1249/2018, the NOEPI supports the implementation of environmental management framework and external finance system in the country (including the donor funded projects) within the Environmental projects Implementation Unit (EPIU) which was established in 2022 under NOEPI purview as part of the. reorganization of public institutions. The NOEPI is the public institution, under its implementing partner, has the mandate, to contribute to policy implementation through specific projects Minister of Environment as Chair of NOEPI Steering Committee	National Office for the Environmental Projects Implementation? (ONEPI) will establish a PIU and the Project Steering Committee. The ONEPI will be fully responsible for the implementation of project activities, human resource development and financial management and reporting, progress reports throughout the project life, the Mid-Term and Final Project evaluation reports and audits
Agency ?Moldsilva? under the Ministry of Environment	Agency ?Moldsilva? (forest) is a semi-autonomous state enterprise that operates under MoE which develops and implement measures on the conservation, restoration of the forests in the State managed and protected areas; develops proposals for legislation on protected areas, acts as the agency for the enforcement of legislation and ensures the observance of the legislative regimes. It also keeps inventory of natural areas including flora and fauna in such areas. ?Moldsilva? manages approximately 50 % of the total surface of the state protected natural areas	Moldsilva will be a key partner for the implementation of the project activities mainly in the monitoring and enforcement areas. Through its state forestry units, the agency will provide technical assistance, co-financing and support in implementing project components. Moldsilva will help build cooperation with local communities
ICAS- Forest Research and Management Institute under the Agency ?Moldsilva?	ICAS provides the scientific backbone for the management and development of the forestry sector by producing and disseminating scientific and technical information, providing specialized advice, recommending and implementing new and modernized technologies, developing innovative products that contribute to increase competitiveness of the forestry sector	ICAS will be a key partner in implementing the reforestation activities in PAs system. Its main responsibilities will involve the re-validation of the activities in the demonstration areas that were selected at PPG stage; support in screening and targeted assessments of the IAS/LMOS, facilitation of engagement with local authorities/communities; technical assistance in developing the technical works to support in monitoring, early detection of IAS/LMOs and redress measures

Agency ?Apele Moldovei? under the Ministry of Environment	The Moldovan Agency ?Apele Moldovei? is under MoE responsible for the implementation of State policy in the area of water resources management; it also manages water inventory, surface water bodies and hydrotechnical constructions	Agency ?Apele Moldovei? will facilitate monitoring of IAS/LMOs in fresh water basins and the transboundary movement
Environmental Protection Inspectorate under the Ministry of Environment	The Inspectorate is responsible for control, supervision, prevention and enforcement of regulation in the protection of flora, fauna and protected natural areas in order to ensure a high level of protection of the environment, public interests, ecological security	The Inspectorate will be a key project partner in implementing activities in relation to PA management plans, mainstreaming biodiversity conservation measures in the local strategies and restoration activities. It is also a project beneficiary and will participate in the project capacity building workshops
Environment Agency under the Ministry of Environment	The Environment Agency performs the functions of monitoring of the quality of protected areas, use of the water and soil resources, flora and fauna, air pollution, geological elements, environmental pollution and provision information on the quality of environment and statistical indicators in the sphere of environment protection (*GD No. 549/2018 on the creation, organization and operation of the Environment Agency*)	The Environment Agency is a beneficiary of the project and will participate in the capacity building activities. The agency will be involved in the monitoring, enforcement, detection, emergency response and risk management instruments and contribute to capacity building on regulatory oversight. The Agency will develop and maintain a national register for IAS and develop specific operational guidelines and manuals for decision making, detection and identification, check points, custom control, risk assessment and risk management, liability and mitigation of their impact on environment. The agency will also develop and maintain the national database and registers for IAS and LMOs, including GIS mapping and spatial planning resources

National Food Safety Agency under the Ministry of Agriculture and Food Industry	The P.I "Central Phytosanitary Laboratory" is under the authority of the National Food Safety Agency (NFSA) with the RM Government Decision No. HG1209/2018 of 05.12.2018 regarding the approval of the Statute of the Public Institution "Central Phytosanitary Laboratory". It has a mission of coordinating and organizing activities aimed at ensuring the implementation of public policies in the field of phytosanitary as established by Statutes. The laboratory?s activities include Phytosanitary Quarantine; quality of products; seed testing and certification; Pesticide and Nitrate residues; Molecular Biology Laboratory - Genetically Modified Organisms (GMOs). The laboratory is designated as a national reference laboratory for its areas of competence and has the following areas of competence: Verification and identification of phytosanitary status, plant protection and nutrition, soil fertility; Verification of pesticide residues in plants and plant products; Checking the quality of seed and planting material, the quality of agri-food products and products involved in ecological agriculture; Providing testing services regarding the harmlessness of products in its fields of competence. The laboratory is accredited to the requirements of the SM EN ISO/IEC 17025:2018 standard, Accreditation Certificate no. L? ? 022 of February 17, 2018, and for tests on the quality of seed material and to issue international Certificates on the quality of seeds, it is accredited by the International Seed Testing Association (ISTA).	The laboratory equipment will be augmented by detection equipment and kits to improve their capacities for identification and detection of LMOs. Manuals and specific guidelines will be developed to enhance the skills of the laboratory personnel to provide monitoring and laboratory analysis.

Custom Control Services under the Ministry of Interior Affairs	The authority provides custom control of goods and biological material (seeds, plants, animals, microorganisms) in line with the international rules under the WTO, CITES, Cartagena Protocol on Biosafety, Nagoya Protocol on ABS. The Service in collaboration with the National Food Safety Agency, Environmental Protection Agency provides custom procedures to prevent transboundary movement of biological materials, including novel organisms that have not been authorized for importation into the country	The personnel will be trained in handling and procedures of IAS/LMOs and specific manuals developed to facilitate work at entry borders.
Local Public Authorities (LPAs) at the district and village/community levels	The authorities of the local public administration (ALPA) are responsible for the management of the protected areas by implementing protection measures and reasonable use of natural resources as instituted by management category (art. 15, Law 1538/1998)	District and village/community public administrations have a significant role to play in the project. Their responsibilities are to promote cooperation among all land users and owners, to implement biodiversity-friendly practices, to support biosecurity initiatives as stipulated by the project, participate in the process framework and identify compensatory mechanisms for any potential economic displacement risks that may arise as a result of the project activities and support the project?s awareness programs, seminars and events at local level. They will be involved in activities such as public awareness, biosecurity communication and participation and potential material/technology transfer and product development activities. Farmers and local communities will be involved in demonstration pilot projects on good farming practices, as basis for biosecurity measures

Academia: Institute of Botany (Botanical Garden) Alexandru Ciobotaru, Institute of Zoology, Institute of Genetics, Physiology and Plant Protection, Institute of Microbiology and Biotechnology, Institute of Ecology and Geography ? State Moldovan University, Institute of Field Crops ?Selectia?, Institute of Horticulture and Food Technology, Institute of Forest Management, State Agricultural Unive rsity (now merged with the State Technical University)	Physiology and Plant Protection, Institute of Botany (Botanical Garden) Alexandru Ciobotaru, Institute of Zoology, Institute of Genetics, Institute of Microbiology and Biotechnology, Institute of Ecology and Geography ? State Moldovan University. Institute of Field Crops ?Selectia?, Institute of Horticulture and Food Technology, Institute of Forest Management, State Agricultural University (now merged with the State Technical University) etc., will be important partners supporting various (flora and fauna) IAS species inventories, IAS and LMOs technical analysis and reports.	Academic research institutions will provide technical support under the project activities in the development of guidelines and operational manuals on scientific risk assessment and risk management, and delivery of training materials. Scientific investigations and revision of the list of IAS for plants and animals. Contribution for development of database, monitoring and investigation, national Registers for IAS and LMOs, Bar Coding, detection and identification of IAS.
Private sector: Farmers associations; fishermen; import/export companies, SGS, tourism companies etc.	Private sector: Farmers associations; fishermen; import/export companies, SGS, tourism companies etc. will be involved in the project activities, trainings, meetings etc. Farmers? Federation, IFAD, ACSA (agriculture extension services), SGS Moldova consultancy services	

NGOs: Association of Environmental and Ecological Tourism Journalists; the Women in Sustainable Development of Moldova (WISDOM); Ecological Society BIOTICA, Eco Contact; other NGOs, The Ecological Movement NGO, EcoContact, Biotica NGO, ECO TIRAS International association etc.	- All NGOs will participate in stakeholder consultation during the development of the protected areas management plans development and revision in targeted areas, and in the awareness raising seminars as relevant., will be involved in public information and training activities to ensure decisional transparency and participation. Joint activities will be explored: - Joint awareness and education activities with the NGOs implementing activities in the targeted PAs such as Ecological Society BIOTICA, Eco Contact, Association of Environmental and Ecological Tourism Journalists; the Women in Sustainable Development of Moldova (WISDOM). - Awareness raising seminars engaging the Association for Environmental and Ecological Tourism Journalists. - With the Coalition of Environmental NGOs for advocacy activities e.g. Eco Contact, National Council of Environmental NGOs and Association of Environment and Eco-tourism Journalists in Moldova - Partnership with the Association for Tourism Development in Moldova for the support to the development of COVID-19 protocols in tourism industry, control and early detection of IAS and LMOs transboundary movement.	
Women, youth and civil society	The project will work closely with the women civil society and women private sector. The non-governmental sector focused to gender issues, as Women Association for Environmental Protection and Sustainable Development, the Women Organization of the Truth and Solidarity Party, Moldovan Women Association etc., will be involved in the project activities, trainings, public awareness campaigns, educational and media actions etc. The gender sensitiveness and implication, increasing role of women in legislative and policy design/development and capacity building will be promoted and supported by the project.	Women, youth will be involved in decision making on LMOs/IAS, monitoring and control activities, as well as in information and communication networking. Women will be plenary involved in the project activities, trainings, public awareness campaigns, educational and medialization actions etc. The gender sensitiveness and implication, increasing role of women in legislative and policy design and capacity building will be promoted and supported by the project. Women associations and local communities will play a partnership/collaborative role in sensitization, education and will be associated with most activities especially the development and dissemination of communication tools.

The Government of Moldova has established the Environmental Agency by its Decision NO. 549 of 13.06.2018 RO, (EN version) in June 2018. Among its functions are the conservation of biodiversity and management of state-protected natural areas and biosecurity.

The functions depict the government?s efforts to put in place a coordinated approach to the management of environmental challenges in Moldova. This project is thus designed bearing in mind the principle of coordination and collaboration in the approach to environmental management.

The main stakeholder is the Ministry of Environment (MoE). MoE has extensive experience in successfully implementing UNEP projects, and it will mainly be responsible for main components of the project. The Ministry of Environment is the country?s GEF focal point, the National Authority for biodiversity conservation and biosecurity/biosafety, CBD and CPB focal point. It has a significant experience in executing GEF-funded projects. The project implementation will be strategically guided by a Project Steering Committee (PSC). An existing management entity will serve as a fiduciary agency and provide support for general coordination of implementation, procurement, financial management and monitoring and evaluation. Other governmental stakeholders there are: Ministry of Health (MoH), Ministry of Education and Research (MoER), Ministry of Labor and Social Protection (MoLSP), Environmental Agency (EA), ?Moldsilva? (Forest) Agency (MFA), Environmental Agency (EA), National Food Safety Agency (NAFS), National Agency for Public Health (NAPH), that will contribute to regulatory and institutional setting up for the IAS and LMOs management frameworks, as well as to the development of guidelines and training activities.

Research institutions in the field of conservation and sustainable use of genetic resources, as example Institute of Genetics, Physiology and Plant Protection, Institute of Botany (Botanical Garden) Alexandru Ciobotaru, Institute of Zoology, Institute of Microbiology and Biotechnology, Institute of Ecology and Geography ? State Moldovan University, Institute of Field Crops ?Selectia?, Institute of Horticulture and Food Technology, Institute of Forest Management, State Agricultural University (now merged with the State Technical University) will benefit from the project activities through the use of their institutional, technical and scientific capacity in the management of IAS and LMOs.

The ?Moldsilva? (Forestry) Agency and the Agency (Water) ?Apele Moldovei? which is responsible for water management, will both be involved in strengthening national capacities for monitoring and control of Invasive Alien Species in the protected areas, terrestrial and freshwater natural ecosystems in Moldova.

The Inspection for Environmental Protection (IEP), Environmental Agency (EA), National Agency for Food Security (NAFS), Customs Control Services (CCS), National Biosafety Committee (NBC) will enhance their competence in the identification, detection and monitoring of transboundary movement of IAS and LMOs as part of integrated management system for biologic resources.

The SGS Moldova, a private consultancy services organization, will be offer consultancy and detection of LMOs services to farmers and other stakeholders. The National Farmers Federation, National Agency for Rural Development (ACSA), IFAD will contribute to the dissemination of information and creation of awareness in the field of LMOs management and risk prevention.

Consulting Agro Business sector representative of the growers of corn and soybean in Moldova, importers/exporters of agricultural crops and feed for animals will be involved in the policy and legal consultations and training activities to improve their knowledge and understanding of international and national rules and approaches in biosafety.

Project stakeholders also include rural households, farmers, private business, rural advisory services, scientific institutes, private business, producer?s groups/associations, local and international NGOs. The Ecological Movement NGO, EcoContact, Biotica NGO, ECO TIRAS International association will be involved in the dissemination of public information and training activities to ensure transparency and participation in decision making. The project will work closely with the women civil society and women private sector. The NGOs in this sector, as Women Association for Environmental Protection and Sustainable Development, the Women Organization of the Truth and Solidarity Party, Moldovan Women Association etc., will focus on gender issues and other project activities such as training, public

awareness campaigns, educational and facilitative actions etc. The gender sensitiveness and implication, increasing role of women in legislative and policy design and capacity building will be fully promoted and supported in the project implementation.

The Stakeholder Engagement Plan for the project is placed as **Annex Q**.

Select what role civil society will play in the project:

Consulted only; No

Member of Advisory Body; Contractor;

Co-financier;

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor;

Other (Please explain) Yes

Advise on the design and participate in activities relevant to consumer related issues and public engagement

Participation in awareness raising meetings and training.

Involvement in community and targeted outreach engagements for awareness and sensitization.

Receiving outreach material designed for the different target groups.

Involvement in the use of online relevant resources to create awareness.

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

In the consultative process leading to finalization of the project design and during the project execution, efforts will be put in place to ensure representation of women and men. Additionally, gender specific data will be collected and disaggregated to guide national design and implementation of gender specific tasks to support implementation of biosecurity. Gender issues will also be incorporated in developing governance mechanisms at two levels a. at the project level and b. in the design, review and update of regulatory instruments.

Capacity building interventions, knowledge management and information sharing will also focus on capturing gender disaggregated data as this is key to monitoring project results and delivery.

Gender balance and participation will be highlighted and supported within the project activities as stipulated in COP decision CBD/COP/15/L.24 by ensuring that women have a proactive participation and initiative in capacity building on biosecurity issues, ecological management of protected areas and ecological secure farming as well as in communication and networking. Considering that Moldovan women play a major role in the conservation and use of biodiversity in national activities, the project will ensure that where stakeholders are involved, gender representation will be taken into consideration. Where possible on resource use and capacity development, gender-segregated data will be collected. In the identification of training participants, efforts will be made to ensure balanced representation of women and men. According to the statistics report, the country?s population female/mail ratio is of 52.6/47.4. At the beginning of 2021, there were 91 men per 100 women. The national legislative framework for equality between women and men is in line with international commitments. However, implementation lags behind, and women still face discrimination and inequality in social, economic, and political life, lacking effective opportunities for participation in decision-making in public and private sectors. 39.6% of the members of Parliament are women, 21.83% of mayors, 36.51% of local councilors, and 27.08% of district councilors ? which are far below international standards and the country?s commitments under the national and international agreed goals. The share of women entrepreneurs is at 33.9% (as of 2017), with women who wish to start their own business facing many barriers.

The project will work in coordinated and collaborative approach, various categories of stakeholders and beneficiaries e.g. vulnerable people, population, policy-makers, decision-makers, operational personnel and staff, laboratory personnel, researchers, community members, participants to the meetings, media people, farmers, private business people, consumers, students, young people, national minorities (Roma, Gagauz, etc.), people of different demographic categories, based on gender equality objectives. All vulnerable groups will be actively involved in all stages of project implementation. The project will ensure that economic benefits of the project for women and men will be equal. Both men and women will be involved in the design, implementation and decision-making processes and the most vulnerable, especially women, will be empowered through establishing a consultative mechanisms, awareness and access to information. Women will be benefiting from preventive measures of possible adverse effects on health and food security having in place precautionary rules based on risk assessment. This would provide better condition for women heath and their kids, as well as women enrollment in production sector of employment. The mentioned stakeholders will benefit via building their capacity, based on sex-disaggregated targets setting in order to contribute to the transformation of their historically evolved gender-inequitable context.

Gender issues are still challenging in Moldova and the project aims at improving this situation. According to an international evaluation regarding the level of implementation of gender equality issues, Moldova is placed on 23rd position out of 130. Thus, it is necessary to continue improving the legal framework in field of gender equality. This priority is also linked with implementation of the EU-RM Association Agreement (2014), which by article 31 clearly state that both countries shall intensify their collaboration to improve the social dialogue, social protection, equality of rights for men and women, liquidation of

discrimination practices and other related issues. In order to ameliorate this situation, Moldova has developed the *Strategy for ensuring equality between women and men in the Republic of Moldova for the years 2017-2021 and its Action Plan* (GD Nr 259/2017). As the strategy stipulates, there are some specific objectives that are geared towards changing the situation with action including the following:

? Education sector: to introduce gender dimensions into the educational policies to improve gender climate in educational institution s, develop and implement educational programs and methodologies to form a responsible behaviour among children and youth.

? Participation in public and political decision-making process foreseen to eliminate structural barriers and to offer a balanced participation of women and men in public and political decision-making process to change the stereotypic roles of women and men in public and family life.

? Implement activities that will ensure an inofensive physical and social environment in order to reduce external causes of death among men and to improve women health especially in rural area.

Gender equality is an important subject in Moldova as economic opportunities are generally gender sensitive. The project monitoring will be disaggregated by gender groups to assess the effectiveness in which the project reaches women and youth. Both genders are expected to benefit from acquiring new skills that are essential for maintaining the sustainability of agro-ecosystems, while capitalizing on existing skills in agricultural production. The project in partnership with the Moldovan Women Association, Women Association for Environmental Protection and Sustainable Development, the Women Organization of the Truth and Solidarity Party etc., will involve in equal part women and men for project implementation at all stages. Priority in the selection of local and international experts will be given to women.

Achieving gender equity requires an integrated approach geared towards behavioral and procedural changes at several levels in the biosafety regulatory process namely at the regulatory, administrative, technical and outreach levels. In response to this, the project will incorporate the following elements:

? Analysis of livelihoods, gender and vulnerable groups including indigenous peoples will continue to inform the project implementation, through assessments of women engagements in handling biotechnology related activities, needs and aspirations, collection of gender specific data and ensuring participation in project activities by the relevant stakeholders by gender. Because gender relations, aspirations, and opportunities can vary greatly, the analysis will begin with a closer look at the social set up that define the roles, burdens, access to and control of resources for men, women, youth and local communities. This will ensure gender sensitivity throughout the project implementation process that considers the needs and priorities of both women and men. The analysis itself will be organized in a way that allows varying approaches and availability to meet the needs and participation of women and men.

? Gender-balanced management: Behavior change and gender-balanced management within various implementing entities and beneficiaries is key to opening spaces that empower women. In the case of regulatory officials and end users of technology, women and men will be trained and tools provided on the national biosecurity systems guided by needs captured during the gender analysis.

? Women will be adequately represented in regulatory mandates as per the law and the guidelines developed not only at the policy level but also at the technical and training levels. Trainers will be taught how to be aware of responsive to and advocate for gender issues in their training context and community and equipped to counter negative behavior.

? Technical and financial capacity building: Targeted, gender-balanced capacity building, budgeting and technical assistance packages will be refined based on the results of the stocktaking analysis. The timing and structure of workshops will take care not to overburden participants, particularly women, who tend to shoulder more of the household and caregiving responsibilities. In addition to the core training activities, specialized technical assistance may be provided in support of handling of modern biotechnology products and the required obligation of biosafety measures in the country especially where in relation to in country use, transit and transboundary movement of LMOs/IAS and its impact on biodiversity as the safe use of genetic material is of supreme value to the livelihoods of women and their families. This can include direct support to women?s organizations. Women have shown significant interest in tools that help build consumer confidence and acceptability of their products.

? Gender-balance will guide the setting up, selection and participation in meetings and training workshops and may lead to organizing separate sector/thematic based meetings for different end users to ensure that that women, youth and local communities are fully informed of the activities to date, to obtain their input, and to collaboratively work together to develop a strategy for their long-term inclusion and participation of the biosecurity regulatory processes in all the participating countries.

The sex-disaggregated targets will be applying for project activities and corresponding expected results will provide important benefits to various categories of people, i.e. stakeholders, participants, officials, decision-makers, experts, etc. and insure at least 60% of them will be women. Collecting sex-disaggregated data will be an important component of monitoring and evaluation system that mainstream gender. A deeper gender analysis, dedicated gender-related activities and outputs will be developed which will have their own indicators and targets. The project will involve specific women?s empowerment activities (accommodating/meeting the needs of women practically, including gender-transformative activities of patriarchal structures to address women?s strategic needs (by challenging the nature of the gendered power relationship between women and men, especially in decision-making contexts). This includes advocacy for meaningful participation of women in decision-making by promoting their inclusion and supporting them through capacity building activities. To achieve an acceptably high number of women in participation (decision-making and implementation) it could be needed to apply affirmative action as it would help to compensate for past ?discrimination? and/or to address existing inequalities.

An in-depth gender analysis aiming to empower women as well as men and work towards achieving gender-equitable outcomes will capture and utilize the dimensions:

? Equal/appropriate participation or representation of women and men ? in decision-making as well as project implementation activities.

? Women?s and men?s different needs based on their concerns, experiences (including with regards to their roles and responsibilities), and constraints.

? Whether proposed activities/approaches will lead to gender-responsive results (and not unintendedly reinforce gender inequity).

? Collection of gender-disaggregated data.

The gender-mainstreamed project will be developed based on in-depth analysis of gender context from the concept phase that will include gender indicators/targets/outputs in the log frame, so they?ll be part of ongoing monitoring and with the clearly sufficient financial and human resources dedicated to the corresponding activities.

Gender access, participation, and benefits among women and men will be monitored and remedial action incorporated to redress any gender inequalities in project implementation. Regularly report on how gender is mainstreamed and ensure that mid-term review, assessments, audits, etc. include gender as a specific criteria/component.

Through this output, the project will build on the gender strategy developed during the PPG (and reported in this Project document) to draft a comprehensive gender strategy, based on a gender analysis/study to understand the differentiated impacts of IAS/LMOs and natural resource management, access and control protocols and processes on women, men and youth. Based on the strategy, the project will ensure that decisions made, and costed interventions proposed for implementation, take into account the potential impacts and outcomes for different groups within society, and in particular men, women and youth. The project Gender Mainstreaming Strategy should include the following core components:

? Gender Analysis and Action Planning: Engage different stakeholders and implementing partners to identify the impact of gendered impact of IAS invasion and habitat degradation. The framing of gender issues will support the development of a gender mainstreaming strategy.

? Gender Mainstreaming Capacity Building in Implementing Partners, Stakeholder, and the Community: Strengthen institutional capacity for mainstreaming gender in all implementing partners, key stakeholders and the beneficiary communities using gender mainstreaming frameworks and tools, the Household Decision Mapping Framework and the Gender Action Learning Systems (GALS) Methodology for empowering can have a cohort study that follows a certain number of households and document changes that are happening. It will document and share lessons in the form of impact stories, training manuals and reports. It will also facilitate policy dialogue on key institutional barriers and influence policy shifts.

GENDER ACTION PLAN WITH COST ESTIMATES

Outcomes	Outputs	Actions	Indicators or Targets	Responsibilities	Timeframe	Budget $
	Component 1: Effective Biosecurity Legislative, Policy, Regulatory and Institutional Frameworks					

Outcome 1. **An integrated and harmonized policy and regulatory framework for Bioresource Management in place** .	**Output 1.1** National policy for integrated bioresource management ensuring biosecurity for IAS and LMOs developed as part of the new NBSAP 2030 in line with the GBF	Ensure equal participation of male and female government staff in decision making towards formulation of operational policy, regulatory and institutional framework. on IAS/LMOs Encourage women participation in analysis of gaps and opportunities for effective implementation of Bioresource management Consult women, men, and youth in target communities and involve them equally in decision making towards formulation of policies and regulations. Include gender issues in adopted policies, strategies and plans.	At least 30 percent of decision makers from government organizations are from the underrepresented group (women or men). At least 30 percent of decision makers from the target communities are from the underrepresented group (women, men, and/or youth). At least 30 percent representation in strengthening and updating of NBSAPs/Biosecurity component from vulnerable gender groups Number of gender and social issues addressed in polices/strategies and action plans.	- Lead Agencies: - Gender Focal Points Collaborating Partners: - Project Manager - National Gender Specialist	Project timeline ? assessment at mid-term and terminal evaluation	2000

	Output 1.2 Subsidiary regulation (law) on both IAS and LMOs developed, existing legislation is strengthened for more effective biosecurity and regulations on Liability and Redress	Strengthen women participation by organizing women and youth led discussions with relevant stakeholders to develop regulation on IAS to ensure biosecurity process in the country Inclusion of women scientist in technical committees and as experts/resource persons for conducting review and regulatory development. Encourage gender balance representation from relevant government organizations in establishing cooperative networks in the country to support liability and redress for IAS and LMOs Include gender issues in adopted laws, legislations and guidelines.	At least 30 percent of decision makers from government organizations are from the underrepresented group (women or men). At least 30 percent of scientists from research and technical institutions are from the underrepresented group (women or men	Lead Agencies: - Gender Focal Points Collaborating Partners/scientists: - Project Manager - National Gender Specialist	Project timeline ? assessment at mid-term and terminal evaluation	3000
	Component 2: Integration of biosecurity into Biological resource management					

Outcome 2a): **Institutional systems for decision making in an integrated biosecurity framework enhanced and strengthened**	**Output 2.1** National capacities in risk analysis frameworks, detection and identification for monitoring and management for LMOs IAS strengthened with defined guidelines and manuals.	Inclusion of women scientist in technical committees and as experts/resource persons for conducting trainings. Encourage participation of women for thematic trainings and networking activities Inclusion of women scientist for conducting risk assessment and risk management for IAS/LMOs and in technical committees and as experts/resource persons. Encourage inclusion of women in the training and mentorship on adaptation of guidelines, procedures, technical tools etc. on various thematic areas for strengthening national biosecurity capacities. Encourage role of women as trainers and advisors for national level trainings.	. At least 30 percent of gender focal points and government staff trained towards capacity building are from the underrepresented group (women or men).	Lead Agencies: - ME Collaborating Partners: - Project Manager - National Gender Specialist - PSC	Project timeline ? assessment at mid-term and terminal evaluation	4000

Outcome 2b). **Capacity in place to support implementation of policy, regulatory and institutional framework for effective biosecurity**	**Output 2.2** National institutional arrangements for LMO and IAS decision-making (authorization) check points, emergency responses, guidance and manuals strengthened/developed	Encourage participation of women for thematic trainings and networking activities Encourage a balance representation of women in technical committees and scientists and laboratory personnel and other resource persons for establishing cooperative networks in the country. Involve women in training process on IAS/LMOs identification, monitoring and management procedures Identify and include women and youth groups representation in informed decision-making process at national level. Encourage gender balance representation from relevant government organizations in establishing cooperative networks in the country.	30 percent of each gender group representation in technical committees. 30 percent of each gender group representation of trained women scientists as resource person to promote cooperation and networking in biosecurity sector 30 percent of each gender group representation among scientists/experts and resource person for national and international trainings and networking activities 30 percent of each gender group representation among scientists as resource person to build capacities for decision making in biosecurity sector, including check points, emergency responses, guidance and manuals developed inclu	Lead Agencies: - MoE Scientific and Technical Institutions Collaborating Partners: - Project Manager - National Gender Specialist	Project timeline ? assessment at mid-term and terminal evaluation	4000

		Inclusion of women scientist in technical committees and as experts/resource persons for conducting trainings. Encourage inclusion of women in the training and mentorship on adaptation of guidelines, manuals, procedures, technical tools etc. on various thematic areas for strengthening national biosecurity Encourage participation of women for thematic trainings and networking activities Include women in establishing institutional biosafety committees at national level.	ding Liability and Redress			
	Component 3: An unified system for Knowledge management, Public awareness, Education, Communication on biosecurity					

Outcome 3: **An integrated mechanism for knowledge management, public awareness, education and information sharing on IAS and LMOs established and implemented**	**Output 3.1** Unified Portal for Information Sharing in line with the CBD?s Integrated approach on Clearing Houses set up with the requisite national database and registers for IAS and LMOs, including GIS mapping and spatial planning resources.	Implement gender sensitive awareness/educational programmes Develop and use appropriate methods for sharing information based on different needs and interests of women, men, and youth. Encourage women to take ownership of the integrated mechanisms Clearing Houses set up with the requisite national database and registers for IAS and LMOs, including GIS mapping and spatial planning resources Encourage women and youth groups hold leadership/managerial role in IAS and LMOs knowledge management	. At least 30 percent of the underrepresented groups (women, men, and/or youth) have access to correct information.	Lead Agencies: - Gender Focal Points Collaborating Partners: - Project Manager - National Gender Specialist	Project timeline ? assessment at mid-term and terminal evaluation	3000

	Output 3.2 Awareness programs, training and educational curricula on LMOs and IAS developed, tested and implemented	Involve existing women and youth groups with leadership/managerial roles in project?s activities (e.g., awareness programmes, information sharing) to make the knowledge management process more participatory. Build gender issues into communication strategies to enhance cooperation and information sharing. Enhance awareness of women and youth on their roles as IAS and LMOs knowledge managers	. At least 30 percent of the underrepresented groups (women, men, and/or youth) are aware of threats and impacts of IAS and LMOs.	Lead Agencies: - Gender Focal Points Collaborating Partners: -Project Manager - National Gender Specialist	Project timeline ? assessment at mid-term and terminal evaluation	3000
. **Component 4: Establishment of a Monitoring and Evaluation measures for project delivery**						

Outcome 4: **Effective project coordination and delivery, meeting measurable outputs and indicators**	**Output 4.1** Systems and structures, technical support including Project Steering Committee for project management, accountability and monitoring of impacts established	Encourage women participation in project implementation and monitoring team.	30 percent women participation in project implementation and monitoring team	Lead Agencies: - Gender Focal Points Collaborating Partners: -Project Manager - National Gender Specialist	Project timeline ? assessment at mid-term and terminal evaluation	3000
	Output 4.2 Continuous monitoring with Mid-term and Terminal Evaluations undertaken and Lessons Learnt and Best Practices prepared and disseminated	Encourage women participation in project implementation and monitoring team.	30 percent women participation in project implementation and effective monitoring in order to share experiences	Lead Agencies: - Gender Focal Points Collaborating Partners: -Project Manager - National Gender Specialist	Project timeline ? assessment at mid-term and terminal evaluation	3000
Total						**25000**

A Gender action plan with costing for the project is placed as **Annex P.**

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources; No

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women No

Does the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

The activities of idustry and private landowners are key IAS drivers. Private industry representatives will work closely with the project with regards to IAS issues of relevance to land management. Private industry and industry associations (such Chambers of Commerce) will be consulted over the biosecurity implications of trade-related issues and will be the target of awareness raising and capacity building activities based around the development and implementation of good practice guidelines to embed IAS issues into key sectors whose activities have IAS implications. Private sector engagement in public awareness, biosecurity communication and participation and potential material/technology transfer and product development activities will be strengthened.

Biosecurity is a cross-cutting issue with involvement and impact on multiple sectors. The project will support the concept of public-private partnership and cooperation at the national level for enhancing capacities. The representatives of private companies and industry associations (e.g., feed and seed importers, feed processors, farmer unions, companies dealing with GMOs) will benefit from information exchange and from operating biosafety framework.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

Risk Analysis and Risk Management Measures

The project to elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation (table format acceptable):

The following table summarizes the information about the identified possible risks, level of risk and the proposed mitigation measures under the project:

Moldova is affected by climate-related natural hazards, such as droughts, floods, hail, soil erosion and landslides which have important negative impacts on agricultural production, crop quality, water supply, and population health. Climate change models forecast shows that the frequency and severity of climate disasters will increase. In turn, the high degree of land degradation exacerbated the vulnerability of agro-ecosystems to climate fluctuations. Thus, the project interventions for promoting ecosystem conservation practices will

contribute to mitigation of climate change impact to natural landscapes and adjacent rural communities *(Table 4).*

Table 4. *Key risks affecting the project objectives and proposed mitigation measures are listed below.*

KEY RISKS	Rating	MITIGATION MEASURES
Governance As a result of political instability there is a risk to divert the attention from important institutional development that can negatively impact the project implementation.	Medium	The UNEP-GEF project will help mitigate this risk to a limited extent by engaging stakeholders from across the political groups and by offering a platform for inter-ministerial discussions on important and major areas of reform that need to be pursued. Continuous communication and involvement of all relevant stakeholders, to ensure that proposed activities are not politically divergent. Consultations and communication will be an important part of the proposed activities.
Regulatory barriers There are significant governance challenges including insufficient linkages between legislature and executive power, and a low level of regulatory enforcement.	Medium	A number of regulatory and enforcement documents to implement laws will be developed and consulted with the sectorial actors. In addition, an Inter-Ministerial Steering Committee will help with both project implementation and coordination among agencies. A strong cooperation with the National Biosafety Commission, Scientific Council on Protected areas, National Commission on Red Book will be established during the project execution.

Coordination between stakeholders The project needs to engage numerous sectorial governmental agencies, academia, private business, farmers, local authorities NGOs etc. Lack of coordination among multiple groups may slow down the project. A possible risk is low interest of farmers and communities to be involved in the demonstrational good farming practices to replicate it for other stakeholders.	Low	The project is likely to apply the implementation and coordination activities supported by local and international experts to a number of coordination meetings, workshop and trainings addressed to all key actors and stakeholders. Decision makers and public awareness and participation will be promoted using the BCH system, large campaign of information and awareness.

Due to climate change impacts, public perception towards LMOs change, especially if LMOs perform better under climate change conditions	Low	Potential use and import of LMOs may increase under increased temperature, heavy droughts and other climate change related results due to tolerance to abiotic stresses. Climate hazards, such as extreme temperatures, lasting droughts, late spring and early fall frosts, hail and heavy rain, have had significant impacts on productivity, incomes, and natural resources of Moldova and are expected to generally increase in intensity and frequency in a changing climate. According to the Third National Communication of the Republic of Moldova under the UNFCCC (2013), drought is one of the most common and devastating extreme climate events in Moldova. A major part of Moldova (74.5%) relates to dry sub-humid (UNCCDAI = 0.50-0.65) and semi-arid (UNCCDAI < 0.50) lands. It is in dry lands the agricultural ecosystems are more vulnerable to climate and the balance of production and consumption often depends on water resources. Accounting for 13% of the total number of hazards, droughts in Moldova make up 67% of the economic losses from weather and climate related risks. Insufficiency and high variability of precipitation are the main drivers of drought and significant failure of water resources and agriculture production, creating a challenging environment for all sectors of human activity. Floods also affect the Republic of Moldova on a recurring basis. In the past 70 years, 10 major floods on the great rivers of the Republic of Moldova (Nistru and Prut rivers) were reported, and three of those occurred in this decade (2006, 2008 and 2010). More recent events have had a significant impact: the 2007 and 2012 droughts caused estimated losses of about US$1.0 billion, respectively US$1.25 billion; the 2008 floods cost the country about US$120 million. (Second National Communication of the Republic of Moldova under the United Nations Framework Convention on Climate Change. Chisinau, 2009). The three SRES emissions scenarios project similar temperatures in the near-term decades +1.2 -1.40C throughout the Republic of Moldova. Only starting with the 2050s the three emissions scenarios produce temperature patterns that are distinguishable from each other. The rate of warming is higher under A2 ensemble and it reaches +4.3 0C; medium - under A1B, +3.8 0C, and smaller +2.7 0C - under the B2 emission scenarios by the 2080s. By the 2081-2100 period the climate aridization will be felt during the whole veg etation period (April to September); it will be much more pronounced and may result in values characteristic to the semi-arid climate (AI = 0.21-0.50). Analysis of data shows that by the 2081-2100 time the drought conditions of HTC ? 0.7 will be observed on the whole territory of Moldova, those levels can achieve even the values characteristic of the medium drought (HTC = 0.6) and strong drought (HTC ? 0.5). (Fourth National Communication of the Republic of Moldova to the UNFCC, 2018.

		Because of climate change on food security and food production in the country, potential use and import of LMOs that are supposed to be more resilient and tolerant may increase. The population of invasive alien species may also be spreading due to their resistance and better adaptation to climate change effects. The local genetic diversity of spontaneous flora and fauna may suffer under the severe droughts and high temperatures because of climate change, affecting their natural habitats and ecosystems. During the PPG phase, the potential of climate change scenarios on the country?s response will be integrated into capacity building interventions and into the design of policies to ensure that such changes to public attitude to LMOs and IAS are anticipated and proactively managed. Furthermore, the project purpose is to strengthen country?s capacity to effectively manage safe handling and use of LMOs and IAS.

Vulnerability of social groups, communities and poverty	Medium	According to the Inequality Study Moldova (SDS, 2022), 47% of the population of the Republic of Moldova belong to a **vulnerable social class** and find it difficult to cover their expenses for what is strictly necessary. If the incomes of some poor people increase, this is due to remittances. The study shows that the most affected by **poverty** are the elderly, especially women. 55% of households of people with disabilities say that water and sewerage services are very expensive and in the case of Roma this figure amounts to 66%. **Farmers** are also in a difficult situation. From a gender perspective, women continue to be a vulnerable group in virtually all areas. 17% of women have a big problem to buy medicines worth 10.8 USD because they do not have money, and 37% - because they do not have enough money. 42% do not consult a doctor even if they need it. About 16% do not go to the hospital regardless of the problem due to lack of time or financial means. Likewise, women are more likely to be subjected to violence. One of the rea-sons is that many victims believe that it is good to tolerate violence in order to keep your family safe. Lack of income among the **Roma minority** confirms their non-employment, and consequently they do not have any medical insurance. Only 42% of Roma people have an insurance policy, compared to 72% of non-Roma people. Roma do not go to the doctor because they do not have money. The data in the report show the lack of will of the local public administration to involve the Roma in decision-making. 21% of Roma say they are ready to participate in community decision-making. **Migration** is a very intense phenomenon in the Republic of Moldova. An impressive number of immigrants (most of whom are returned migrants) and emigrants has been registered in the last five years. According to the Annual Social Report (2018), in 2017 al-most 110,000 immigrants have entered Moldova and almost 160,000 emigrants left the country, forming a negative net migration of about 50,000 people in that year. In 2015, the child poverty rate was 11.5%, while that for general population 9.6%. Including 0.2% of children are exposed to extreme poverty. The **poverty rate for rural children** is 9 times higher than the poverty rate for those in urban areas. In the 2019 Public Opinion Barometer (BOP) shows that 43.3% of respondents have answer that the family income is enough only for what is strictly necessary, and 21.7% said that their family's income is not enough for the strict necessary, and only 3.2% mentioned that with the family income they manage to have everything they need. (UNECEF, 2020). Thus, poverty in Moldova is quite high, especially among **vulnerable groups**, such as families with many children and families with a single parent. A significant impact on poverty reduction and the increase in the standard of living of the disadvantaged modification of the mechanism for granting social assistance, which contributed to the reduction of the absolute poverty rate by 0.7%, and aid for the cold period of the year by 0.2%. Low

		incomes and high risks of poverty are caused by limited economic opportunities, which impede the population, especially vulnerable groups, to achieve their professional aspirations. As a result, Moldova has one of the lowest employment rates in Central and Eastern Europe (41% in 2016). Totally 1.9% of young people up to 24 years old have benefited from unemployment benefits in 2015, and in 2019 only 1.5%. **Young people of rural areas** report lower levels of quality of life than young people in urban areas. In general, women report lower quality of life than men. Moldova?s inter-national ranking in the report ?The Youth Progress Index 2021? places Moldova on the 66th place out of 150 evaluated countries, presenting a score of 68.17 (European Youth Forum, 2021). Much of the current and predicted impacts of climate variability and climate change are concentrated in rural areas, where populations have fewer resources. Rural low-income communities are particularly vulnerable to the impacts of CC due food insecurity, in-creased health risks, reduced agricultural productivity and increased incidences of extreme events (FAO, 2020). In addition to being more exposed to climate risks, socially vulnerable groups are also less able to adapt to these risks, because of financial and institutional barriers.

An outbreak of diseases (Covid-19)	Medium	Moldova has had as of 31st March 2022 a total of 513,146 cases of COVID-19 since the start of the epidemic. A number of 11,4321 COVID-19 related deaths occurred (Ministry of Health). The country declared a pandemic emergency regime on full lockdown for the period of 16 March ? 16 May 2020, and the sanitary emergency regime has been prolonged until today. Moldova is the first in a series of 39 countries for which this first round of data since the outbreak of COVID-19 are available. The data provide a snapshot of business performance at the height of the crisis in April 2020 relative to the pre-COVID-19 baseline. (World Bank: The growing impact of COVID-19 on Moldova?s private sector). The impact of the pandemic on SMEs has been significant, with most companies reporting sales declines of up to 75-100%. The main factors affecting the work of companies have been the decrease in demand for products and services, work restrictions, limited access to raw materials or supply disruptions (especially for imported materials) and distribution chains, decreased labor productivity. Eighty-eight per cent of the entrepreneurs reported a negative effect of the pandemic, especially those in HoReCa, domestic non-food trade and services. (UNDP Moldova. Policy dialog: The socio-economic impact of the COVID-19 pandemic on Small and Medium Enterprises in the Republic of Moldova). The infection rate has increased dramatically post-lockdown. After initial containment progress, Moldova is currently seeing higher infection rates than peer countries (MD: 8,527cases per million population; RO: 2,089; UA: 1,395), while testing lags behind some neighboring countries in the region. The COVID-19 pandemic has found the Moldovan economy in a vulnerable position. An economic recession in 2020 seems imminent. The impact comes from two factors: External (decline in exports, remittances and FDI), and Internal (strict containment measures). (Social and Economic Impact Assessment of COVID-19 in Republic of Moldova. Deliverable 1 ?Initial impact assessment report, 2020) The outbreak of COVID-19 has already affected work nationally and will have a major impact on the economy of the country. Under such conditions, the government is expected to focus public resources on rebuilding the economies of the country. This might affect the co-financing of the project and the ability of the project to deliver on the GEBs. However, the set-up of stringent biosecurity conditions will also be priorities for post-COVID to mitigate the recurrence of such pandemic and diseases. During PPG and project implementation the importance of having a strong integrated biosecurity management system will be communicated as part of the green recovery program of the country. Potential impacts on the commitment of co-financiers and partners will be assessed in detail during the PPG phase to develop adequate risk mitigation actions. The current COVID-19 situation will be taken on board during the project and the risks will be mitigated by trying to carry out relevant activities via

		alternative working methods (e.g. videoconferences, telecommuting, recourse to national human resources in the countries, etc.). Any mitigation measure will have to be discussed between the implementing and the executing partners/agencies. The risk is only partly under project control. Biosecurity considerations which are at the base of Biosafety capacity building and implementation will be fully triggered both to ensure human and environmental safety to project implementation measures and execution of activities, including project deliverables.
Gender-inequitable context in country that could be a challenging environment	Medium	There is gender-inequitable context in country that could be a challenging environment to work in and achieve gender-related results. According to the UNDP Human Development Report, the Human Development Index for the Republic of Moldova is 0.750 and the ranking is 90. Inequality Inequality-adjusted HDI (IHDI) - 0.672; Gender. Gender Development Index (GDI) -1.014; Poverty. Population in multidimensional poverty, headcount (%) - 0.9. Global Gender Gap Index for Moldova is ranking 28 out of 156 countries, and the Score is 0.768 in 2021 according to the World Economic Forum report. During the PPG phase a special attention will be paid to involve women in all implemented activities including stocktaking phase, theory of change, project design, inter departmental communication, relations and awareness with main stakeholders, assessments and review and project activities designing. Regular meetings with women will help to ensure their large participation and incorporating their suggestions and interests.

Ukraine crisis in Moldova	High	As of today, over 250,000 people from Ukraine have crossed the country's border, out of which over 100,000 remained in Moldova, these numbers being in continuous rise as the military actions intensify. Almost 90% of the total number of refugees are women with children ? one of the most vulnerable group of persons being highly exposed to different risks and challenges. Military provocations in Transnistria region of Moldova that happened during the first week of May 2022 provide social tension and instability over all country. The Security Council of Moldova decided to extend the Security restriction period for the next 60 days. Moldova is facing massive challenges after hundreds of thousands of Ukrainian refugees entered the country seeking shelter from Russia?s invasion in 2022. Moldova is already struggling with its own economic difficulties. According to the latest UN report, the Republic of Moldova is the first in the top five countries to receive refugees from Ukraine - with almost 1,400 people per 10,000 inhabitants. The United Nations Development Program states that over 30% of Moldova's population could fall below the poverty line due to the conflict in Ukraine, and every second Moldovan is at risk of becoming poor next year. The Government is currently working on a resilience plan, which will include quick solutions to ensure socio-economic resilience. This plan has several dimensions. The first is to maintain the purchasing ability of the population. The increased pension fund and increased pensions above inflation would be one of actions. This fund has been increased by 30% compared to last year through various mechanisms. A reform the welfare system to help families with children. Financial support for economically active families, who need the care of young children, who do not have access to the nursery, so that parents remain economically active. The second dimension is energy security, it is planned to create natural gas reserves. To have electrical infrastructure and interconnection projects with Romania, so that it is expected to diversify the supply. A third dimension is economic competitiveness seeking to develop small and medium enterprises. The fourth dimension is food security. There is to have to make sure that the necessary food is produced internally and that reserves are sufficient. The fifth dimension is public safety. For this, a macro-economic support is need, which should be directed towards increasing the country's resilience. Authorities struggle to deal with the ongoing flood of refugees; however, the project may be a possibility for people to recover some of their economic capacities after the Ukraine crisis is over. Local authorities (which are important stakeholders in the project) are possibly currently overwhelmed by the number of refugees from Ukraine and will probably be less inclined to participate in workshops or other project-activities.

		The Moldovan project team will observe the situation in relation of effects from the Ukraine crisis. If any problems occur and actions are needed (e.g. problem in the stakeholder participation ? conducting meetings) the project team will immediately clarify the next steps. Considering this situation and in order to get information on the status of the project will be established on a regular basis (monthly) via meetings.

The Safeguards Risk and Identification Form is attached as **Annex O.**

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

i. UNEP will be the Implementing Agency who will have its role to overall supervision and support in accordance with the GEF and UNEP rules and procedures, financial planning and reporting process.

ii. The Ministry of Environment (Mo E) will be the Executing Agency through a national inter-agency task force to facilitate in-country coordination and multi-stakeholders? representation across sectors to ensure their input to IAS and LMOs management. The Government of Moldova intends to leverage GEF resources to complement their ongoing activities and facilitate effective implementation of the CBD, CPB conventions. All efforts will be made to ensure synergy between the ongoing projects/programs, avoiding overlaps and optimize the available resources. The MoE will provide an overall administrative coordination of project activities in accordance with the national legislation and international agreements, interdepartmental collaboration, and multi-stakeholders involvement in the project implementation.

iii. Effective project implementation will be provided through establishment of a Project Steering Committee (PSC), chaired by the Ministry of Environment (Mo E), with members from relevant agencies. This PSC will review the project twice a year and will work closely with various ongoing initiatives carried out by other Ministries and stakeholders. The Project Steering Committee will ensure a good coordination between governmental bodies and stakeholders.

Roles and responsibilities of the project?s governance mechanism:

Implementing Partner (IP): The Implementing Partner for this project is the **Ministry of Environment (MoE) with its affiliated institution- the National Office for Environmental Projects Implementation (NOEPI).** The Implementing Partner is the entity to which the Ministry of Environment has entrusted the implementation of UNEP/GEF assistance specified in the signed project document along

with the assumption of full responsibility and accountability for the effective use of project resources and the delivery of outputs, as set forth in this document.

The Ministry of Environment has been selected as the IP as it represents the government institution responsible for the development of legislation, action plans, norms and standards in the field of environmental protection, sustainable use of natural resources, including management of protected areas, air, waste, water resources, water supply and sewerage system, ensuring compatibility of legal framework with Multilateral Environmental Agreements (MEA). The responsibilities of the Ministry of Environment will include:

? Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems;

? Chairing the Project Board meetings;

? Monitoring the progress of the project at strategic level, towards the achievement of the development outcomes;

? Ensuring effective management of the Risks and Safeguards as outlined in this Project Document and management of new risks that may emerge during project implementation.

? Ensuring that the project partners will deliver the pledged co-financing;

? Ensuring that there is a coherent project organisation structure and logical set of work plans;

? Set tolerances in the AWP and other plans as required for the Project Manager;

? Financial management, including overseeing financial expenditures against project budgets;

? Approving the multiyear workplan;

? Approving the combined delivery report at the end of the year;

The Ministry has founded the National Office for Environmental Projects Implementation (NOEPI) as per the Law nr.98/2012 (art 4, point b), GD 695/2017 (7th point), GD145/2021 and GD 1249/2018 in order to overcome the above mentioned barriers, and enable the receipt and management of the donor funded projects. The NOEPI is the public institution, functioning under the MoE mandate, responsible to contributing to policy implementation through specific projects. The work of NOEPI is monitored by the MoE and other state authorities as follows:

? Minister of Environment is Chair of NOEPI Steering Committee

? NOEPI establishes the Steering Committee of the Projects implemented by NOEPI, while the ministry?s staff are regular members of the Project Boards

? Internal Audit Unit of the Ministry of Environment has the authority to conduct the audits of NOEPI accounts

? State Financial Inspection has the authority to perform financial controls of NOEPI

? The thematic and complex controls initiated by National Court of Accounts in environment area and sub-areas.

The Ministry of Environment (MoE) has the institutional mandate in a field that is relevant for the project and responds to the key programmatic criteria, having the capacities to ensure quality programme management, provide synergies, replicate and upscale project results, mobilize development partners and ensure national-level co-financing for the project. The MoE has experience and technical capacity to supervise, monitor, and ensure adaptive management and risk response towards delivery of project outcomes and outputs. MoE will be supported by the NOEPI in the implementation of this project. From this perspective and under this arrangement, the MoE will have substantive supervisory, leadership and strategic planning functions and roles, while the project administration responsibilities and functions (contracting, recruitment of personnel and experts, finance administration and administrative support to project processes) will be conducted by the NOEPI under the leadership of the MoE.

The National Office for Environmental Projects Implementation (NOEPI): The Public Institution ?**National Office for Environmental Projects Implementation (NOEPI)?**[1] is the successor of rights and obligations of the former eight project implementation units of the former Ministry of Environment (on different thematic areas such as ozone, biodiversity, climate change, environment pollution, biosecurity, etc.). Thus, the NOEPI is mandated to implement various multilateral donor-supported projects (e.g. UNEP, UNDP, UNIDO, WB et al.) and bilateral donor funded initiatives. NOEPI is a legal entity with individual state coat stamp, name and treasury accounts and was established with the purpose of supporting the Ministry of Environment to efficiently implement the external and internal financial and technical assistance projects, in accordance with the provisions of the national normative acts regarding the implementation of the requirements of the international conventions, and the alignment with the international standards in the field of environmental protection.

The NOEPI will be accountable to the Ministry of Environment in accordance to as responsibilities and obligations outlined in the EPIU statute and Government Decision No. 1249/2018. The implementation support services to be provided by the NOEPI will include:

• Contracting and contract management for procurement of goods, services, and works for the project at national level;

•Certification for contract performance and acceptance of goods and services as per Project Procurement Plan;
•Financial management, including payments for goods and services involving national consultants and made in national currency.
•Logistical support, including duty travel for project personnel and consultants, project event management within the country.
•Equipment and Asset Management services, including IT equipment maintenance, licenses, and ICT support for the project team and project activities.
•Administrative support for the project.

The NOEPI will support the implementation of project activities as per the Annual Work Plan, Procurement Plan and Budget, agreed with the Ministry of Environment and UNEP.

Project stakeholders and target groups:

The participation and contribution of stakeholders and key target groups are critical for the success of the project, for stakeholders at both the national and local levels. The project applies participatory approaches to ensure government ownership and full stakeholder engagement under each project component. The Project Board or Steering Committee involves the Ministry of Environment (MOE), the Agency ?Moldsilva?, the Environmental Agency, representatives of the State Moldovan University (academia) NGOs, etc. Full membership will be identified during the Inception phase. Each organization will nominate a full member.

UNEP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNEP and GEF policies and procedures and the standards and provisions. Outlined in the project agreement document**.**

Project Management Unit: Project management services including safeguards monitoring will be delivered by the Project Management Unit (PMU), hosted by NOEPI under the Ministry of Environment mandate, staffed as follows:

•The Project Manager (PM) has the authority to run the project on behalf of the Implementing Partner, and will attend the Project Steering Committee meetings. The Project Manager is responsible for day-to-day management and decision-making for the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. The Project Manager?s prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The Project Manager will oversee implementation of environmental and social safeguards updates, raising awareness about project.
•**The Project Manager** will be supported by a **Project Administrative/Financial Assistant**, who will assist in project planning, revisions and budget execution documents, contracting of national / local consultants and all project staff, in accordance with UNEP procedures and national legislation requirements. In addition

the M&E and Gender consultants will provide technical support services on the project and monitoring of safeguards. The PMU will be further supported by national technical experts, research institutes and NGOs.

The project is in line with a series of ongoing capacity building initiatives implemented by a number of relevant ministries and departments in Moldova, namely: Ministry of Health (MoH), Ministry of Education and Research (MoER), Environment Agency (EA), ?Moldsilva? (Forest) Agency (MA), Inspection for Environmental Protection (IEP), National Agency for Food Security (NAFS), National Biosafety Committee (NBC), relevant research institutes and universities with biological and agricultural profile - Institute of Genetics, Physiology and Plant Protection, Institute of Botany (Botanical Garden) Alexandru Ciubotaru, Institute of Zoology, Institute of Ecology and Geography, Institute of Forestry Management, Moldovan State University, Agrarian State University (now State Technical University), et others.

At completion of the project, an integrated management system would be established in Moldova that responds to the sustainable use of biodiversity, control and prevention of Invasive Alien Species and to ensure an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms (LMOs).

The project will be focused to ensure management of IAS and LMOs in a multi-disciplinary and cross-sectoral participation. The **Project Steering Committee** will further ensure good coordination between governmental bodies and stakeholders. The project is in line with a series of ongoing capacity building initiatives implemented by a number of stakeholder Ministries and departments in Moldova. The project implementation will be strategically guided by a Project Steering Committee (PSC). An existing management entity will serve as a fiduciary agency and provide support for general coordination of implementation, procurement, financial management and monitoring and evaluation. There are governmental stakeholders: the Ministry of Environment (MoE), Ministry of Health (MoH), Ministry of Education and Research (MoER), ?Moldsilva? (Forest) Agency (SFA), Academy of Sciences of Moldova (ASM) and research institutions, the Inspection for Environmental Protection (IEP), National Agency for Food Security (NAFS), Customs Control Services (CCS), National Biosafety Committee (NBC), as well as universities with biological and agricultural profile (Moldova State University, State Agrarian University) et oth. A leading role will be provided by the Ministry of Environment as the national authority for biodiversity conservation and acting as the national executing agency through a national inter-agency task force to facilitate in-country coordination and multi-stakeholder representation across sectors to ensure their impute to the integrated management system for biological resources. The gender parity among members of stakeholder entities will be ensured by encouraging women to take on leadership roles in an effort to have women in decision-making bodies/positions. A gender-related government entity will be fully respected and implemented in the Project Steering Committee for oversight of gender mainstreaming and/or a civil society organization i.e. the Moldovan Women Association and ensure there is gender expertise present in the Project Management Unit (PMU) to support the implementation of gender-related interventions. The Public Institution National Office of Environmental Projects Implementation (NOEPI) of the Ministry of Environment of Moldova will serve as the PMU. The Government of Moldova intends to leverage GEF resources to complement their ongoing activities and facilitate effective and integrated implementation of

the CBD, NP, CPB and NKSP. All efforts will be made to ensure synergy between the ongoing projects/programs, avoiding overlaps and optimize the available resources.

Effective project implementation will be provided through establishment of a Project Steering Committee, chaired by the MoE, with members from relevant agencies. This PSC will review the project twice a year, and will work closely with various ongoing initiatives carried out by other Ministries and stakeholders.

Gender-disaggregated performance indicators will be assessed. Monitoring and evaluation will include gender-specific indicators in management/regulatory agency positions and of the presumed result of greater gender equity including the impact of biosafety at household community and household levels (increased family income, improved household wellbeing, more efficient businesses, and improved Biosafety measures). Results will be disaggregated to demonstrate distribution of results across the different genders, biosafety expertise, opportunities in decision making (through the Project Steering Committee and the Expert Technical Groups), socio-economic and local communities.

Soft skills required for effective project delivery and efficient functioning of NBF institutions, including provision of platforms for information and experience sharing on biosafety, will be enhanced at the intercountry level. Throughout the implementation of the project, gender disintegrated data will be compiled on the project personnel and on project participants/ beneficiaries. The project will endeavor to balance gender representation and participation across all levels of project implementation. Similarly, these considerations will apply as the project reviews and adopts existing manuals and guidelines for local regional needs. For some specific technical tools that are internationally developed (by UNEP or SBCD, etc.),

The project will collaborate with other relevant programmes and initiatives in the field of biodiversity and nature conservation as listed under der baseline scenario in pages 47 ? 51.

Synergistic and joint activities will be promoted to ensure exchange of basic information and database, GIS mapping, selection of demonstrational areas and pilot activities, involvement/use in/of educational and training activities and materials, good practices of ecosystem management and farming, local community participation to support the delivery of the expected project results.

The proposed project implementation arrangements and decision-making flow chart for the project and the terms of reference for the project implementation and experts to be hired for project activities is placed as shown below and is detailed in **Annex K.**

DECISION MAKING FLOW CHART

The monitoring of the progress of project activities will be undertaken in accordance with UNEP?s internal guidelines for project monitoring and evaluation (M&E). In this respect, self-evaluation will be ongoing throughout the project and GEF/UNEP?s requirements of quarterly and half-yearly reports on substantive and financial matters will be provided. This process will include a mid-term evaluation/review and end-of-project evaluation undertaken by external review teams arranged by UNEP.

Deliverables will be identified on a timetable agreed between UNEP and each participating country, and country-specific final reports will be prepared at the end of the activities planned under this project. Project execution performance, delivered outputs and project impact will be measured according to the indicators developed in the project log frame, and using the specific Monitoring and Evaluation Plan that will be developed at the inception of the project. The general and specific objectives of the project, and the list of its planned outcomes, will provide the basis for this monitoring and evaluation plan.

Coordination with ongoing GEF UNEP projects

Coordination with recent, ongoing and pipeline GEF-UNEP projects in Moldova will be emphasized, with a focus on the following projects:

? GEF/UNEP project ?GEF Enabling Activity: GBF- Early Action Project? (2022-2024). Component 1: Rapid review of NBSAP for alignment with the post-2020 GBF; Component 2: Assessment of monitoring systems; Component 3: Policy and institutional alignment and review for coherence with Global Biodiversity Framework; Component 4: Biodiversity Finance Activities.

? UNEP and UNEP-WCMC Project ?Building national biodiversity information supply and demand in Pan Europe to support implementation & progress review of the post-2020 global biodiversity framework?. (2022-2023). The regional project for Ukraine, Uzbekistan and Moldova is aimed to advise in the development of the national biodiversity information for specific topics of biodiversity.

? UNEP/GRID-GENEVA ?Mainstreaming biodiversity and ecosystem services in Eastern Europe and Caucasus (Moldova)?, the main objective of the project is to provide a remote sensing technology to national experts for helping a continuous monitoring of ecosystems. This is a transfer of capacities project that could be summarized into three principal aims: Transfer of know-how on data cube technology in the country; Provide an operational national one-scene footprint Data Cube; and Training for Data Cube users.

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[1] https://www.legis.md/cautare/getResults?doc_id=113696&lang=ro

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

The project will support Moldova to meet the commitment shown by its ratification of the CPB and relevant obligations under the CBD. Quality implementation of the CBD and its Protocol has a direct impact on the agricultural innovation and technology transfer policies of developing/evolving agricultural economies such as the partner countries in this proposal, and for the global economy and environment.

The consistency of the project with various strategies and plans or reports and assessments under relevant conventions are described below:

- National Action Plan for Adaptation (NAPA) under LDCF/UNFCCC
- National Action Program (NAP) under UNCCD
- National Biodiversity Strategies and Action Plan (NBSAP) under UNCBD
- National Communications (NC) under UNFCCC
- National Capacity Self-Assessment (NCSA) under UNCBD, UNFCCC, UNCCD
- Poverty Reduction Strategy Paper (PRSP)
- Others:
- Kunming-Montreal Global Biodiversity Framework post 2020 under the CBD
- Cartagena Protocol on Biosafety (CPB)
-6th National Report to the CBD
-4th National Report to the CPB
- Bern Convention on Conservation of European Wildlife and Natural Habitats (1979)

Being a Party to the CBD and the Cartagena Protocol on Biosafety, including the Nagoya-Kuala Lumpur Supplementary Protocol, the Government of Moldova is committed to fulfill its obligations concerning biodiversity management and ecosystem conservation. This coverage corresponds with the 2020 targets established by the National Biodiversity Strategy and Action Plan for 2015-2020 (NBSAP) (approved in 2015), the Sixth National Report on Biological Diversity (2018), the Fourth National Report to the Cartagena Protocol (2019), the National Environmental Protection Strategy 2014-2023 (2014), the National Ecological Network Program (2001), the National Strategy for Sustainable Development of Forestry Fund (2001), and the State Program on Forest Fund Areas Regeneration and Forestation, 2003-2020, (2003).

Strategy on Biological Diversity of the Republic of Moldova for 2015-2020 and the Action Plan. The 5 strategic goals for the realization of the Aichi biodiversity targets at the global level that shall be transposed into the national strategies are as follows:

- Strategic Goal A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society
- Strategic Goal B. Reduce the direct pressures on biodiversity and promote sustainable use
- Strategic Goal C. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity
- Strategic Goal D. Enhance the benefits to all from biodiversity and ecosystem services
- Strategic Goal E. Enhance implementation through participatory planning, knowledge management and capacity-building

The mentioned policy and regulatory documents are consistent with the planned activities under the project. For example, the provisions in the NBSAP on risk assessment, laboratory detection and identification of IAS and LMOs, public information and participation, liability and redress are in line with activities planned in the component 1, 2 and 3 of the project.

The Strategic Goal A, foresee the establishment of a sustainable management and efficient institutional framework for biodiversity conservation through ensuring the integration of international treaties requirements into national policies on biodiversity, specifying the activity on ratification of the Nagoya-Kuala Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety.

Under the *Strategic Goal B,* it is expected to reduce by 2020 the pressure on biodiversity to ensure sustainable development through developing procedures and strengthen capacities to assess risk/risk management as part of the living modified organisms authorization process, develop the liability and redress mechanism for biosafety. As result there is expected to ensure the biological security measures by developing 2 risk assessment procedures for the introduction of living modified organisms in the environment and the establishment of an advisory center. The *Specific Goal C* of the NSBAP, foreseen to implemented beyond 2020 proposes measures to stop the threats to biodiversity through interventions that stops soil degradation and mitigates the climate change effects, measures that decrease the negative impact of IAS on biodiversity by developing a study/program or practical guide on how to manage the IAS.

The *Strategic Goal E*, foresee to ensure by 2020 the scientific support for biodiversity conservation, access to information and promotion of education in context of sustainable development by ensuring the educational framework and training of personnel in field of biodiversity and biosecurity through organizing of special training courses, publication of 3 guides on best practices. Also, here is planned to raise public awareness and information level on biodiversity conservation.

The national policies in the fields of forestry management foresee a number of measures and actions for afforestation and extension of the total forest area till 15% of the territory, development of the national protected areas conservation and management plan, decrease of anthropic effects and pressure, conservation of biodiversity and ecosystem services. Ensuring biosecurity in the mentioned areas and sites become an actual need to preserve biodiversity and contribute to social and economic development in the country.

The project is thematically consistent with the GEF-7 Biodiversity Strategy in the context of Mainstreaming biodiversity across sectors as well as landscapes and seascapes, focusing to sustainably managing biodiversity in productive landscapes and seascapes and ensuring that any impact caused by productive sectors on biodiversity is avoided, or substantially reduced or minimized; supporting the complete and effective implementation of the Nagoya Protocol, the Cartagena Protocols and its Nagoya Kuala-Lumpur Supplementary Protocol.

The project will support regulatory and institutional capacities aimed at building an integrated risk-based management system for conservation of genetic resources, prevention from invasive alien specifies and management of potential adverse impacts of novel organisms to the natural ecosystems and implementation of best practices in ecosystem conservation. The project will also promote ecosystem adaptive conservation assisting in managing and monitoring of risks associated with IAS/LMOs unintentional transboundary movement and intervention.

The project will ensure the gender equality in line with the existent policy framework identified by the Strategy for ensuring equality between women and men in the Republic of Moldova for the years 2017-2021 and of the Action Plan (GD Nr 259/2017). Gender equality, poverty reduction, women leadership and participation in decision making, will be encouraged at all stages of the project implementation.

The project will contribute towards strengthening community and farm-level capacity and decision support systems for biodiversity, biosecurity and ecosystem sustainability. It will reinforce these outcomes by supporting land users and local communities in a wider landscape and ecological networks and emphasizing cross-sector integration of sustainable requirements into broader approaches towards biodiversity, biosecurity and landscape conservation, and ensuing harmonization of activities within different governmental institutions, local authorities and public sector.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

UNEP has an existing platform through the library of its project management database ANUBIS (A New UNEP Information System) for the Biodiversity/biosafety projects and related initiatives to learn from each other, share experience and expertise and tools and methodologies to support decision-making. ANUBIS also allows the projects to assess project outputs and reports in a user-friendly form. In addition, UNEP has created an annual forum for the projects to physically meet at regional/sub-regional level to learn and share experiences on project management including best practices and challenges, in addition to training on emerging issues. The project will also have access to UNEP Biosafety?s YouTube channel to access media files and share materials for the benefit of the projects in the portfolio. Existing mechanisms and training will be offered for the project to assess and share information on the Clearing House Mechanism of the CBD, Biosafety Clearing House platform and the integrated national platform on CHM, BCH.

UNEP, in active collaboration with the Secretariat of the Convention on Biodiversity, Cartagena Protocol on Biosafety and the Nagoya-Kuala-Lumpur Supplementary Protocol, will provide the technical aspects of project implementation and lessons learned from previews programmes and projects. The project is designed with the third component on knowledge management and learning. This component demonstrates the importance that the project places on timely access to reliable information as a foundation for risk-based management of IAS and LMOs. Activities undertaken under this component will review and consolidate existing information, establish monitoring systems and communicate relevant information in appropriate formats for different national and international audiences with an awareness plan. An internet based information sharing system will be enhanced its entry points for information and knowledge entry points or nodes for different stakeholders including the regulatory agencies, private sector, local communities and Civil Society.

The project involves demonstrations of community based ecological practices and related policies in Moldova, and the results will be shared with the public through awareness raising campaigns and biodiversity communication, e.g. publications, presentations, gender and children-related publications. For governmental and industrial stakeholders, the results will be summarized and distributed for replication. Lessons learned from introducing environmentally sound agricultural production and conservational activity in the sector and its integration in global environmental processes will be shared with other stakeholders and sectors, regions and countries to take sound environmental practices already in consideration during the project implementation steps. Furthermore, a gender-sensitive approach will be incorporate, which can comprise of, but is not limited to, the following:

? Use of male and female knowledge product, communication, and public education material developers for the diversity of perspectives and approaches, as well as male and female reviewers of these products.

? Use of gender-sensitive language and gender-balanced images (women not presented as victims but as agents of change).

? Examining context and content (use gender analysis; use convincing gender arguments based on reliable sources and qualitative and quantitative data including sex-disaggregated data).

? Referring to (inter-)national policy framework, policies, strategies, and plans, as applicable and appropriate.

The Knowledge Management Approach for the project, shall include a budget, key deliverables and a timeline and explaining how it will contribute to the project?s overall impact (Table 6).

Table 6. Knowledge Management deliverables, timetable and costs

Outcomes	Project Outputs	Activities	Year	GEF budget	Co-financing
OUTCOME 3. An integrated mechanism for knowledge management, public awareness, education and information sharing on IAS and LMOs established and implemented	Output 3.1: Unified Portal for Information Sharing in line with the CBD?s Integrated approach on Clearing Houses set up with the requisite national database and registers for IAS and LMOs, including GIS mapping and	3.1.1 Develop a Unified Portal for Information Sharing in line with the CBD?s Integrated approach on Clearing Houses to be set up with the requisite national database and registers for IAS and LMOs,	1,2,3 year	10,600	10,000
		3.1.2 Develop National Database and Register for IAS and LMOs, including GIS mapping and spatial planning resources as part of Monitoring and bioinformational system.	1,2,3 year	5,000	5,000

	spatial planning resources.	3.1.3 To develop and disseminate biosecurity outreach material in the form of primers, booklets, brochures, audio ? video resources, Instagram and Twitter pages etc. for multiple stakeholder categories.	1,2,3 year	50,000	50,000
		3.1.4 Two-days Meeting to Unified Portal for Information Sharing in line with the CBD?s Integrated approach on Clearing Houses set up with the requisite national database and registers for IAS and LMOs, including GIS mapping and spatial planning resources.	3 year	5,000	5,000
	Output 3.2: Awareness programs, training and educational curricula on LMOs and IAS developed, tested and implemented	3.2.1 Revise the list of Invasive species, its distributions in Moldova and the vulnerability of different natural ecosystems to different biological invaders in the light of climate change.	1 year	5,000	5,000
		3.2.2 National Gender Cross-cutting assessment overall project activities	1,2,3 year	5,000	5.000
		3.2.3 Develop Awareness programs, training and educational curricula on LMOs and IAS.	3 year	5,000	5,000
		3.2.4 A two-day Meeting on Revised the list of Invasive species, its distributions in Moldova and the vulnerability of different natural ecosystems to different biological invaders in the light of climate change.	1 year	-	5,000

		3.2.5 Eight one-days Meetings (in territory, LPAs) on Awareness programs, training strategy on LMOs and IAS on communication and awareness raising activities with various stakeholders from government, academia, local public administration women and NGOs, private business local communities etc.	2,3 year	30,000	30,000
		3.2.6 One-days Meeting to prepare strategies for mainstreaming biosecurity capacity into the national educational systems and curricula development	3 year	5,000	5,000
OUTCOME 4: Effective project coordination and delivery, meeting measurable outputs and indicators	Output 4.1: Systems and structures, technical support including Project Steering Committee for project management, accountability and monitoring of impacts established	4.1.1 One-day National Inception workshop with various stakeholders from government. Academia, local public administration, local communities, NGOs, private business, women, media etc.	1 year	5,000	5,000
		4.2.2 Carry out Terminal Evaluation (Terminal Evaluation report) and institutionalize the establish systems for continuity beyond the Project and publications for stakeholders	1,2,3 year	30,000	30,000
Total				**155,600**	**160,000**

9. Monitoring and Evaluation

Describe the budgeted M and E plan

Monitoring will be carried out by the project coordination team and the project stakeholders particularly the project advisory committee, on a regular basis in order to ensure that project performance and progress are as per the project objectives (internal monitoring and evaluation).

?In line with the GEF Evaluation requirements and UNEP?s Evaluation Policy, GEF Full-Sized Projects and any project with a duration of 4 years or more will be subject to an independent Mid-Term Evaluation or management-led Mid-Term Review at mid-point. All GEF funded projects are subject to a performance assessment when they reach operational completion. This performance assessment will be either an independent Terminal Evaluation or a management-led Terminal Review.

In case a Review is required, the UNEP Evaluation Office will provide tools, templates, and guidelines to support the Review consultant. For all Terminal Reviews, the UNEP Evaluation Office will perform a quality assessment of the Terminal Review report and validate the Review?s performance ratings. This quality assessment will be attached as an Annex to the Terminal Review report, validated performance ratings will be captured in the main report.

However, if an independent Terminal Evaluation (TE) of the project is required, the Evaluation Office will be responsible for the entire evaluation process and will liaise with the Task Manager and the project implementing partners at key points during the evaluation. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP staff and implementing partners. The direct costs of the evaluation (or the management-led review) will be charged against the project evaluation budget. The TE will typically be initiated after the project?s operational completion If a follow-on phase of the project is envisaged, the timing of the evaluation will be discussed with the Evaluation Office in relation to the submission of the follow-on proposal.

The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalized. The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process.

The evaluation recommendations will be entered into a Recommendations Implementation Plan template by the Evaluation Office. Formal submission of the completed Recommendations Implementation Plan by the Project Manager is required within one month of its delivery to the project team. The Evaluation Office will monitor compliance with this plan every six months for a total period of 12 months from the finalization of the Recommendations Implementation Plan. The compliance performance against the recommendations is then reported to senior management on a six-monthly basis and to member States in the Biennial Evaluation Synthesis Report.

COSTED MONITORING AND EVALUATION PLAN

Type of M&E activity	Responsible Parties	Time Frame	Indicative Budget ($)	
			GEF	Co-finance
Monitoring and Measurement of project indicators (outcome, progress and performance indicators, GEF Core Indicator Worksheet) and monitoring of ESS	PMU under guidance of UNEP, with inputs from Project Steering Committee (PSC) ,National Project Coordinator (NPC) and designates national experts/consultants and r	Outcome indicators: start, mid and end of project progress/ perform. Indicators: Annually	10,000	40,000
Project implementation reports (PIR) to UNEP	PMU under guidance of PSC	Annually, part of reporting routine		10,000
Monitoring visits to field sites	PMU, NPC and designated national experts	As appropriate		50,000
Mid Term Review	UNEP	Mid Term of the Project	10,000	40,000
Terminal Evaluation	UNEP	Within 6 months of end of project implementation	30,000	40,000
Publication of Lessons Learnt and other project documents	PMU	Annually, part of Semi-annual reports & Project Final Report		40,000
		TOTAL	**50,000**	**220,000**

Note: The main co-finance will be from Ministry of Environment, Moldova

The costed M & E plan is attached as Annex J:

The Monitoring and Evaluation Plan is costed and placed as **Annex J**. The ToRs of key personnel is places as **Annex T.** The Detailed Project Workplan with Benchmarks and Deliverables is attached as **Annex L-1.** Workplan with Timelines is presented in the **Annex L-2.**

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The project will contribute to socioeconomic benefits at the national and local levels in supporting the achievement of global environment benefits and adaptation benefits *(Table 5).*

Table 5. Socioeconomic benefits to be delivered by the project at the national and local levels in supporting the achievement of global environment benefits and adaptation benefits.

Benefits	**Benefits Baseline (B)**	**Alternative** **(A)**	**Increment** **(A-B)**

Global benefits	Under the **baseline scenario**, priority actions identified in the NBSAP would likely remain unfulfilled, as gaps in institutional authority and coordination, and limited resources, would make implementation highly difficult. Institutional will, mechanisms and resources to effectively engage with productive sectors that are key IAS/LMOs pathways would remain weak, and most IAS/LMOs management would remain focused solely on protecting economic resources with little regard for biodiversity conservation. Understanding of the potential impacts of climate change on IAS/LMOs dispersion will be absent, preventing decision makers from making effective long-term decisions on IAS/LMOs prevention and control. In the islands, IAS/LMOs management would continue on a case-by-case basis, without a setting of priorities or a systematic approach, and without consistent cooperation among stakeholders or mechanisms for sharing information nationally or internationally. Protected Areas would continue to lack technical expertise or models for IAS/LMOs management. In the absence of this project, globally significant biodiversity in Moldova, including native/endemic species and natural ecosystems at vulnerable island and mainland PA sites, will continue to be threatened by the introduction, establishment and spread of IAS/LMOs.	The project, which counts on financing from the GEF, government institutions will remove key barriers for the strengthening of the management of IAS/LMOs that impact biodiversity at entry and distribution points as well as high priority conservation areas (PAs) within Moldova. The GEF project will replace the baseline piecemeal approach with a coordinated and effective IAS/LMOs management framework for the country. As a complement to national baseline investments in IAS/LMOs policy and legal development, inspection and quarantine functions, and site-level eradications, the GoM is seeking GEF support to develop improved IAS/LMOs management systems that protect Moldova?s globally	The GEF increment will strengthen IAS/LMOs management at entry and distribution points, and high priority conservation areas, throughout Moldova. This will produce benefits for globally significant species and ecosystems nationally, including: mammals (75), birds (281), reptiles (14), amphibians (14), freshwater fish species (90), invertebrates species (15000), including insects species (13000) and plants species (5 568), from which vascular plants species (2 044). Moldova also numerous crop cultivars that represent a resource of immense importance in terms of global food security. At the site level, the GEF increment will help to conserve important biodiversity at Protected Areas, including over species of flora and fauna, including Red Book endangered species. The project also will help to prevent forest degradation and allow natural reforestation to take place, thereby adding to global CO2 sequestration capacity. The project also will produce global benefits by helping Moldova to implement the NBSAP of Moldova and its action plan, thereby fulfilling its obligations as a Party to the Convention on Biological Diversity, and by strengthening the national contribution to the global Aichi Targets, specifically Target 4 on sustainable production, Target 6 on marine and aquatic species, Target 7 on agriculture, aquaculture and forestry, Target 9 on invasive alien species, and Target 19 on threatened by the introduction, establishment and spread of IAS/LMOs and will provide and for its catalytic effect in bringing other resources and increased attention to the issue of IAS/LMOs knowledge,

		significant biodiversity. In line with the GEF focal area strategy for IAS/LMOs, the project will implement a systemic approach to IAS/LMOs management while also addressing IAS/LMOs in the wild species trade, aquaculture, forest and wildlife products sectors and in targeted areas of high biodiversity value and significant IAS/LMOs threat. Project activities will be oriented towards maximizing limited national resources to address the most important elements of the threat posed by IAS/LMOs. As such, the project will place special emphasis on early detection and prevention systems, as well as the use of risk analyses to identify IAS with the most potential	the science base and technologies relating to biodiversity.

		environmental and economic impact on Moldova, in order to establish clearly agreed priorities for IAS/LMOs management interventions. This project represents critical support at a crucial time as Moldova endeavours to implement the new National Biodiversity Strategy and its Action Plan 2030 (NBSAP) in line with the post 2020 GBF both for the resources and expertise it.	

National and local benefits	Under the **baseline** scenario, efforts to guide development of targeted production sectors (aquaculture, trade, forest and wildlife products) in the prevention, inspection, quarantine and response to IAS/LMOs introduction and spread will be stymied by a lack of clear regulatory authority, insufficient technical tools and processes, poor understanding of the economic impacts of specific IAS/LMOs and the costs for different IAS/LMOs management options, and lack of partnerships between regulatory authorities and business associations and companies. As a result, the focus of governmental and private stakeholders will stay on short-term economic benefits, and import, production and distribution of IAS/LMOs in these sectors will proceed without weighing the costs and benefits of various activities. In this scenario, economic development will frequently be unsustainable and incur significant opportunity costs for Moldova by damaging/destroying natural ecosystem functions and values. Over time, this will represent a loss to both the national economy and to local stakeholders.	The project will engage a variety of stakeholders in processes to plan for and implement IAS/LMOs management. These stakeholders will include associations, companies and individual producers in the trade, aquaculture, forest and wildlife products sectors, including importers, traders, producers, and distributors, who will be engaged in developing improved prevention and control measures for IAS relevant to their productive activities. Other relevant stakeholders will be managers of operations in these sectors, as well as agriculture and livestock producers and other local residents at selected PA sites, who will	The project is expected to yield national and local benefits by supporting the more effective IAS/LMOs management of the trade, aquaculture, forest and wildlife products sectors, as well as strengthening IAS/LMOs management for specific productive sector operations in and around high priority conservation areas (islands and mainland PAs), all of which are responsible for various pathways and processes that contribute to the introduction and spread of IAS into Moldova. By reducing the impact of these sectors, through improved biosecurity processes, strengthened regulations, substitution of exotic species with native species, etc., the project will reduce or eliminate IAS/LMOs impacts that affect the social and economic well being of Moldova?s citizens. For example, aquatic ecosystems are highly impacted by IAS; invasive have supplanted native fish species on which local communities depend; and invasive aquatic plant species have a negative impact on water supply, contribute to premature accumulation of sediments in reservoirs and obstruction of water canals and water inlets in hydroelectric installations, etc., while also providing suitable habitat for disease vectors. By safeguarding biological diversity and ecosystems and their services from these and other IAS/LMOs threats, the project will add

		be provided with training and information on strategies (biosecurity measures; replacement of exotic species with native species or transboundary movement of LMOs) for improved IAS/LMOs management in their operations and practices, as well as guidance on new regulations and restrictions relevant to their activities. Stakeholders at Island sites, including local residents as well as fishermen and tourism operators, will be integral to the development and implementation of Island Biosecurity Plans, as well as the implementation of various IAS/LMOs control, eradication and monitoring programs. In all of these national and local level activities, relevant	considerably to local and national economic benefits.

		stakeholders will have the opportunity to participate in IAS/LMOs planning, priority setting and management, so that IAS/LMOs management actions balance the needs of these groups and the biodiversity conservation and ecosystem functioning objectives of the project.	

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Low	Low		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Risk Analysis and Risk Management Measures

The project to elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation (table format acceptable):

The following table summarizes the information about the identified possible risks, level of risk and the proposed mitigation measures under the project:

Moldova is affected by climate-related natural hazards, such as droughts, floods, hail, soil erosion and landslides which have important negative impacts on agricultural production, crop quality, water supply, and population health. Climate change models forecast shows that the frequency and severity of climate disasters will increase. In turn, the high degree of land degradation exacerbated the vulnerability of agro-ecosystems to climate fluctuations. Thus, the project interventions for promoting ecosystem conservation practices will contribute to mitigation of climate change impact to natural landscapes and adjacent rural communities *(Table 3).*

Table 3. *Key risks affecting the project objectives and proposed mitigation measures are listed below.*

KEY RISKS	Rating	MITIGATION MEASURES
Governance As a result of political instability there is a risk to divert the attention from important institutional development that can negatively impact the project implementation.	Medium	The UNEP-GEF project will help mitigate this risk to a limited extent by engaging stakeholders from across the political groups and by offering a platform for inter-ministerial discussions on important and major areas of reform that need to be pursued. Continuous communication and involvement of all relevant stakeholders, to ensure that proposed activities are not politically divergent. Consultations and communication will be an important part of the proposed activities.

Regulatory barriers There are significant governance challenges including insufficient linkages between legislature and executive power, and a low level of regulatory enforcement.	Medium	A number of regulatory and enforcement documents to implement laws will be developed and consulted with the sectorial actors. In addition, an Inter-Ministerial Steering Committee will help with both project implementation and coordination among agencies. A strong cooperation with the National Biosafety Commission, Scientific Council on Protected areas, National Commission on Red Book will be established during the project execution.

Coordination between stakeholders The project needs to engage numerous sectorial governmental agencies, academia, private business, farmers, local authorities NGOs etc. Lack of coordination among multiple groups may slow down the project. A possible risk is low interest of farmers and communities to be involved in the demonstrational good farming practices to replicate it for other stakeholders.	Low	The project is likely to apply the implementation and coordination activities supported by local and international experts to a number of coordination meetings, workshop and trainings addressed to all key actors and stakeholders. Decision makers and public awareness and participation will be promoted using the BCH system, large campaign of information and awareness.

Due to climate change impacts, public perception towards LMOs change, especially if LMOs perform better under climate change conditions	Low	Potential use and import of LMOs may increase under increased temperature, heavy droughts and other climate change related results due to tolerance to abiotic stresses. Climate hazards, such as extreme temperatures, lasting droughts, late spring and early fall frosts, hail and heavy rain, have had significant impacts on productivity, incomes, and natural resources of Moldova and are expected to generally increase in intensity and frequency in a changing climate. According to the Third National Communication of the Republic of Moldova under the UNFCCC (2013), drought is one of the most common and devastating extreme climate events in Moldova. A major part of Moldova (74.5%) relates to dry sub-humid (UNCCDAI = 0.50-0.65) and semi-arid (UNCCDAI < 0.50) lands. It is in dry lands the agricultural ecosystems are more vulnerable to climate and the balance of production and consumption often depends on water resources. Accounting for 13% of the total number of hazards, droughts in Moldova make up 67% of the economic losses from weather and climate related risks. Insufficiency and high variability of precipitation are the main drivers of drought and significant failure of water resources and agriculture production, creating a challenging environment for all sectors of human activity. Floods also affect the Republic of Moldova on a recurring basis. In the past 70 years, 10 major floods on the great rivers of the Republic of Moldova (Nistru and Prut rivers) were reported, and three of those occurred in this decade (2006, 2008 and 2010). More recent events have had a significant impact: the 2007 and 2012 droughts caused estimated losses of about US$1.0 billion, respectively US$1.25 billion; the 2008 floods cost the country about US$120 million. (Second National Communication of the Republic of Moldova under the United Nations Framework Convention on Climate Change. Chisinau, 2009). The three SRES emissions scenarios project similar temperatures in the near-term decades +1.2 -1.40C throughout the Republic of Moldova. Only starting with the 2050s the three emissions scenarios produce temperature patterns that are distinguishable from each other. The rate of warming is higher under A2 ensemble and it reaches +4.3 0C; medium - under A1B, +3.8 0C, and smaller +2.7 0C - under the B2 emission scenarios by the 2080s. By the 2081-2100 period the climate aridization will be felt during the whole veg etation period (April to September); it will be much more pronounced and may result in values characteristic to the semi-arid climate (AI = 0.21-0.50). Analysis of data shows that by the 2081-2100 time the drought conditions of HTC ? 0.7 will be observed on the whole territory of Moldova, those levels can achieve even the values characteristic of the medium drought (HTC = 0.6) and strong drought (HTC ? 0.5). (Fourth National Communication of the Republic of Moldova to the UNFCC, 2018.

		Because of climate change on food security and food production in the country, potential use and import of LMOs that are supposed to be more resilient and tolerant may increase. The population of invasive alien species may also be spreading due to their resistance and better adaptation to climate change effects. The local genetic diversity of spontaneous flora and fauna may suffer under the severe droughts and high temperatures because of climate change, affecting their natural habitats and ecosystems. During the PPG phase, the potential of climate change scenarios on the country?s response will be integrated into capacity building interventions and into the design of policies to ensure that such changes to public attitude to LMOs and IAS are anticipated and proactively managed. Furthermore, the project purpose is to strengthen country?s capacity to effectively manage safe handling and use of LMOs and IAS.

Vulnerability of social groups, communities and poverty	Medium	According to the Inequality Study Moldova (SDS, 2022), 47% of the population of the Republic of Moldova belong to a **vulnerable social class** and find it difficult to cover their expenses for what is strictly necessary. If the incomes of some poor people increase, this is due to remittances. The study shows that the most affected by **poverty** are the elderly, especially women. 55% of households of people with disabilities say that water and sewerage services are very expensive and in the case of Roma this figure amounts to 66%. **Farmers** are also in a difficult situation. From a gender perspective, women continue to be a vulnerable group in virtually all areas. 17% of women have a big problem to buy medicines worth 10.8 USD because they do not have money, and 37% - because they do not have enough money. 42% do not consult a doctor even if they need it. About 16% do not go to the hospital regardless of the problem due to lack of time or financial means. Likewise, women are more likely to be subjected to violence. One of the rea-sons is that many victims believe that it is good to tolerate violence in order to keep your family safe. Lack of income among the **Roma minority** confirms their non-employment, and consequently they do not have any medical insurance. Only 42% of Roma people have an insurance policy, compared to 72% of non-Roma people. Roma do not go to the doctor because they do not have money. The data in the report show the lack of will of the local public administration to involve the Roma in decision-making. 21% of Roma say they are ready to participate in community decision-making. **Migration** is a very intense phenomenon in the Republic of Moldova. An impressive number of immigrants (most of whom are returned migrants) and emigrants has been registered in the last five years. According to the Annual Social Report (2018), in 2017 al-most 110,000 immigrants have entered Moldova and almost 160,000 emigrants left the country, forming a negative net migration of about 50,000 people in that year. In 2015, the child poverty rate was 11.5%, while that for general population 9.6%. Including 0.2% of children are exposed to extreme poverty. The **poverty rate for rural children** is 9 times higher than the poverty rate for those in urban areas. In the 2019 Public Opinion Barometer (BOP) shows that 43.3% of respondents have answer that the family income is enough only for what is strictly necessary, and 21.7% said that their family's income is not enough for the strict necessary, and only 3.2% mentioned that with the family income they manage to have everything they need. (UNECEF, 2020). Thus, poverty in Moldova is quite high, especially among **vulnerable groups**, such as families with many children and families with a single parent. A significant impact on poverty reduction and the increase in the standard of living of the disadvantaged modification of the mechanism for granting social assistance, which contributed to the reduction of the absolute poverty rate by 0.7%, and aid for the cold period of the year by 0.2%. Low

		incomes and high risks of poverty are caused by limited economic opportunities, which impede the population, especially vulnerable groups, to achieve their professional aspirations. As a result, Moldova has one of the lowest employment rates in Central and Eastern Europe (41% in 2016). Totally 1.9% of young people up to 24 years old have benefited from unemployment benefits in 2015, and in 2019 only 1.5%. **Young people of rural areas** report lower levels of quality of life than young people in urban areas. In general, women report lower quality of life than men. Moldova?s inter-national ranking in the report ?The Youth Progress Index 2021? places Moldova on the 66th place out of 150 evaluated countries, presenting a score of 68.17 (European Youth Forum, 2021). Much of the current and predicted impacts of climate variability and climate change are concentrated in rural areas, where populations have fewer resources. Rural low-income communities are particularly vulnerable to the impacts of CC due food insecurity, in-creased health risks, reduced agricultural productivity and increased incidences of extreme events (FAO, 2020). In addition to being more exposed to climate risks, socially vulnerable groups are also less able to adapt to these risks, because of financial and institutional barriers.

An outbreak of diseases (Covid-19)	Medium	Moldova has had as of 31st March 2022 a total of 513,146 cases of COVID-19 since the start of the epidemic. A number of 11,4321 COVID-19 related deaths occurred (Ministry of Health). The country declared a pandemic emergency regime on full lockdown for the period of 16 March ? 16 May 2020, and the sanitary emergency regime has been prolonged until today. Moldova is the first in a series of 39 countries for which this first round of data since the outbreak of COVID-19 are available. The data provide a snapshot of business performance at the height of the crisis in April 2020 relative to the pre-COVID-19 baseline. (World Bank: The growing impact of COVID-19 on Moldova?s private sector). The impact of the pandemic on SMEs has been significant, with most companies reporting sales declines of up to 75-100%. The main factors affecting the work of companies have been the decrease in demand for products and services, work restrictions, limited access to raw materials or supply disruptions (especially for imported materials) and distribution chains, decreased labor productivity. Eighty-eight per cent of the entrepreneurs reported a negative effect of the pandemic, especially those in HoReCa, domestic non-food trade and services. (UNDP Moldova. Policy dialog: The socio-economic impact of the COVID-19 pandemic on Small and Medium Enterprises in the Republic of Moldova). The infection rate has increased dramatically post-lockdown. After initial containment progress, Moldova is currently seeing higher infection rates than peer countries (MD: 8,527cases per million population; RO: 2,089; UA: 1,395), while testing lags behind some neighboring countries in the region. The COVID-19 pandemic has found the Moldovan economy in a vulnerable position. An economic recession in 2020 seems imminent. The impact comes from two factors: External (decline in exports, remittances and FDI), and Internal (strict containment measures). (Social and Economic Impact Assessment of COVID-19 in Republic of Moldova. Deliverable 1 ?Initial impact assessment report, 2020) The outbreak of COVID-19 has already affected work nationally and will have a major impact on the economy of the country. Under such conditions, the government is expected to focus public resources on rebuilding the economies of the country. This might affect the co-financing of the project and the ability of the project to deliver on the GEBs. However, the set-up of stringent biosecurity conditions will also be priorities for post-COVID to mitigate the recurrence of such pandemic and diseases. During PPG and project implementation the importance of having a strong integrated biosecurity management system will be communicated as part of the green recovery program of the country. Potential impacts on the commitment of co-financiers and partners will be assessed in detail during the PPG phase to develop adequate risk mitigation actions. The current COVID-19 situation will be taken on board during the project and the risks will be mitigated by trying to carry out relevant activities via

		alternative working methods (e.g. videoconferences, telecommuting, recourse to national human resources in the countries, etc.). Any mitigation measure will have to be discussed between the implementing and the executing partners/agencies. The risk is only partly under project control. Biosecurity considerations which are at the base of Biosafety capacity building and implementation will be fully triggered both to ensure human and environmental safety to project implementation measures and execution of activities, including project deliverables.
Gender-inequitable context in country that could be a challenging environment	Medium	There is gender-inequitable context in country that could be a challenging environment to work in and achieve gender-related results. According to the UNDP Human Development Report, the Human Development Index for the Republic of Moldova is 0.750 and the ranking is 90. Inequality Inequality-adjusted HDI (IHDI) - 0.672; Gender. Gender Development Index (GDI) -1.014; Poverty. Population in multidimensional poverty, headcount (%) - 0.9. Global Gender Gap Index for Moldova is ranking 28 out of 156 countries, and the Score is 0.768 in 2021 according to the World Economic Forum report. During the PPG phase a special attention will be paid to involve women in all implemented activities including stocktaking phase, theory of change, project design, inter departmental communication, relations and awareness with main stakeholders, assessments and review and project activities designing. Regular meetings with women will help to ensure their large participation and incorporating their suggestions and interests.

Ukraine crisis in Moldova	High	As of today, over 250,000 people from Ukraine have crossed the country's border, out of which over 100,000 remained in Moldova, these numbers being in continuous rise as the military actions intensify. Almost 90% of the total number of refugees are women with children ? one of the most vulnerable group of persons being highly exposed to different risks and challenges. Military provocations in Transnistria region of Moldova that happened during the first week of May 2022 provide social tension and instability over all country. The Security Council of Moldova decided to extend the Security restriction period for the next 60 days. Moldova is facing massive challenges after hundreds of thousands of Ukrainian refugees entered the country seeking shelter from Russia?s invasion in 2022. Moldova is already struggling with its own economic difficulties. According to the latest UN report, the Republic of Moldova is the first in the top five countries to receive refugees from Ukraine - with almost 1,400 people per 10,000 inhabitants. The United Nations Development Program states that over 30% of Moldova's population could fall below the poverty line due to the conflict in Ukraine, and every second Moldovan is at risk of becoming poor next year. The Government is currently working on a resilience plan, which will include quick solutions to ensure socio-economic resilience. This plan has several dimensions. The first is to maintain the purchasing ability of the population. The increased pension fund and increased pensions above inflation would be one of actions. This fund has been increased by 30% compared to last year through various mechanisms. A reform the welfare system to help families with children. Financial support for economically active families, who need the care of young children, who do not have access to the nursery, so that parents remain economically active. The second dimension is energy security, it is planned to create natural gas reserves. To have electrical infrastructure and interconnection projects with Romania, so that it is expected to diversify the supply. A third dimension is economic competitiveness seeking to develop small and medium enterprises. The fourth dimension is food security. There is to have to make sure that the necessary food is produced internally and that reserves are sufficient. The fifth dimension is public safety. For this, a macro-economic support is need, which should be directed towards increasing the country's resilience. Authorities struggle to deal with the ongoing flood of refugees; however, the project may be a possibility for people to recover some of their economic capacities after the Ukraine crisis is over. Local authorities (which are important stakeholders in the project) are possibly currently overwhelmed by the number of refugees from Ukraine and will probably be less inclined to participate in workshops or other project-activities.

		The Moldovan project team will observe the situation in relation of effects from the Ukraine crisis. If any problems occur and actions are needed (e.g. problem in the stakeholder participation ? conducting meetings) the project team will immediately clarify the next steps. Considering this situation and in order to get information on the status of the project will be established on a regular basis (monthly) via meetings.

The Safeguards Risk and Identification Form is attached as **Annex O.**

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Annex O_SRIF-Moldova Biosecurity_CEO Endorsement	**CEO Endorsement ESS**	
SRIF-Moldova Biosecurity PIF_am	**Project PIF ESS**	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Project Title: Biosecurity Implementation Framework for the Management of Biological Resources in Moldova						
Project Objective	**Objective level Indicators**	**Baseline**	**Targets and Monitoring Milestones**	**Means of Verification**	**Assumptions & Risks**	**UNEP MTS reference***

						Nature Action/
To strengthen institutional biosecurity frameworks in the management of invasive alien species and living modified organisms through a coordinated risk analysis measure in line with Cartagena Protocol, its Supplementary Protocol and relevant Invasive Alien Species regulations in Moldova	A functional, broad-based, cross-sectoral biosecurity framework/system is in place by the end of this project: Increased level of national sectors/partner organizations having access to appropriate tools and methods for detection, risk assessment, monitoring and management of IAS and LMOs Increased level of mobilized public knowledge on the environmental risks of IAS and LMOs Increased level of direct beneficiaries which are further disaggregate	Existing fragmented policies and legislation on biosafety and IAS. Uncoordinated processes, human resource and decision making institutions. Some on-going government programmes and initiatives that address biosecurity issues in a fragmented manner.	An integrated and harmonized biosecurity policy and regulatory framework in place Enhanced and strengthened institutional biosecurity systems for decision making in an integrated manner in place At least 80% mobilized public Knowledge on environmental risks on LMOs and IAS through an integrated mechanism for knowledge management, risk communication, public awareness, education	Adopted policy and legal instruments available, approved by MoE and published Monitoring and Evaluation (M&E) reports and Final Project report by Project Implementation Unit (PIU), Project Steering Committee (PSC) Terminal evaluation report by UN Environment /GEF National Report to the CBD/CPB by MoE, Online publications by CHM and BCH NFPs	-Easily accessible Government cofinance - Adequate human resource to upscale and implement LMO and IAS policies - Sustained political will for project implementation -Continuing support from government and cooperation from partner agencies NGOs and general public informed on IAS and LMO issues Risks: -Budgetary limitations	Environmental Governance

	d by gender as co-benefit of GEF investment (***1200 persons)*** ***Female ? 700 persons*** ***Male ? 500 persons***		and information sharing on IAS and LMOs. Capacity to support implementation of policy, regulatory and institutional framework for effective biosecurity management in place		-Lack of collaboration among Ministries an d ongoing initiatives	
Component 1 - Effective Biosecurity Legislative, Policy, Regulatory and Institutional Frameworks						
Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment

1. An integrated and harmonized policy and regulatory framework for Bioresource Management in place	Policies, new/amended regulations/laws directly related to IAS/LMOs biosecurity enacted An operationalized and functional biosecurity (IAS and LMOs) cross-sectoral coordination framework in place Gender responsive legislative frameworks for biosecurity in place	Fragmented inadequate policies aimed at diminishing the negative impact of invasive species as indicated in the NBSAP 2015-2020 Outdated National Biosafety Framework (Cartagena Protocol) policies Biosafety Law (2001) and its enabling instrument (2003) New Law on Regulation and control of GMOs approved in 2022 without implementing regulations	By end of this project: - An effective biosecurity legislation, policy, regulatory, institutional and functional framework is in place, - Biosecurity Action Plan as part of the updated NBSAP 2030, in line with the GBF post 2020 in place with specific inputs on Target 6 (IAS) and Target 17 (Biosafety), -Law on GM microorganisms. Law on IAS, Regulation for liability and redress etc.	Biosecurity roadmap as part of the updated NBSAP published Legal instruments published by the end of the project. Project Monitoring and Evaluation reports published Project Final Report published by PIU Terminal Evaluation report published by UNEP/GEF - Project data available GEF in ANUBIS, UMOJA, the GEF Portal and the Core Indicator Worksheet		2(iii), 2(iv)

			- By mid-project point, - Operationalized decision making based Risk assessment to facilitate IAS and LMOs decision making process.	- Availability of online publications by CHM and BCH, the SCBD; and, partner organizations - Regular national reports to CBD & CPB by MoE as mandated - Online web addresses/ with easily accessed links for public information		
Component 2 - Integration of biosecurity into Biological resource management						
Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment

2a). Institutional systems for decision making in an integrated biosecurity framework enhanced and strengthened 2b). Hunan resource and institutional capacity to support implementation of policy, regulatory and institutional framework for effective biosecurity in place	Existence of decision support tools being used to support biosecurity decisions -Number guidelines and manuals developed and in place for undertaking risk-based biosecurity of IAS and LMOs, including guidelines and manuals on Liability and Redress -Number of check points, emergency responses established -Number of operational infrastructure and equipment provided for biosecurity Number of sector partnership arrangement agreed on by	-Limited data base on IAS for flora and fauna species - Inactive National Biosafety Commission for authorization of GMO use/import - Environmental Agency that makes decision and monitors IAS and LMOs	Active National Commission on IAS equipped to ensure risk based decision making and manned by at least **10** trained personnel on various aspects of decision making. **10** trained personnel on monitoring, undertaking surveillance and early detection of IAS/LMOs. -Standard Operating Procedures, guidelines and manuals on risk assessment and management, liability and redress, detection and identificatio	- M & E reports by PCU, PTA & PAC; throughout project life - Terminal Project Report by PCU - Terminal evaluation report by UN Environment /GEF Terminal Evaluation report published by UNEP/GEF - Project data available in GEF Tracking tools - Availability of online publications by CHM and BCH NFPs, the SCBD; and, partner organizations	Assumptions Partner organizations have access to appropriate tools and methods for risk assessment, monitoring and management of IAS and LMOs .Risks: Access to some identified/retained biosecurity tools could be impossible due to socio-political insecurity challenges or regulatory challenges	2(iii), 2(iv)

	Mid-project term - Number of risk-based biosecurity strategies implemented by end of project. - Number of key border personnel trained on their functions in biosecurity -Number of key agencies with strengthened capacity by the end of project Gender responsive institutional and frameworks for biosecurity in place		n developed. - Data base on at least 10 identified Risk assessment experts developed. -2 institutions for IAS decision-making (authorization) check points, emergency responses, guidance and manuals in place 30 Personnel for Risk assessment and risk management, detection and identification, liability and redress trained - Training materials on risk assessment and management, liability and redress, detection	- Regular annual national reports to CBD & CPB by MoE as mandated - Online web addresses/ with easily accessed links for public information with articles by researchers and/or academia		

			and identification developed Gender sensitive strategies for ensuring 1:1 female/male ratio in all activities in place			
Component 3 - A unified system for Knowledge management, Public awareness, Education, Communication on biosecurity						
Project Outcome	**Outcome Indicators**	**Baseline**	**Targets and Monitoring Milestones**	**Means of Verification**	**Assumptions & Risks**	**MTS Expected Accomplishment**

3. An integrated mechanism for knowledge management, public awareness, education and information sharing on IAS and LMOs established and implemented.	-Number of educational institutions with integrated biosecurity curricula in the educational system - Number of Key institutions that are sensitized on, and are using the available national biosecurity tools-training manuals, guidelines etc.; thereby adding value to their day-to-day activities -A National Biosecurity Knowledge Management portal in place for access to effective	Existing number of GMOs/biosafety/biodiversity related courses in the Faculty of Biology and Geosciences of the State Moldovan University Minimum access to CHM, BCH and other data sources by scientific personnel	At the end of the project: At least 5 educational institutions have integrated biosecurity curricula in their educational programmes -Public awareness, facilitated access to CHM, BCH and biosecurity education, training manuals and guidelines with at least 100 persons trained including scientific personnel, and other relevant stakeholders. The end of project	- Availability of biosecurity data on the national portal. By project mid- point, all training materials are in place and learning strategies developed and adopted; and, - MTR carried out and recommendations being implemented. -Project Final report by PIU - Terminal Evaluation report by UNEP/GEF at end of project	Assumptions: -Strong Public Relations efforts undertaken -Public actions mobilized on the environmental risks of IAS and LMOs -Continuing support from government and cooperation from Partner agencies Risks: - Delays in the release of government Co-finance due to government budgetary limitations and/or bottle necks.	2(iii), 2(iv)

	LMOS and IAS prevention, control, monitoring and management, in partnership with key stakeholders. -Number of knowledge products related to biodiversity conservation considerations mainstreaming into policies, laws and regulations, developed and disseminated. Gender responsive access to information and public awareness mechanism for biosecurity in place		target is a strengthened institutional capacity for Moldova and access for the use of knowledge management and learning strategies for effective biosecurity 10 personnel in each key stakeholder group, local authorities trained in for the use of KM Portal on use of biosecurity data sets. Gender sensitive strategies for ensuring 1:1 female/male ratio in all activities in place			

Component 4: Establishment of a Monitoring and Evaluation measures for project delivery						
Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment

Outcome 4: Effective project coordination and delivery, meeting measurable outputs and indicators	Effective project coordination and delivery, meeting measurable outputs and indicators Systems and structures for project management, accountability and monitoring of impacts established Mid-term and Terminal Evaluations undertaken Lessons Learnt and Best Practices prepared and disseminated.	The Ministry of Environment will serves as the the Competent National Authority for IAS and LMOs The P. I. National Office for Environmental Projects Implementation (NOEPI), founded by the Ministry of Environment was established by the Governmental decision in 2019, amended in 2022. It will serve as the Project Implementation Unit (PIU).	Systems and structures for project management, accountability and monitoring of impacts established. Project Committee meetings organized. Technical support to project activities by Project Technical Advisers Mid-term and Terminal Evaluations undertaken Lessons Learnt and Best Practices prepared and disseminated (At least 3 publications by the end of the project)	Annual Project Audits Minutes of Project Committee meetings Project Technical advisers? reports Mid-Term evaluation report Progress interim and closure narrative and financial reports		

			Gender sensitive strategies for ensuring 1:1 female/male ratio in all activities in place			
PROJECT OUTPUTS						
Project Outputs	Output Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	PoW Output Reference Number
OUTPUF 1						

Output 1.1: National policy for integrated bioresource management ensuring biosecurity for IAS and LMOs developed as part of the new NBSAP 2030 in line with the GBF	- An updated and adopted National Biosecurity Strategy (integrated bioresource management) in place 12 months form the project inception as part of the new NBSAP 2030 in line with the GBF .	A National Biodiversity Strategy and Action Plan (NBSAP) for 2015-2020 exists but need to be updated in accordance with the KM GBF.	- By the end of this project, A national policy on biosecurity issues for LMOs and IAS developed, validated and adopted as an integral part of the new updated NBSAP for 2030 with specific national targets (6, 17) in line with the GBF post 2020.	Project M & E reports by PCU, PSC; done periodically throughout the project life span; Progress report done half-yearly to the UNEP. - MTR report by UNEP/GEF consultants - Project Final Report by PCU at the end of project - Terminal Evaluation report by UNEP/GEF at end of project - National Reports to the CBD/CPB by MoE on due terms Online info on the CHM, BCH portals etc. - GEF Core Indicator	1. Assumptions: - There is sufficient human and material resources accompanied by conducive working conditions for effective delivery - Project outputs are normally in one language. 2. Risks - Delays in the recruitment of international consultants is possible and could delays project outputs	2B, 2C

				Sheet as required		

Output 1.2: Subsidiary regulation (laws) on both IAS and LMOs developed, existing legislation is strengthened for more effective biosecurity and regulations on Liability and Redress.	A regulatory instrument on LMO microorganisms developed and enacted by the end of the project. -A regulatory instrument on IAS is developed by the end of the project - Implementing regulation on liability and redress is developed for LMOs by the end of the project Environmental Inspectorate with fully mandated with regulatory powers to undertake inspection activities on LMOs and IAS	-The 2001 Biosafety Law exists with no provisions on LMO microorganisms and Liability and Redress - The new Law on Regulation and control of GMOs/2022 has a specific article on Liability and Redress (related the LMOs) without implementing regulations.	- By project Mid-point, all draft instruments and regulations (LMO microorganisms, Liability and Redress, IAS) developed and submitted to the MoE By the end of this project, an updated and amended legal and regulatory framework in place with regulations on LMO Microorganisms, Liability and Redress; on IAS; -National Biosecurity authority is set up , Environmental Inspectorate are strengthene	-Copies of the draft policy, regulatory and legislative instruments, exist Project M & E reports by PIU& PSC; carried out throughout project life span is available. -MTR report by UN Environment /GEF consultants. - Project Final Report by PIU at end of project - Terminal Evaluation report by UNEP/GEF at end of project - National Reports to CBD & CPB by MoE on due terms	1. Assumptions: - Sufficient human and material resources are available for efficient and effective project delivery - Government will expedite the process of updating, organizing and operationalizing the National Protection Agency with Biosecurity duties Risks - Official instruments are required to be in Romanian and Russian yet, public information could be limited by translation hurdles	2B, 2C

			d legally for regulatory authority on IAS and LMOs	- GEF Core Indicators a s required		
OUTPUT 2						

Output 2.1: National capacities in risk analysis frameworks, detection and identification for monitoring and management for LMOs and IAS strengthened with defined guidelines and manuals.	20 risk assessors trained in skilled sets for risk assessment and management, monitoring, detection and identification, inspection and control, for LMOs and IAS Standards Operating Procedures (SOPs) on specific regulations, guidelines and manuals for risk assessment management, monitoring and detection of IAS and LMOs developed and available. -Personnel trained in all aspect of informed risk assessment based decision making authorization -.	No trained and authorised risk assessor No Standards Operating Procedures (SOPs) for risk assessment and management, monitoring, detection and identification, inspection and control, for LMOs and IAS in place One laboratory partially equipped for detection, diagnostics and monitoring of LMOs, in the Molecular laboratory under the National Food Safety Agency provided by the NBF	By project mid-point At least three (3) Laboratories have new equipment; and institutional strengthening in detection, diagnostics and monitoring of LMOs. At least 75 % of the budgeted equipment has been purchased and distributed. By end of project, 20 Risk Assessors trained and authorized Standards Operating Procedures (SOPs)	-Copies of regulations, guidelines and manuals available -M & E reports periodically prepared by PIU, and PSC. Are available at the project office. -Mid-term review report by UNEP/GEF consultants, -Terminal Evaluation report by UNEP/GEF. -Project final report by PIU. GEF Core Indicator Sheet as as required	1.Assumptions: -Relevant initiatives are interested and committed to engage in collaborative activities of the project 2.Risks: Disparity in the period of project implementation may hinder collaboration -Consequential lack of commitment from ongoing partner initiatives is possible.	2B, 2C

		Implementation project in 2011.	for risk assessment and management, monitoring, detection and identification, inspection and control, for LMOs and IAS in place 3 Laboratories fully equipped and proficient in detection, diagnostics and monitoring of LMOs and IAS			

Output 2.2 National institutional arrangements for LMO and IAS decision-making (authorization) check points, emergency responses, guidance and manuals strengthened/developed	Number of partnership arrangements agreed on and signed within six (6) months of project inception - Number of National arrangements for IAS and LMOs decision-making (authorization) check points established Number of national laboratories in LMO detection, diagnostics and monitoring with strengthened institutional capacities, recorded at the end of the project.	Very limited legal provisions related to effective coordination and partnership arrangement for maximizing synergies in the regulation and control of IAS and LMOs	By project mid-point all the elected arrangements among the institutions are drafted, validated and being implemented. By end of this project. Agreements with at least three (3) selected institutions are all signed and being implemented By the end of the project: 3 Partnership agreements fully operationalized with selected Biosecurty mandated institutions.	- M & E reports by PCU, PSC, are available -Progress half year and annual reports submitted to the UNEP, Project closure report prepared and submitted to the UNEP - Mid-term review report by UNEP//GEF consultants, -Terminal Evaluation report by UNEP/GEF -Project final report by PCU	1. Assumptions: -Appropriate biosecurity tools and resources are available to support pre and post approval monitoring of LMOs and IAS decision making 2. Risks - Lack of appropriate biosecurity tools and resources for the restoration of degraded lands could be an issue. 1. Assumptions: GEF funding is enough to cover both equipment and human capacity enhancement 2. Risks:	2B, 2C

			-Report on the training of : - At least 30 scientists, taking into consideration gender balance, in the prevention, control and management of biological invasions (IAS); - at least 10 Laboratory technicians trained in Detection, diagnostics and monitoring of LMOs and IAS		- The value of GEF budgeted funds could depreciate in the wake of price increase on commodities and services - In the absence of approvals of LMOs for contained use at the time of offer, the equipment and the enhanced human capacity may not be tested	
OUTPUT 3						

Output 3.1 Unified Portal for Information Sharing in line with the CBD?s Integrated approach on Clearing Houses set up with the requisite national database and registers for IAS and LMOs, including GIS mapping and spatial planning resources	-Number of organized communication and awareness raising activities reported -Number of communication and awareness raising tools produced and distributed Existence/presence of biosecurity information marked in public on places including calendars, notice boards, and on common articles of daily use	- A National Biological Invasions list exists but should be revised and approved. - The plan identified different communication strategies for different stakeholder categories; and the implementation phase was initiated	By the end of the project: A Unified Portal for Information Sharing for LMOs and IAS developed in line with the CBD CHM portal. 2. The National Biosecurity Information System and GIS mapping developed 3. National Biosecurity Communication Strategy and Action plan developed and operational	- M & E reports by PCU, PSC. -Progress half year and annual reports submitted to the UNEP. - Mid-term review report by UN Environment consultants. - Terminal Evaluation report by UN Environment. - The Activity report by PCU/Consultants -Project final report by PCU	1.Assumptions: -Strong public relations efforts undertaken - Public actions mobilized on the environmental risks of IAS and LMOs	2B, 2C

Output 3.2 Awareness programs, training and educational curricula on LMOs and IAS developed, tested and implemented	Number and visibility of biosecurity information and communication gargets such as brochures, flyers, customized gender sensitive T. shirts, etc., produced and distributed to stakeholders and the general public. Number of agreed protocols allowing information exchange within the clearing house system: such that, the CHM, national BCH and ABSCH hubs all connected to the established database can communicate with each other on the platform that is operationalized to monitor and inform risk-based management of species,	A significant number of customized biosecurity designed gadgets such as brochures, flyers, customized T. shirts, exercise books for school children and note books for adults were made available to the general public during the execution of NBF IMP project. There exists a database that was created in the Moldovan national portal for the exchange of information amongst focal points of biosecurity information hubs.	By end of this project, a widespread visibility of biosecurity information (at least by 90%) is marked on commonly used articles, and, at public places such as bus stops, notice boards; and in stakeholder offices; etc. - By project mid-point, at least 50% of the budgeted biosecurity products are already purchased and disseminated. - By end of project, an operationalized and functioning National Biosecurity Information	- Records/registers and invoices and receipts at the project office - M & E reports by PCU, PTA, and PAC, prepared throughout project lifespan -Mid-term review report by UNEP/GEF consultants, -Terminal Evaluation report by UNEP/GEF. - Activity Report by PCU and/or Consultants -Project final report by PCU -An Online address is available on MoE	1. Assumptions: GEF funds together with Government Co-financing are enough to ensure a nation-wide coverage in the communication and awareness raising activities -An understanding of cooperation on information exchange among the national focal points of the biosecurity information hubs is possible. 2. Risks: Already budgeted GEF funding and co-financing could depreciate in value due to price increase/fluctuation in market	2B, 2C

	pathways and ecosystems		System is in place By end of this project, at least - At least 30 scientists, taking in consideration gender equity, trained in IAS & LMOs management in risk communication. - 80 non scientists including representatives from NGOs and local communities selected in accordance with gender equity, are trained to engage in risk communication and awareness creation on Biosecurity.	- M & E reports by the PIU& PSC - MTR report by UNEP/GEF consultant. - Terminal Evaluation report by UNEP/GEF consultant -Project final report by PIU.	commodities and services. Lack of commitments amongst the focal points of the information hubs could be an issue	
OUTPUT 4						

Output 4.1: Systems and structures, technical support including Project Advisory Committee for project management, accountability and monitoring of impacts established	Effective project coordination and delivery, meeting measurable outputs and indicators Systems and structures for project management, accountability and monitoring of impacts established	No baseline as this is first Biosecurity project to be implemented	Effective project coordination and delivery, meeting measurable outputs and indicators Systems and structures for project management, accountability and monitoring of impacts established	An Online address is available on MoE - M & E reports by the PIU& PSC - MTR report by UNEP/GEF consultant. - Terminal Evaluation report by UNEP/GEF consultant -Project final report by PIU.		

Continuous monitoring including gender considerations. Progress reports and Terminal Evaluations undertaken. Lessons Learnt and Best Practices prepared and disseminated	Mid-term and Terminal Evaluations undertaken Lessons Learnt and Best Practices prepared and disseminated		Mid-term and Terminal Evaluations undertaken Lessons Learnt and Best Practices prepared and disseminated	An Online address is available on MoE - M & E reports by the PIU& PSC - MTR report by UNEP/GEF consultant. - Terminal Evaluation report by UNEP/GEF consultant -Project final report by PIU.		

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

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ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: **44,739**			
Project Preparation Activities Implemented	***GEF/LDCF/SCCF/NPIF Amount ($)***		
	Budgeted Amount	***Amount Spent To date***	***Amount Committed***

1202 Technical review and verification of draft inputs, drafting of proposal highlighting international best practices add technical advice on project design (International consultants)	15,000	15,000	0
2101 National data collection, consultative meetings, preparation of draft inputs, stakeholder/gender analysis and validation workshop to review and finalise draft project document supported by national experts	29,739	19,000	10,739
Total	**44,739**	**34,000**	**10,739**

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

GEOGRAPHIC COORDINATES: 45?27? - 45?27? Nord (350 km), 26?39? - 30?05? Est.

GEO LOCATION INFORMATION

The Location Name, Latitude and Longitude are required fields insofar as an Agency chooses to enter a project location under the set format. The Geo Name ID is required in instances where the location is not exact, such as in the case of a city, as opposed to the exact site of a physical infrastructure. These IDs are available on the GeoNames? geographical database containing millions of placenames and allowing to freely record new ones. The Location & Activity Description fields are optional. Project longitude and latitude must follow the Decimal Degrees WGS84 format and Agencies are encouraged to use at least four decimal points for greater accuracy. Users may add as many locations as appropriate. Web mapping applications such as OpenStreetMap or GeoNames use this format. Consider using a conversion tool as needed, such as:https://coordinates-converter.com Please see the Geocoding User Guide by clicking here.

Location Name	Latitude	Longitude	Geo Name ID	Location & Activity Description
Moldova	47.4116	28.3699		

ANNEX E: Project Budget Table

Please attach a project budget table.

Budget (GEF Costs)

Project title: Biosecurity Implementation Framework for the Management of Biological Resources in Moldova
Project number: 10982
Project executing partner: Ministry of Environment (MoE)

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is

required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).